CDC's Enhanced State Opioid Overdose Surveillance (ESOOS) Program

Archived Provisional Data Report from July 2019

All data are preliminary and may change as more data are received from state and jurisdiction health departments. Over time, methodology may be refined and may impact these provisional percent change estimates. Please refer to the most recent data available at: cdc.gov/drugoverdose/data/nonfatal/cdc-esoos.html.

CDC's Enhanced State Opioid Overdose Surveillance (ESOOS) program captures different types of data for both fatal and nonfatal overdoses. Twelve states were initially funded in September 2016, and an additional 20 states and the District of Columbia were funded in September 2017, to share data on nonfatal overdoses with CDC on a quarterly basis. The most current data available come from the most recent state data received during April 2019. CDC's ESOOS program captures some data via CDC's National Syndromic Surveillance Program (NSSP) BioSense Platform.

ESOOS collects hospital billing data, which are collected by hospitals and shared with state and local partners. Hospital billing data include a standardized discharge diagnostic code (i.e., International Classification of Diseases, Tenth Edition, Clinical Modification, ICD-10-CM) used to categorize a visit as an overdose. The time lag between the date of a particular emergency department (ED) visit and the availability of billing data varies widely by state (e.g., monthly to annually).

ESOOS also collects syndromic surveillance data, which include information on the purpose of an ED visit using the chief complaint free text field and a standardized discharge diagnostic code (i.e., ICD-10-CM) typically included in hospital billing data. These data can serve as an early warning system. They have become an important resource for tracking public health outbreaks, and can provide value in uncovering trends in suspected overdoses quickly.

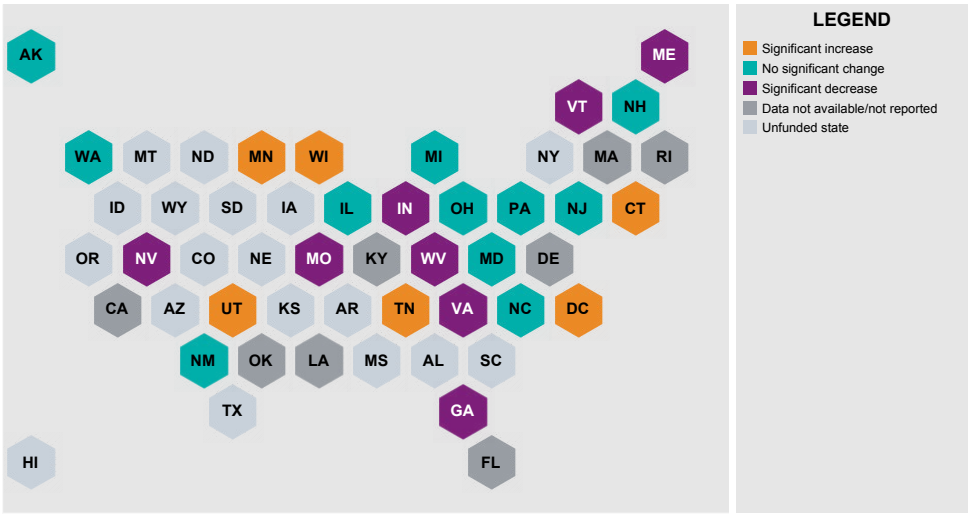
ALL DRUGS

Suspected overdose estimates for a given point in time may change as information on the ED visit is updated, so data should be interpreted with caution. For the most recent quarter change, the fourth quarter (October–December) of 2018 to the first quarter (January–March) of 2019, ESOOS states, including the District of Columbia, reported a 4.8% decrease in all drug overdoses.

Overall, suspected drug overdoses in ESOOS states, including the District of Columbia, increased 1.3% from the first quarter of 2018 to the first quarter of 2019. Five states (Connecticut, Minnesota, Tennessee, Utah, and Wisconsin) and the District of Columbia reported a significant annual increase in all drug overdoses during this time period. Significant decreases in all drug overdoses during this time period occurred in eight states (Georgia, Indiana, Maine, Missouri, Nevada, Vermont, Virginia, and West Virginia).[1]

Trends in Emergency Department Visits for Suspected Drug Overdose, Q1 2018 to Q1 2019

CDC s Enhanced State Opioid Overdose Surveillance Program, Data Current as of July 15, 2019



