Stimulant Overdose Surveillance Preliminary Report Georgia 2016-2018

Drug Surveillance Unit
Epidemiology Section
Georgia Department of Public Health

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

Stimulant Overdose Surveillance, Georgia, 2018

The purpose of this report is to describe fatal (mortality) and nonfatal (morbidity) stimulant-involved hospitalizations and deaths in Georgia during 2016, 2017, and 2018, including those involving prescription stimulants (e.g. Adderall, Ritalin, etc.), and illicit stimulants (e.g., cocaine, methamphetamine, etc.). Stimulant overdose data was 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

Stimulant-involved morbidity and mortality is increasing in Georgia.

Mortality

- From 2016 to 2018, overdose deaths involving stimulants increased by 44%, from 487 to 703 deaths.
- From 2017 to 2018, overdose deaths involving stimulants increased by 11%, from 631 to 703 deaths.
- In 2018, amphetamines were involved in more deaths than any other stimulant.
- White persons were 1.6 times more likely to die from a drug overdose involving stimulants and 5.5 times more likely to die from a drug overdose involving amphetamines than Black persons, yet Black persons were 1.5 times more likely than white persons to die from a drug overdose involving cocaine.
- Males aged 25-64 years died more frequently from stimulant-involved overdose than males in any other age category and females of all age categories. Males aged 35-44 years had the highest stimulant-related death rate.

Morbidity

- From 2016 to 2018, hospitalizations involving stimulants increased by 21.9% and ED visits involving stimulants increased by 18.5%.
- From 2017 to 2018, hospitalizations involving stimulants increased by 15.3% and ED visits involving stimulants increased by 9.8%.
- In Georgia in 2018:
    - Stimulants were involved in 2,769 ED visits and 1,752 hospitalizations.
    - Cocaine was involved in 1,241 ED visits and 977 hospitalizations.
    - Amphetamines were involved in 1,335 ED visits and 764 hospitalizations.
- White persons were 2.9 times more likely to visit an ED and 3.5 times more likely to be hospitalized for amphetamine-involved poisonings than black persons, yet Blacks were 6.6

times more likely to visit an ED and 9.0 times more likely to be hospitalized for cocaine-involved poisonings than Whites.

- Males aged 25-34 years visited an ED and were hospitalized from amphetamine-involved poisoning more frequently than males and females in any other age category.

Note: further information about opioid-related hospitalizations and deaths in Georgia can be found in the Opioid Overdose Surveillance Reports from 2016, 2017, and 2018 published online at https://dph.georgia.gov/drug-overdose-surveillance-unit

Deaths involving Stimulants (Mortality), Georgia, 2018

Data Source

Drug-related deaths were derived from DPH Vital Records death certificates for all deaths that occurred in Georgia during 2016-2018. Data records are continuously updated (corrected, amended or deleted) as more information becomes available, therefore, reports represent the most current data, and future reports may reflect updated data.

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

Deaths involving ANY DRUG:

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

Deaths involving ALL STIMULANTS:

Includes prescription stimulants (e.g. Adderall, Ritalin, etc.), over-the-counter stimulants (e.g. caffeine, ephedrine, etc.) and illicit stimulants (e.g. cocaine, methamphetamine, ecstasy, etc.)

1. Deaths with any of the following ICD-10 codes as any underlying cause of death: X40-44, X60-64, X85, Y10-14
   AND
   Any of the following ICD-10 codes as any other listed cause of death: T40.5, T43.6

OR

2. Any cause of death text field contains the following keywords: 5F-ADB, adderall, amphetamine, bath salt, bath salts, bathsalt, biphetamine, BK-DMBDB, bk-dmbdb, cathinone, coca leaf, cocaine, concerta, crack, crystal meth, dexedrine, dextroamphetamine, ecstasy, ephedrine, flakka, focalin, khat, levoamphetamine, lisdexamfetamine, MDA, MDMA, methamphetamine, methylin, mollie, molly, pseudoephedrine, psychostimulant, ritalin, speed, speedball, stimulant, vyvanse

Deaths involving COCAINE

1. Deaths with any of the following ICD-10 codes as any underlying cause of death: X40-44, X60-64, X85, Y10-14
   AND
   The following ICD-10 code as any other listed cause of death: T40.5

OR

2. Any cause of death text field contains the following keywords: coca leaf, cocaine, crack

Deaths involving OTHER STIMULANTS with abuse potential

Includes prescription stimulants (e.g. Adderall, Ritalin, Concerta, etc.), over-the-counter (e.g. caffeine) and illicit stimulants (e.g. crystal meth, ecstasy, MDMA, etc.)

1. Deaths with any of the following ICD-10 codes as any underlying cause of death: X40-44, X60-64, X85, Y10-14
   AND
   Any of the following ICD-10 codes as any other listed cause of death: T43.6

OR

2. Any cause of death text field contains the following keywords: 5F-ADB, adderall, amphetamine, bath salt, bath salts, bathsalt, biphetamine, BK-DMBDB, bk-dmbdb, cathinone, concerta, crystal meth, dexedrine, dextroamphetamine, ecstasy, ephedrine, flakka, focalin, khat, levoamphetamine, lisdexamfetamine, MDA, MDMA, methamphetamine, methylin, mollie, molly, pseudoephedrine, psychostimulant, ritalin, speed, speedball, stimulant, vyvanse

Other Definitions or Limitations

Overdose death county represents the county of residence.

Rate indicates deaths per 100,000 population using 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 poisoning by drugs), X60-X64 (intentional self-poisoning by drugs), X85 (assault by drug poisoning), Y10-Y14 (drug poisoning of undetermined intent), T40.5 (poisoning by cocaine), T43.6 (poisoning by psychostimulants with abuse potential)

ED Visits and Hospitalizations involving Stimulants (Morbidity), Georgia, 2018

Data Source

Nonfatal ED visits or hospitalizations were derived from Georgia hospital discharge inpatient and ED visit 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 disorders or poisoning due to stimulant use during 2016-2018. Data records are continuously updated (corrected, amended or deleted) as more information becomes available, therefore, reports represent the most current data, and future reports may reflect updated data.

Case Definitions (categories are not mutually exclusive)

ED visit or hospitalization involving poisoning by any drug

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

Any mention of ICD-10CM codes: T36-T50
AND
5th or 6th character: 1-4, and a 7th character of A or missing

ED visit or hospitalization involving use of ALL STIMULANTS

Includes prescription stimulants (e.g. Adderall, Ritalin, etc.), over-the-counter stimulants (e.g. caffeine, ephedrine, etc.) and illicit stimulants (e.g. speed, ecstasy, methamphetamine, etc.)