Centers for Disease Control and Prevention
National Center for Injury Prevention and Control

CDC's Enhanced State Opioid Overdose Surveillance (ESOOS) Program:[*] Trends[†] in Emergency Department Visits for Suspected Drug Overdose[§] for Selected States Providing Data, Q4 2016 (October 1, 2016–December 31, 2016) to Q1 2019 (January 1, 2019–March 31, 2019),[¶] by State

	Yearly Percent Change							Quarterly Percent Change								
	Q4 2016 to Q4 2017 (19 states)	Q1 2017 to Q1 2018 (22 states)	Q2 2017 to Q2 2018 (22 states)	Q3 2017 to Q3 2018 (23 states)	Q4 2017 to Q4 2018 (27 states)	Q1 2018 to Q1 2019 (25 states)	Category, Q1 2018 to Q1 2019	Q4 2016 to Q1 2017 (19 states)	Q1 2017 to Q2 2017 (22 states)	Q2 2017 to Q3 2017 (22 states)	Q3 2017 to Q4 2017 (24 states)	Q4 2017 to Q1 2018 (28 states)	Q1 2018 to Q2 2018 (28 states)	Q2 2018 to Q3 2018 (28 states)	Q3 2018 to Q4 2018 (28 states)	Q4 2018 to Q1 2019 (26 states)
Overall	**-0.62**	**-10.55**	**-12.02**	**-4.87**	0.68	**1.29**	Significant increase	**3.24**	**9.7**	-3.19	**-8.32**	**-3.52**	**7.7**	**2.26**	**-5.77**	**-4.77**
State																
Alaska	.	.	.	.	-6.4	5.27	No significant change	.	.	.	.	-1.17	-0.87	-10.83	7.13	11.16
California[**]	-0.71	**4.49**	0.38	3.01	2.12	.	Data not available/ not reported	**-4.48**	**9.7**	0.28	**-5.5**	0.52	**5.38**	2.9	**-6.32**	**.**
Connecti-cut	.	.	.	.	**14.11**	**10.73**	Significant increase	.	.	.	.	**-7.06**	**33.98**	1.26	**-9.5**	**-9.82**
Delaware[††]	.	.	.	.	.	.	Data not available/ not reported	.	.	.	.	.	.	.	.	
District of Columbia	**-7.59**	**-24.47**	**-33.83**	**-6.9**	**-13.41**	**10.62**	Significant increase	0.17	**24.15**	**-11.46**	**-16.09**	**-18.12**	**8.76**	**24.58**	**-21.96**	4.61
Florida[§§]							Data not available/ not reported									
Georgia	-2.95	**-7.38**	**-10.66**	**-5.37**	**-7.41**	**-5.74**	Significant decrease	-0.43	**8.88**	**-6.81**	-3.93	**-4.98**	5.01	-1.29	**-6**	-3.27
Illinois	**5.16**	2.73	-0.41	**-7.54**	**9.68**	0.75	No significant change	1.34	**6.92**	**10.34**	**-12.04**	-1.01	**3.65**	2.43	**4.35**	**-9.06**
Indiana	**20**	**5.78**	**9.07**	-0.23	**-8.41**	**-9.21**	Significant decrease	**3.89**	**3.98**	**7.18**	**3.65**	**-8.43**	**7.21**	-1.95	**-4.85**	**-9.23**
Kentucky[**]	5.21	**-19.16**	**-28.39**	.	.	.	Data not available/ not reported	**20.38**	**6.07**	**-11.11**	**-7.3**	**-7.51**	**-6.05**	.	.	.
Louisiana[**]	.	.	.	.	**57.48**	.	Data not available/ not reported	.	.	.	.	**137.03**	**-8.13**	**-8.46**	**-21**	.
Maine	8.69	1.91	**-9.03**	**-11.89**	**-11.19**	**-14.98**	Significant decrease	1.34	**10.44**	-0.92	-1.98	-4.98	-1.42	-4.04	-1.21	**-9.03**
Maryland	-1	1.86	**-8.65**	**-7.34**	1.27	2.04	No significant change	0.74	**20.29**	**-12.82**	**-6.29**	3.65	**7.88**	**-11.57**	2.41	4.45
Massa-chusetts[††]	.	.	.	.	.	.	Data not available/ not reported	.	.	.	.	.	.	.	.	
Michigan	.	.	.	.	1.79	3.3	No significant change	.	.	.	.	0	**6.64**	**3.87**	**-8.11**	1.49

Table of trends continues on next page.

Minnesota	.	-3.1	-1.42	**-10.42**	3.34	**28.85**	Significant increase	.	-1.2	**13.95**	-2.54	**-11.69**	0.51	3.55	**12.43**	**10.12**
Missouri	-5.92	-6.17	1.06	-2.43	1.34	**-10.24**	Significant decrease	-0.04	1.7	3.45	**-10.54**	-0.31	**9.54**	-0.12	**-7.08**	**-11.7**
Nevada	-3.09	1.09	1.39	**-11.22**	**-10.67**	**-7.01**	Significant decrease	**-8.36**	**7.79**	3.73	-5.43	-4.4	**8.11**	**-9.16**	-4.85	-0.48
New Hampshire	-4.46	-7.83	**-30.02**	**-19.22**	**-16.9**	-5.72	No significant change	-8.32	**25.83**	**-9.61**	-8.38	**-11.55**	-4.46	4.34	-5.76	0.36
New Jersey	0.12	**-5.49**	**6.12**	**13.97**	**12.99**	-3.92	No significant change	**6.08**	**7.14**	-3.58	**-8.64**	0.14	**20.3**	3.55	**-9.42**	**-14.85**
New Mexico	-5.84	-6.66	5.57	2.24	-2.99	6.82	No significant change	-0.65	4.18	-6.51	-2.7	-1.51	**17.83**	**-9.46**	**-7.67**	**8.45**
North Carolina	-0.54	-2.9	**-8.83**	**-10.8**	-3.06	-2.82	No significant change	-2.21	**11.45**	**3.75**	**-12.04**	**-4.53**	**4.65**	1.5	**-4.41**	**-4.29**
Ohio	**-9.31**	**-33.91**	**-38.42**	**-19.2**	**-14.64**	-1.71	No significant change	**12.14**	**15.95**	**-18.63**	**-14.29**	**-18.27**	**8.03**	**6.77**	**-9.45**	**-5.89**
Oklahoma[§§]							Data not available/ not reported									
Pennsylvania	**-5.59**	**-17.33**	**-16.05**	**-6.73**	**-4.23**	-0.69	No significant change	-1.04	**12.19**	-1.18	**-13.94**	**-13.35**	**13.92**	**9.79**	**-11.64**	**-10.15**
Rhode Island[**]	.	.	.	.	.	.	Data not available/ not reported	.	.	.	.	.	.	-3.18	2.98	-6.53
Tennessee	.	.	.	**10.31**	3.45	**9.74**	Significant increase	.	.	.	**7.39**	-2.75	**5.76**	-0.13	0.71	3.16
Utah	.	**10.55**	**10.53**	**27.13**	**12.2**	**12.12**	Significant increase	.	-0.75	**-11.37**	**20.75**	4.08	-0.77	1.94	6.57	4
Vermont	.	-8.36	-14.72	-4.94	**-17.09**	**-21.34**	Significant decrease	.	-0.12	-5.74	10.45	-11.88	-7.05	5.07	-3.66	-16.4
Virginia	**4.98**	**-6.6**	**-6.24**	**6.38**	-3.97	**-5.87**	Significant decrease	1.11	**9.87**	**-5.04**	-0.48	**-10.05**	**10.3**	**7.74**	**-10.16**	**-11.82**
Washington	.	.	.	**-8.1**	0.63	0.19	No significant change	.	.	.	-4.25	-3.98	4.99	**-4.79**	4.85	**-4.4**
West Virginia	**-27.29**	**-22.88**	**-24.28**	-0.17	**-11.26**	**-13.75**	Significant decrease	**-11.23**	-2.01	**-10.92**	-6.16	-5.86	-3.78	**17.44**	**-16.59**	**-8.5**
Wisconsin	**8.12**	**-23.82**	**-18.71**	**-24.36**	**10.58**	**19.66**	Significant increase	**29.51**	3.89	3.5	**-22.36**	**-8.74**	**10.86**	-3.69	**13.5**	-1.26