Any mention of ICD-10CM codes: T40.5X, T43.60, T43.61, T43.62, T43.63, T43.69, T44.99, T50.5X, T65.21, T65.22

AND

5th or 6th character: 1-4, and a 7th character of A or missing

ED visit or hospitalization involving use of COCAINE

Any mention of ICD-10CM codes: T40.5X

AND

5th or 6th character: 1-4, and a 7th character of A or missing

ED visit or hospitalization involving use of AMPHETAMINES

Includes prescription amphetamines (e.g. Adderall, etc.) and illicit amphetamines (e.g. speed, ecstasy, methamphetamine, etc.)

Any mention of ICD-10CM codes: T43.62

AND

6th character: 1-4, and a 7th character of A or missing

ED visit or hospitalization involving use of OTHER STIMULANTS

Includes over-the-counter stimulants (e.g. caffeine, nicotine [chewing tobacco, cigarettes, nicotine insecticides, etc.], decongestants [ephedrine, pseudoephedrine, dopamine, etc.]) and prescription stimulants [Ritalin, appetite suppressants]).

1. Any mention of ICD-10CM codes: T43.60, T43.61, T43.63, T43.69, T44.99, T50.5X, T65.21, T65.22
   AND
   5th or 6th character: 1-4, and a 7th character of A or missing

Other definitions or limitations

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.

Patients that were admitted through the ED and subsequently hospitalized appear in both the ED and hospital inpatient data.

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

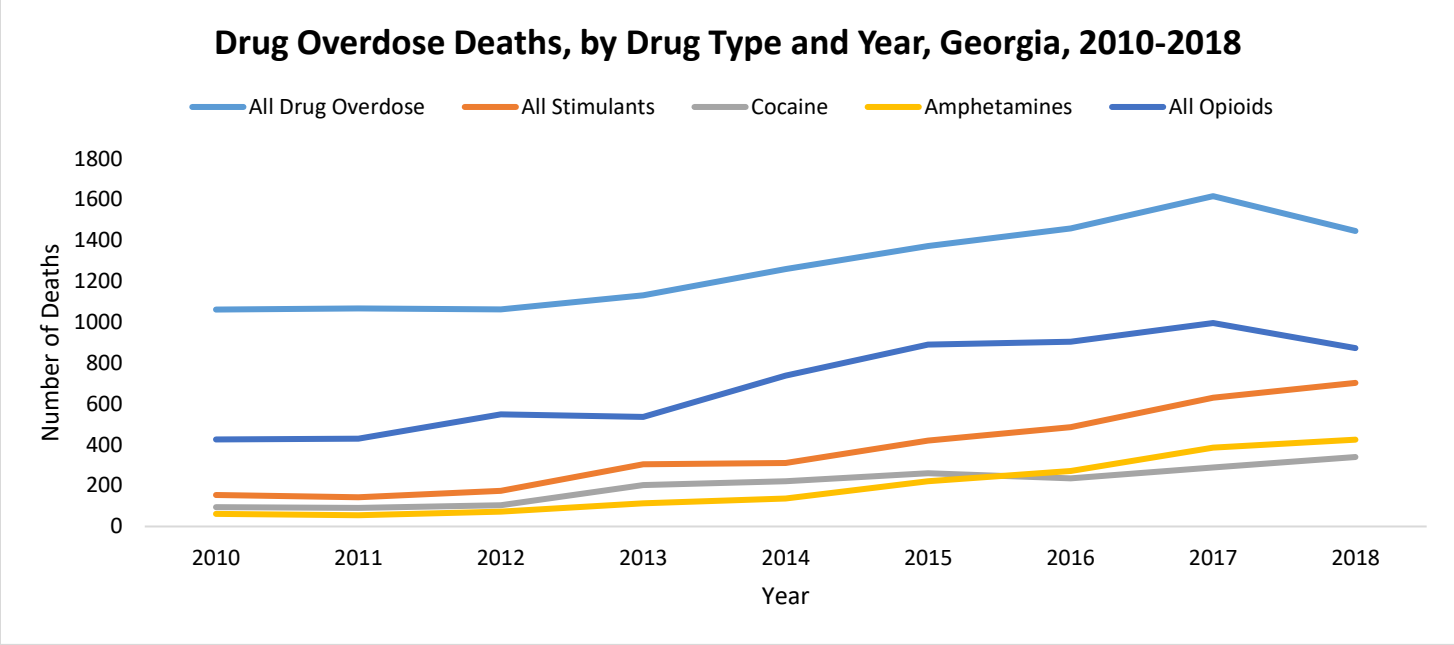
Rates for categories with fewer than 5 ED visits or hospitalizations may not be accurate and are not presented in this report.

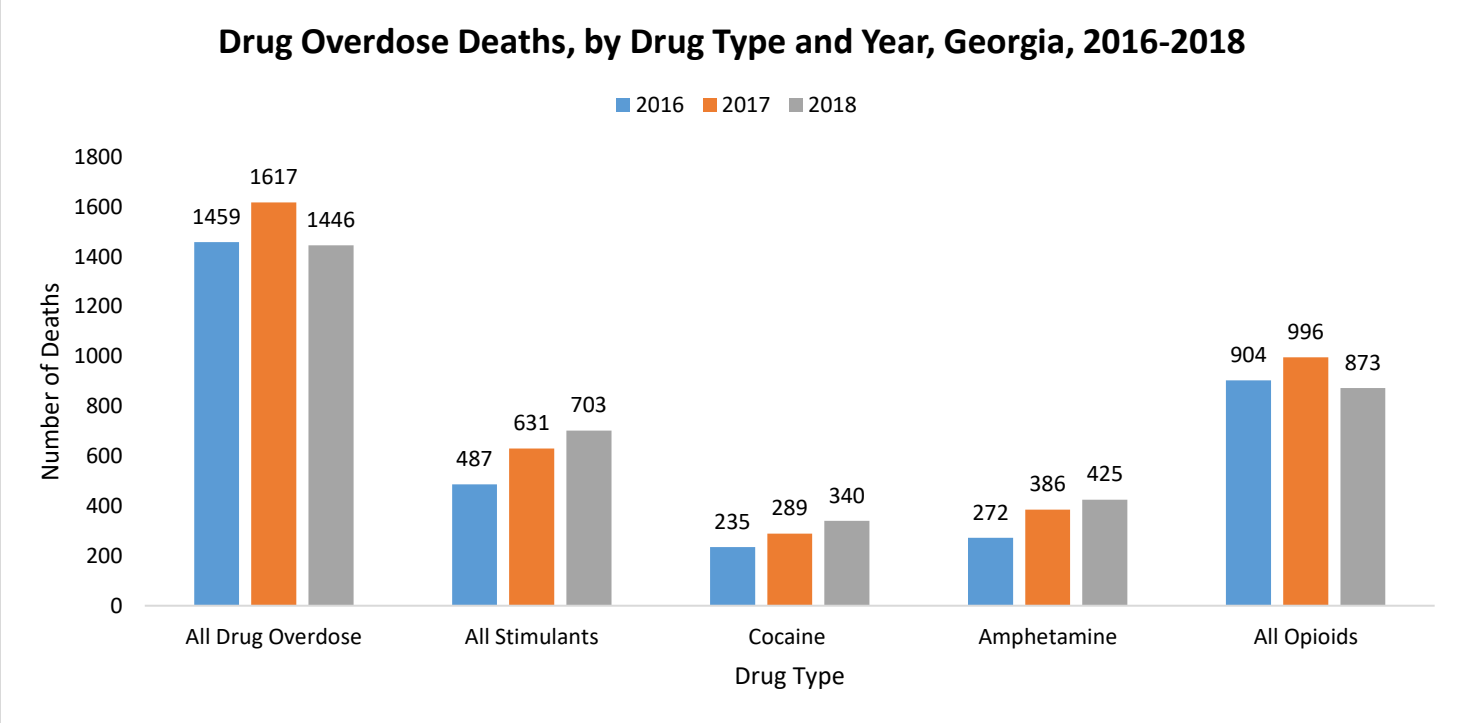
ICD-10 CM Code Description

Poisoning by: T36-T50 (range includes all drugs), T40.5X (cocaine), T43.60 (unspecified psychostimulants), T43.61 (caffeine), T43.62 (amphetamines), T43.63 (methylphenidate), T43.69 (other psychostimulants), T44.99 (incl. ephedrine) T50.5X (appetite suppressants) T65.21 (chewing tobacco), T65.22 (cigarettes); *5th or 6th Character:* 1 (accidental, unintentional), 2 (intentional self-harm), 3 (assault), 4 (undetermined intent); *7th Character*: A (initial encounter) or missing

Drug Overdose Deaths involving Stimulants (Mortality)

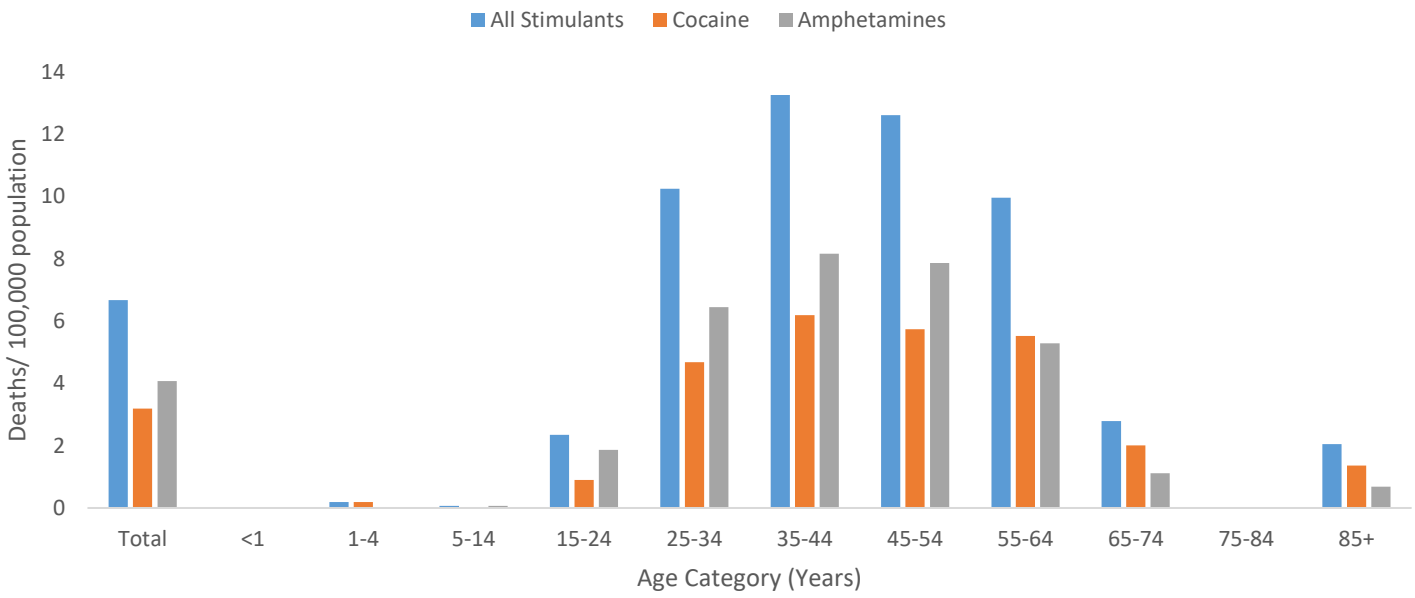
**Note: Categories are not mutually exclusive and may include any over-the-counter, prescription, or illicit substances. Statistics refer to all overdose deaths in the state of Georgia (permanent residents and non-residents).*