[*] Data come from states participating in CDC's Enhanced State Opioid Overdose Surveillance (ESOOS) program and are current as of April 15, 2019. Every three months, states share overdose data from ED visits to CDC, including syndromic or hospital billing data to identify all drug, opioid, and/or heroin overdoses that presented in the ED and demographic characteristics of those who overdosed, such as sex, age, and county of patient residence. States have several options for how they relay their ED data to CDC. States choose to share ED visits for suspected overdoses (e.g., all drug, opioid, and heroin) either directly with CDC using a secure server or they can allow CDC to have access to their states' data in the National Syndromic Surveillance Program's (NSSP) BioSense Platform. The number of states included in the calculations of quarterly and yearly change will vary and will increase over time as additional states share data with CDC. Comparisons between states should not be made due to variations in data quality, completeness, and reporting across states.

[†] To account for changes occurring across time, quarterly and yearly trends for the rate of ED visits involving suspected drug overdoses (e.g., ED visits involving drug overdoses divided by total ED visits and multiplied by 10,000) were analyzed by U.S. state. Yearly change, controlling for seasonal effects, was estimated as the change from the final quarter of previous year to the final quarter of the current year (e.g., first quarter 2018 to first quarter 2019). Quarterly rate changes were calculated for all quarters. Significance testing was conducted using chi-square tests. Data table provides the yearly and quarterly rate changes by state. Bolded estimates indicate statistically significant results between quarters.

[§] The case definitions used by states draw from multiple fields within ED data. Please see more information on the Case Definition webpage or CDC's March 2018 Vital Signs.

[¶] The following are several important caveats to consider when interpreting the data presented: (1) Data sent from facilities to health departments may be delayed or may stop for a period of time. When facilities begin sharing data again, information about visits during the lapse may never be shared; (2) For syndromic data, information from ~70% of visits arrive within 48 hours as the chief complaint of the visit. However, the chief complaint field may be incomplete. As updates to visits arrive weeks later, relevant overdose discharge diagnosis codes or revised chief complaint text may be received. Therefore, rates may change over time as the visit records are completed and new drug overdose visits are identified; (3) Because these data are not finalized based on toxicological results, they are not considered confirmed cases, but "suspected" overdoses. Data collected from syndromic surveillance should not be interpreted or represented as exact counts; and (4) Data likely represent an undercount, given inaccuracies in coding and missing chief complaint information.

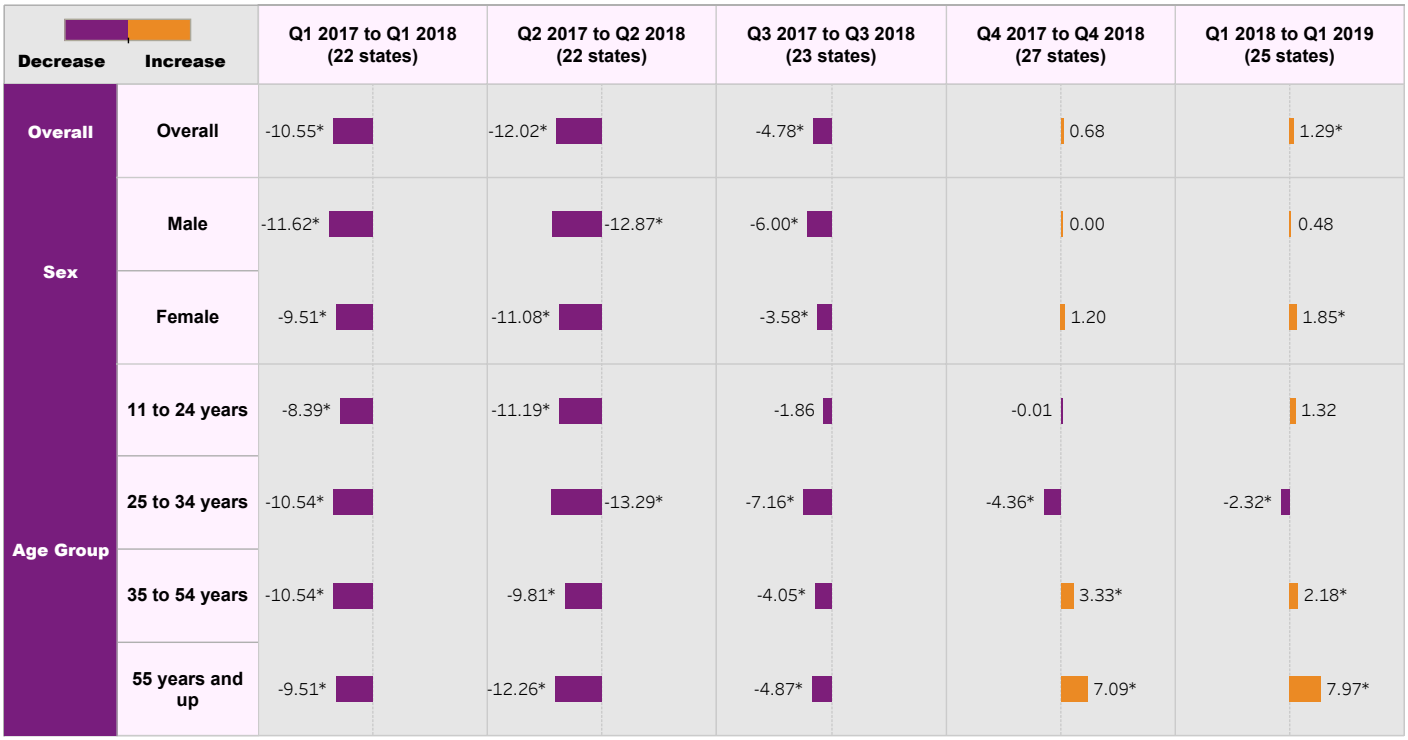
[**] The funded ESOOS state did not provide CDC enough quarters of data to calculate yearly percent change. Some states provided enough data to calculate some quarterly changes.