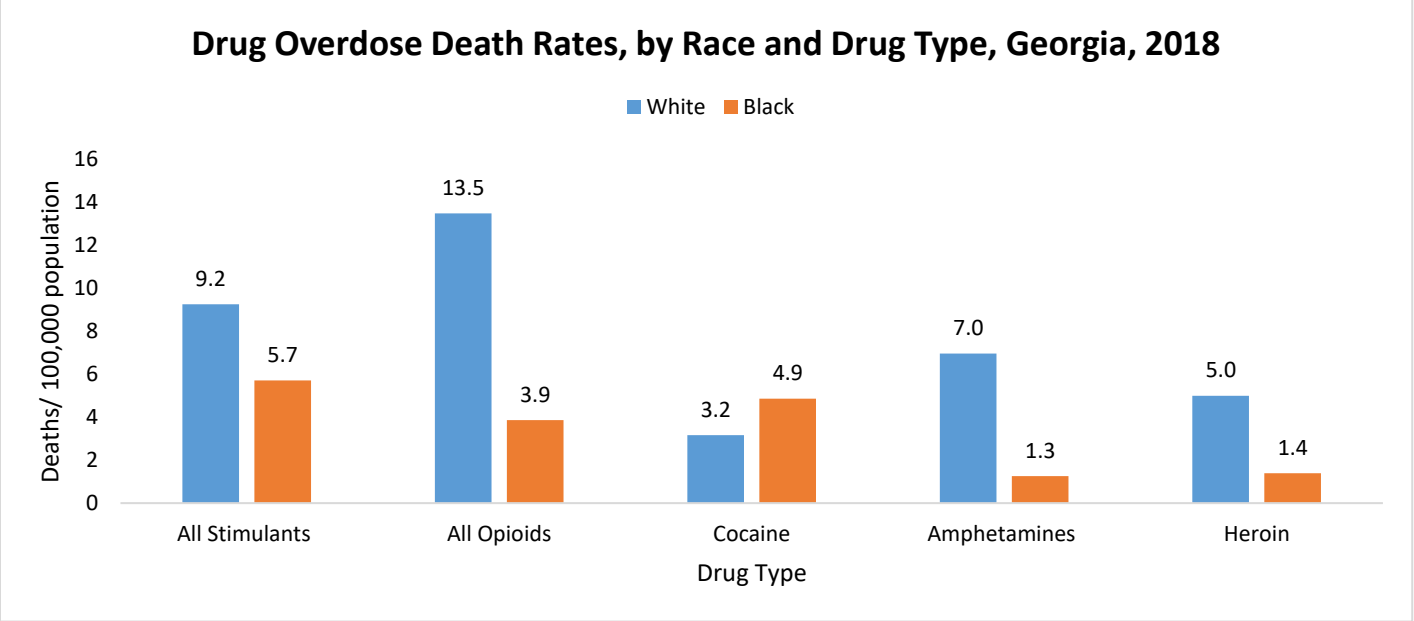


- From 2016 to 2018, there was a 44% increase in drug deaths involving all stimulants, a 45% increase in deaths involving cocaine, and a 56% increase in deaths involving amphetamines.
- From 2017 to 2018, there was an 11% increase in drug deaths involving all stimulants, an 18% increase in deaths involving cocaine, and a 10% increase in deaths involving amphetamines.
- From 2016 to 2018 there was a 4% decrease in drug deaths involving all opioids.
- From 2017 to 2018, there was a 14% decrease in drug deaths involving all opioids.

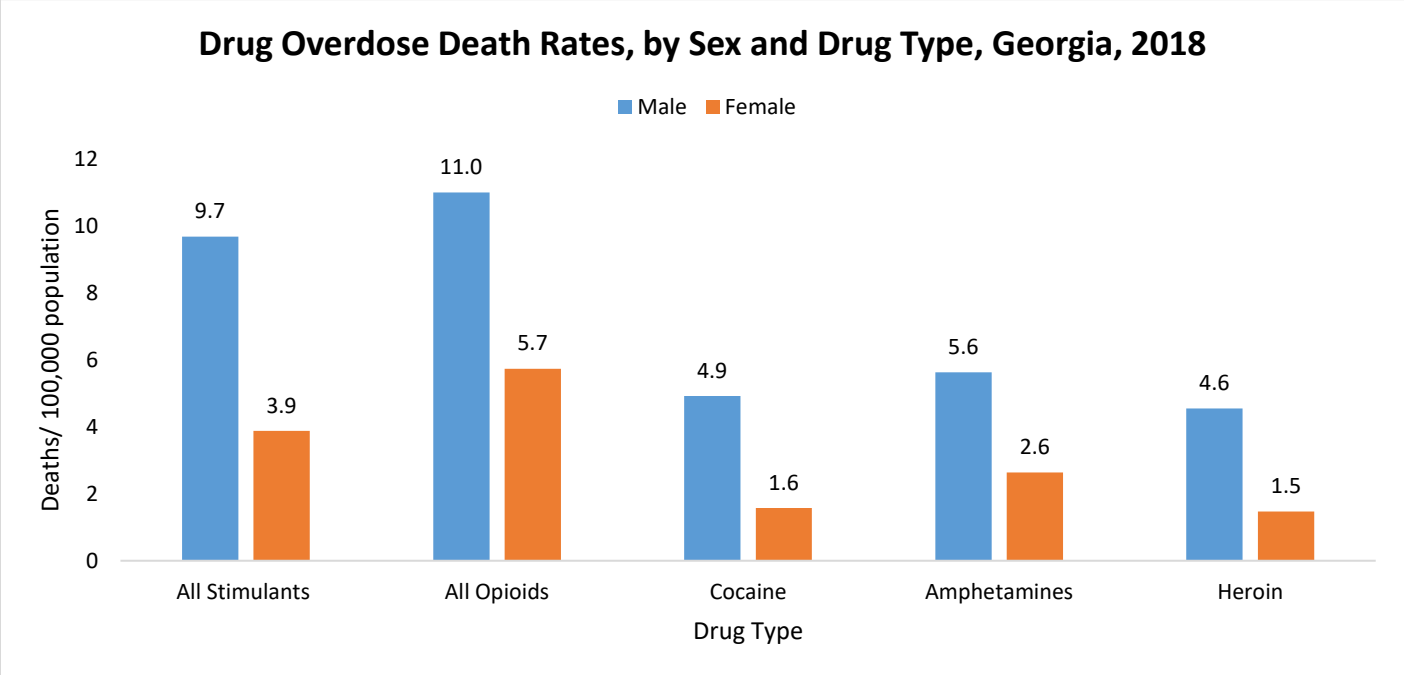
Stimulant-Involved Overdose Death Rates, by Age and Drug Type, Georgia, 2018



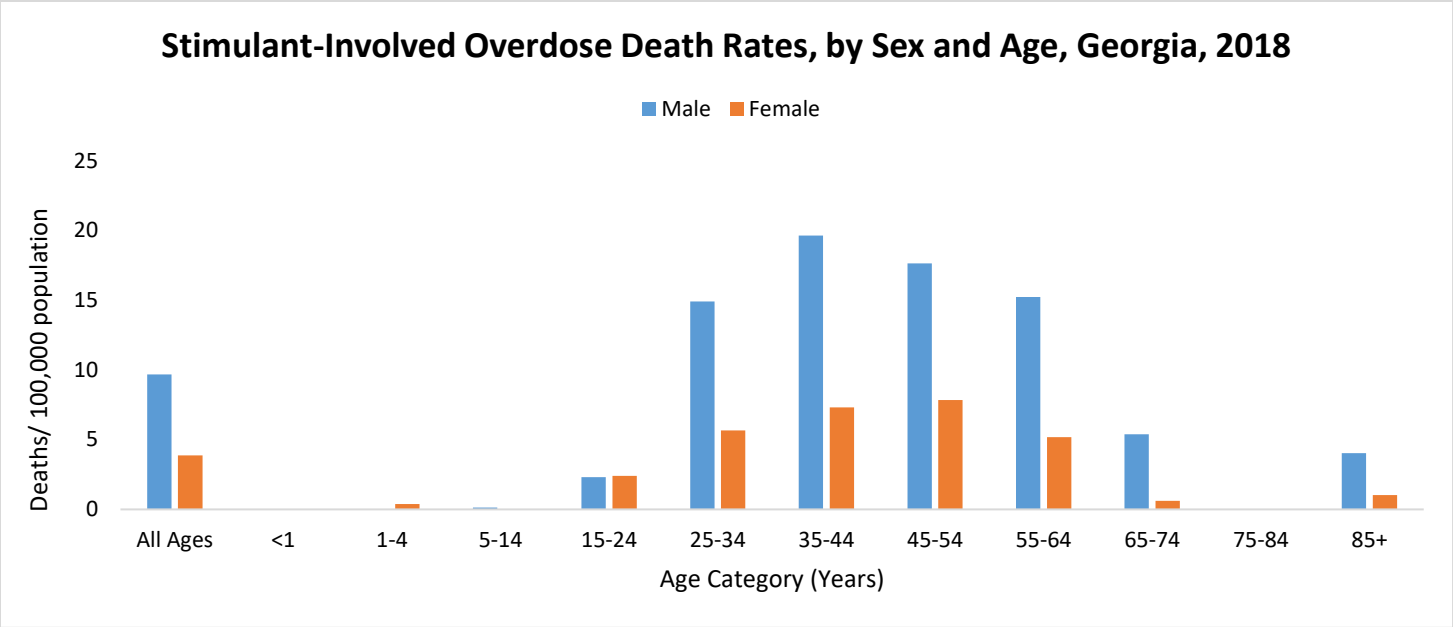
- Persons aged 45-54 years died more frequently from amphetamine-involved overdose than from cocaine-involved overdose.
- Persons aged 55 years or older died more frequently from cocaine-involved overdose than from amphetamine-involved overdose.
- Persons aged 35-54 years had the highest rates for amphetamine-involved deaths and cocaine-related deaths.



- White persons were 1.6 times more likely than black persons to die from a drug overdose involving stimulants, and 3.5 times more likely to die from a drug overdose involving opioids.
- Black persons were 1.5 times more likely than white persons to die from a drug overdose involving cocaine, and white persons were 5.5 times more likely than black persons to die from an overdose involving amphetamines.



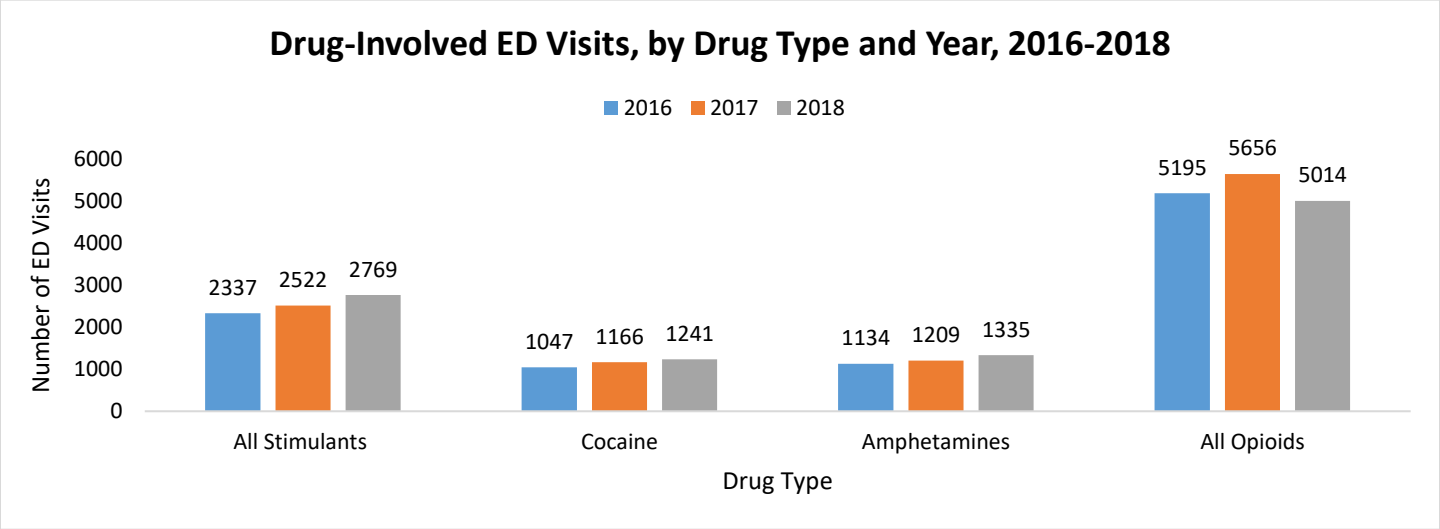
- Males were 2.5 times more likely to die from a stimulant-involved overdose than females, and 1.9 times more likely to die from an opioid-involved overdose than females.
- Males were 3.1 times more likely to die from a cocaine-involved overdose than females, and 2.1 times more likely to die from an overdose involving amphetamines than females.



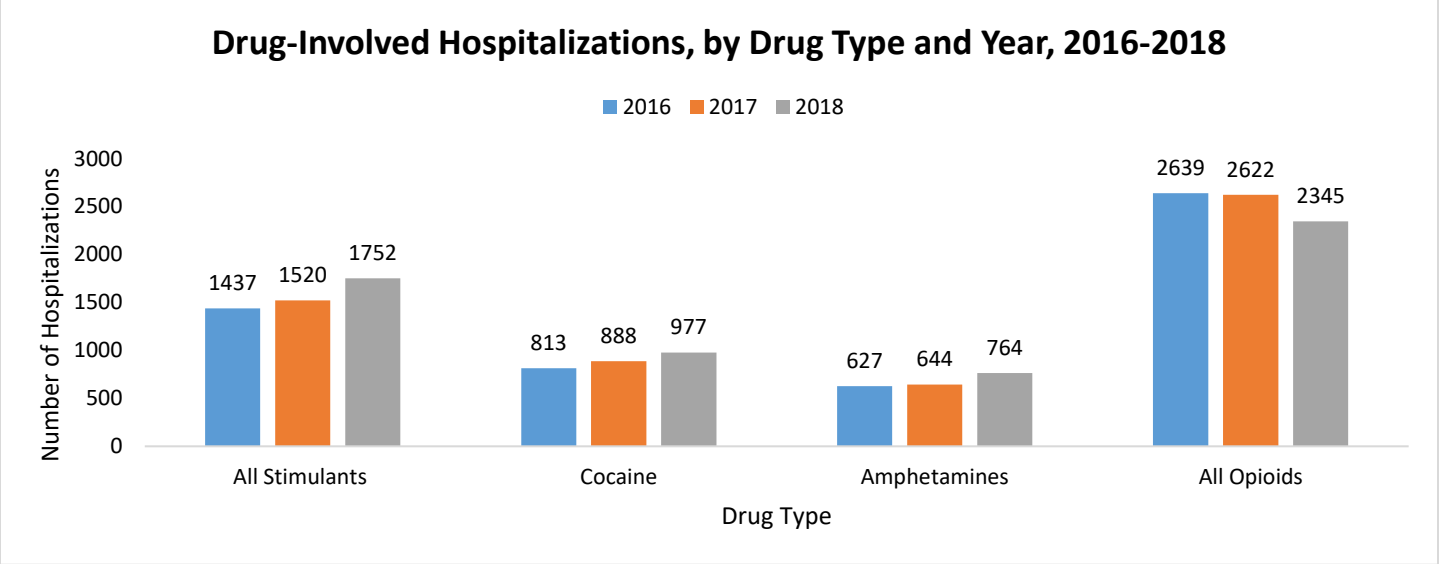
- Males aged 25-64 years died more frequently from stimulant-involved overdose than males in any other age category, with males aged 35-44 years having the highest stimulant-involved death rate.
- Females aged 25-64 years died more frequently from stimulant-involved overdose than females in any other age category, with females aged 45-54 years having the highest stimulant-related death rate.

ED Visits and Hospitalizations (Morbidity) involving Stimulants

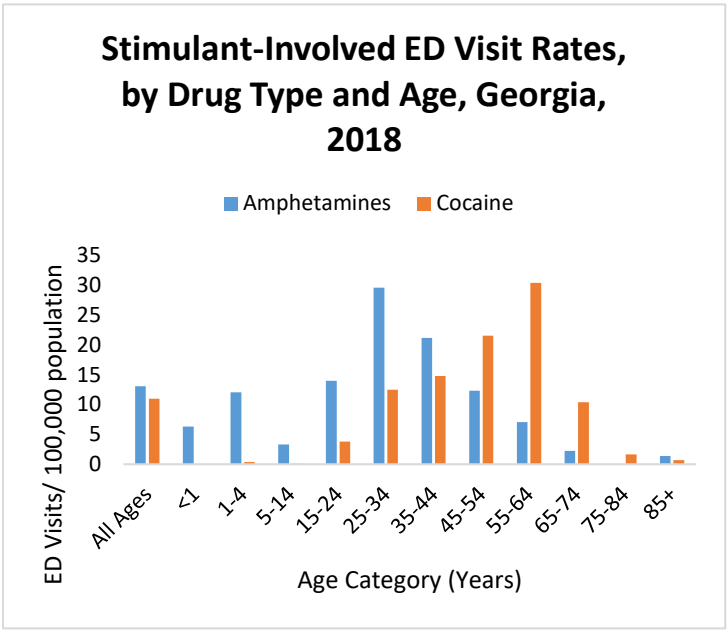
Note: Categories are not mutually exclusive and may include over-the-counter, prescription, or illicit substances in each.

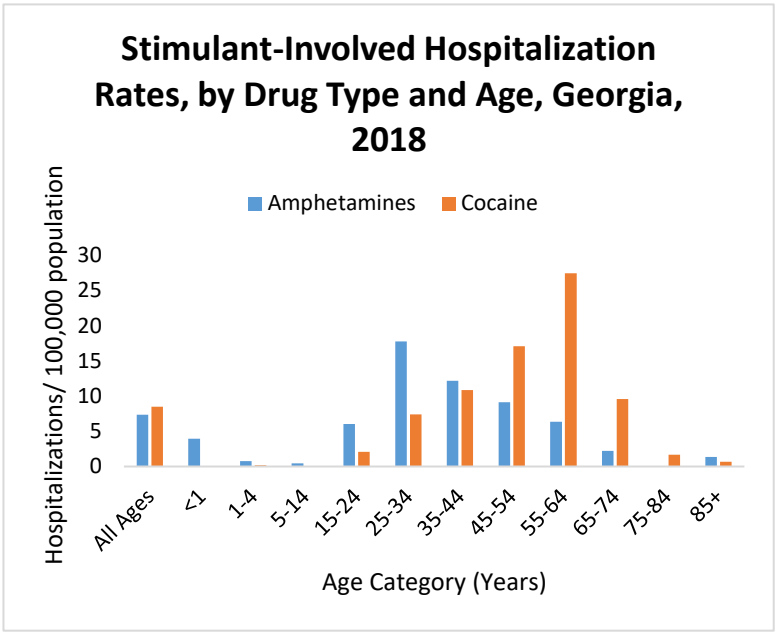


- ED visits involving stimulant use increased by 18.5% from 2016 to 2018, and increased by 9.8% from 2017 to 2018.
- ED visits involving cocaine and amphetamine use increased by 18.5% and 17.7% respectively from 2016 to 2018, and increased by 6.4% and 10.4% from 2017 to 2018.

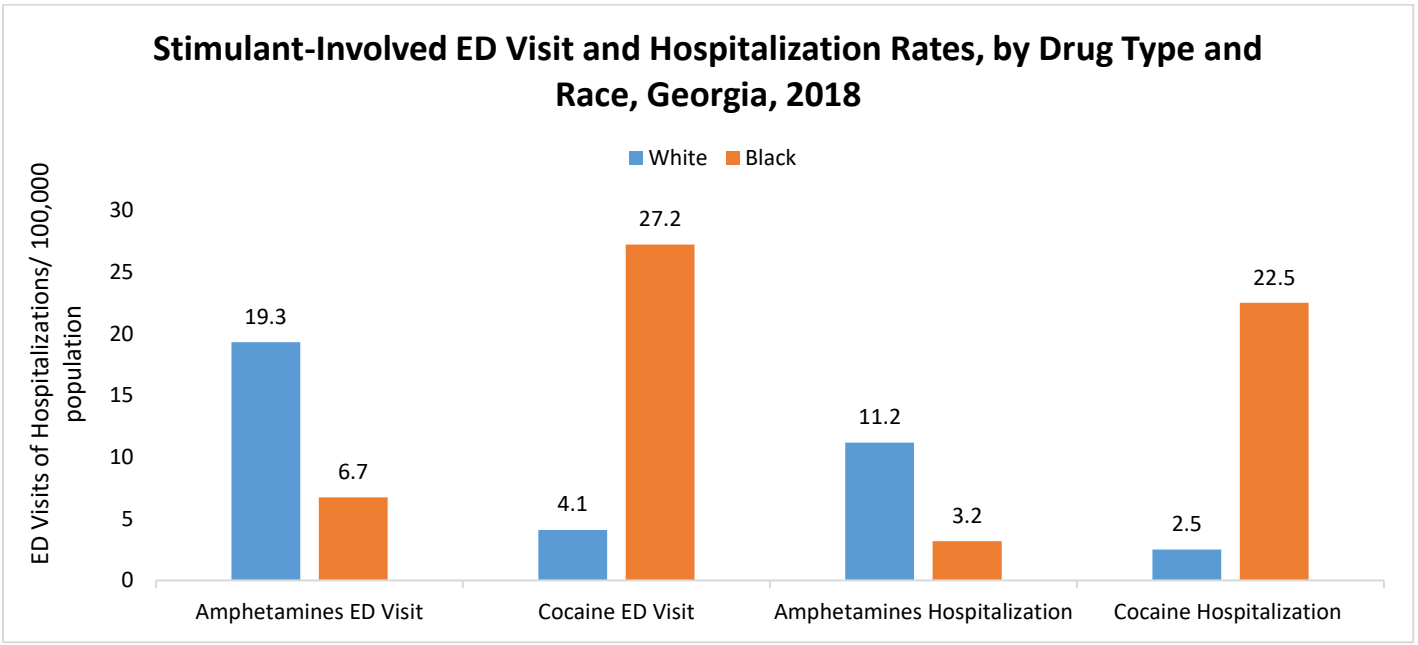


- Hospitalizations involving stimulant use increased by 21.9% from 2016 to 2018, and increased by 15.3% from 2017 to 2018.
- Hospitalizations involving cocaine and amphetamine use increased by 20.2% and 21.9% respectively from 2016 to 2018, and increased by 10.0% and 18.6% from 2017 to 2018.

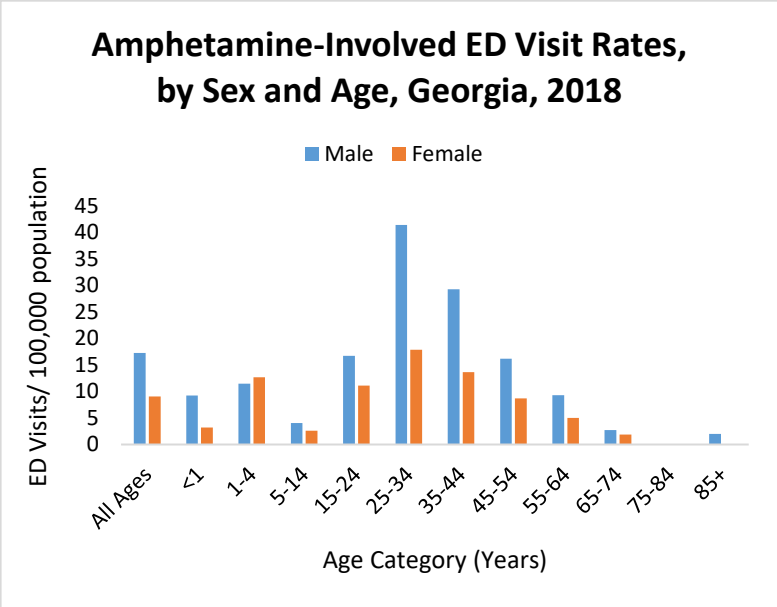


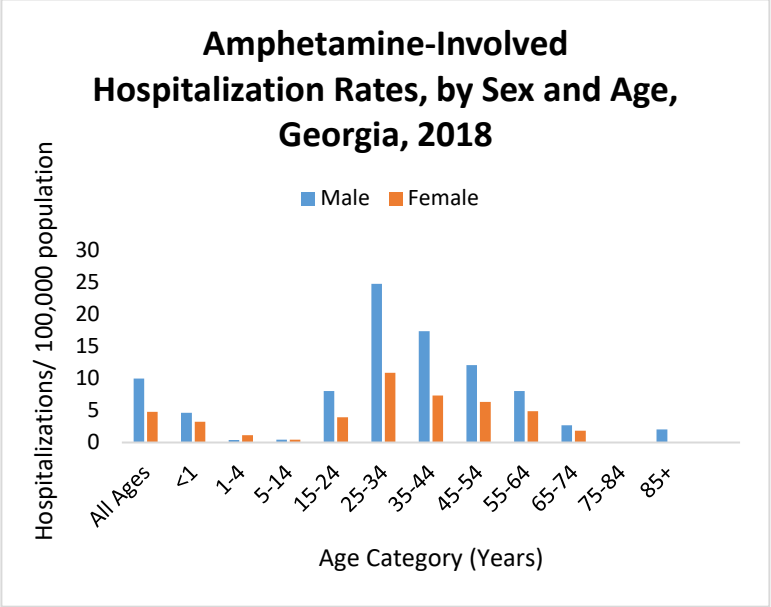


- Persons aged 25-34 years were more likely to visit an ED or be hospitalized because of amphetamine-involved poisoning than persons of other age categories.
- Persons aged 55-64 years were more likely to visit an ED or be hospitalized because of cocaine-involved poisoning than persons of other age categories.

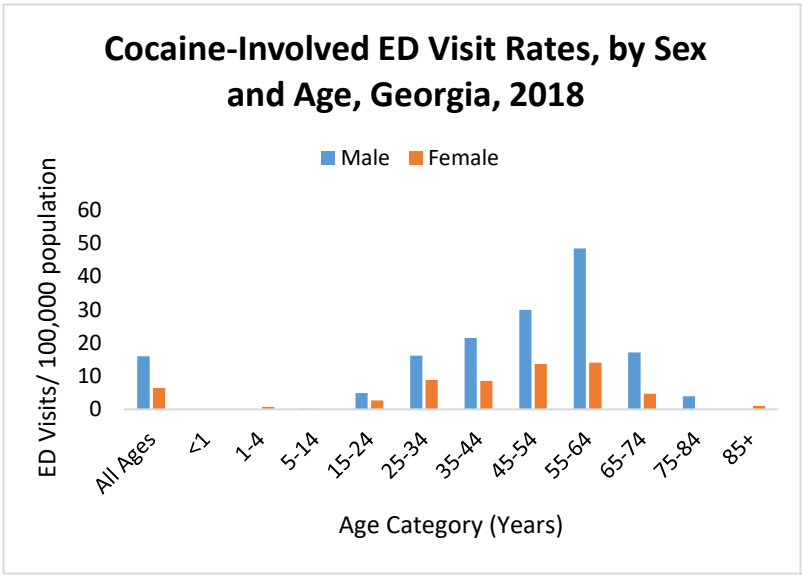


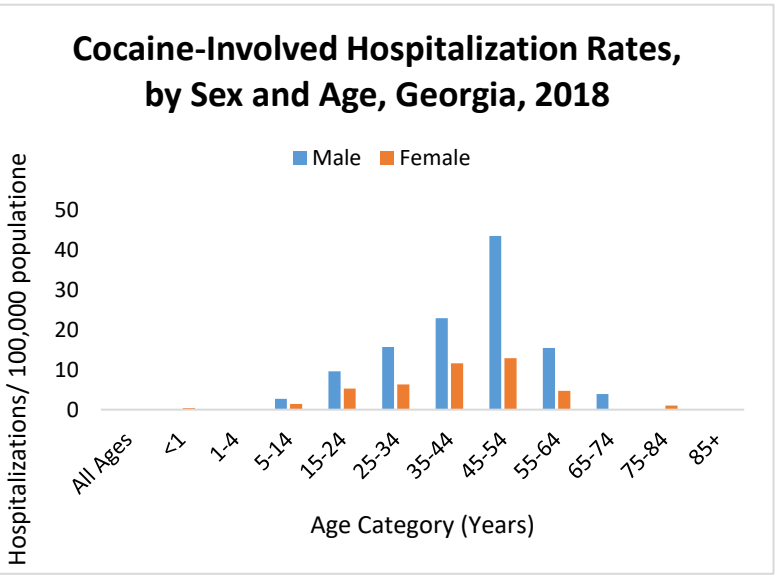
- Whites were 2.9 times more likely to visit an ED and 3.5 times more likely to be hospitalized for amphetamine-involved poisonings than Blacks.
- Blacks were 6.6 times more likely to visit an ED and 9.0 times more likely to be hospitalized for cocaine-involved poisonings than Whites.





- Males aged 25-34 years visited an ED and were hospitalized for amphetamine-involved poisoning more frequently than males and females in any other age category.
- Both males and females aged 25-34 years were hospitalized for amphetamine-involved poisoning most frequently.





- Males aged 45-54 years visited an ED for cocaine-involved poisoning more frequently than males and females in any other age category.
- Males aged 55-64 years were hospitalized for cocaine-involved poisoning more frequently than males and females in any other age category.

Deaths involving Stimulants (Mortality) — Georgia, 2016–2018

Number, and age-adjusted rate per 100,000 population
Any category may include prescription and/ or illicit drugs, categories are not mutually exclusive, rates for counts under 5 may be unstable

	Any Drug		Any Opioid		Any Stimulant		Cocaine		Amphetamines	
Year	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate
2018	1,446	13.6	873	8.3	703	6.7	340	3.2	425	4.1
2017	1,617	15.5	996	9.5	631	6.1	289	2.7	386	3.8
2016	1,459	14.0	904	8.7	487	4.7	235	2.2	272	2.7

ED Visits and Hospitalizations involving Stimulants (Morbidity) — Georgia, 2016–2018

Number, and age-adjusted rate per 100,000 population
Any category may include prescription and/ or illicit drugs, categories are not mutually exclusive, rates for counts under 5 may be unstable

	Any Drug				Any Opioid				Any Stimulant				Cocaine				Amphetamines			
	ED Visits		Hospitalizations		ED Visits		Hospitalizations		ED Visits		Hospitalizations		ED Visits		Hospitalizations		ED Visits		Hospitalizations	
Year	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate
2018	23515	222.5	9379	85.6	5014	45.9	2345	20.6	2769	26.0	1752	15.9	1241	11.0	977	8.5	1335	13.1	764	7.3
2017	23856	227.6	9481	87.7	5656	52.5	2622	23.5	2522	31.9	1520	14.2	1166	10.7	888	8.1	1209	11.9	644	8.0
2016	23404	226.3	9637	91.1	5195	48.9	2639	24.3	2337	22.8	1437	13.8	1047	9.8	813	7.5	1134	11.3	627	6.2

Georgia Department of Public Health (DPH), Epidemiology Section, Drug Surveillance Unit

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

Morbidity and Mortality involving Stimulants — Georgia, 2018 (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 category may include prescription, and/ or illicit stimulants, categories are not mutually exclusive, rates for counts under 5 may be unstable						
	All Stimulants					
	ED Visits		Hospitalizations		Deaths	
	No.	Rate	No.	Rate	No.	Rate
Total	2769	26.0	1752	15.9	703	6.7
Age group						
<1 year	8	6.3	5	3.9	0	N/A
1-4 years	104	19.6	8	1.5	1	N/A
5 -14 years	98	6.9	11	0.8	1	N/A
15-24 years	335	23.2	139	9.6	34	2.4
25-34 years	633	43.0	363	24.6	151	10.2
35-44 years	501	36.5	309	22.5	182	13.3
45-54 years	479	33.9	365	25.9	178	12.6
55-64 years	486	37.8	434	33.8	128	10.0
65-74 years	114	12.7	106	11.8	25	2.8
75-84 years	8	1.9	9	2.2	0	N/A
85+ years	3	N/A	3	N/A	3	N/A
Sex (age group)						
Male	1798	34.4	1174	21.9	495	9.7
<1 year	6	9.2	3	N/A	0	N/A
1-4 years	51	18.9	3	N/A	0	N/A
5-14 years	52	7.2	4	N/A	1	N/A
15-24 years	184	25.0	82	11.2	17	2.3
25-34 years	415	56.8	240	32.8	109	14.9
35-44 years	336	50.8	211	31.9	130	19.6
45-54 years	313	45.7	237	34.6	121	17.6

55-64 years	352	57.6	312	51.1	93	15.2
65-74 years	81	19.9	74	18.1	22	5.4
75-84 years	7	3.9	7	3.9	0	N/A
85+ years	1	N/A	1	N/A	2	N/A
Female	970	18.1	577	10.3	208	3.9
<1 year	2	N/A	2	N/A	0	N/A
1-4 years	53	20.4	5	1.9	1	N/A
5-14 years	46	6.6	7	1.0	0	N/A
15-24 years	151	21.3	57	8.0	17	2.4
25-34 years	218	29.4	123	16.6	42	5.7
35-44 years	165	23.2	98	13.8	52	7.3
45-54 years	166	22.9	128	17.6	57	7.9
55-64 years	134	19.9	122	18.1	35	5.2
65-74 years	33	6.8	32	6.6	3	N/A
75-84 years	1	N/A	2	N/A	0	N/A
85+ years	1	N/A	1	N/A	1	N/A
Race						
White	1326	25.9	748	14.0	497	9.2
Black	1251	35.1	911	25.4	195	5.7

Georgia Department of Public Health (DPH), Epidemiology Section, Drug Surveillance Unit

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