[††] The funded ESOOS state does not provide CDC estimates for ED visits for suspected all drug overdose.

[§§] The funded ESOOS state does not provide CDC ED data.

Annual Percent Changes in All Drug Overdoses for Selected States Providing Data, Q1 2017 to Q1 2019, by Sex and Age Group

CDC s Enhanced State Opioid Overdose Surveillance Program, Data Current as of July 15, 2019



*Statistically Significant

CDC's Enhanced State Opioid Overdose Surveillance (ESOOS) Program:* Annual Percent Changes† in All Drug Overdoses§ for Selected States Providing Data,¶ Q1 2017 (January 1, 2017–March 31, 2017) to Q1 2019 (January 1, 2019–March 31, 2019) by Sex and Age Group

	Yearly Percent Change				
	Q1 2017 to Q1 2018 (22 states)	Q2 2017 to Q2 2018 (22 states)	Q3 2017 to Q3 2018 (23 states)	Q4 2017 to Q4 2018 (27 states)	Q1 2018 to Q1 2019 (25 states)
Overall	**-10.55**	**-12.02**	**-4.78**	0.68	**1.29**
Sex					
Male	**-11.62**	**-12.87**	**-6**	0	0.48
Female	**-9.51**	**-11.08**	**-3.58**	1.2	**1.85**
Age group					
11–24	**-8.39**	**-11.19**	-1.86	-0.01	1.32
25–34	**-10.54**	**-13.29**	**-7.16**	**-4.36**	**-2.32**
35–54	**-10.54**	**-9.81**	**-4.05**	**3.33**	**2.18**
55 and up	**-9.51**	**-12.26**	**-4.87**	**7.09**	**7.97**

* Data come from states participating in CDC's Enhanced State Opioid Overdose Surveillance (ESOOS) program. Every three months, states share overdose data from ED visits to CDC, including syndromic or hospital billing data to identify all drug, opioid, and/or heroin overdoses that presented in the ED and demographic characteristics of those who overdosed, such as sex, age, and county of patient residence. States have several options for how they relay their ED data to CDC. States choose to share ED visits for suspected overdoses (e.g., all drug, opioid, and heroin) either directly with CDC using a secure server or they can allow CDC to have access to their states' data in the National Syndromic Surveillance Program's (NSSP) BioSense Platform. The number of states included in the calculations of quarterly and yearly change will vary and will increase over time as additional states share data with CDC. Comparisons between states should not be made due to variations in data quality, completeness, and reporting across states.

† To account for changes occurring across time, quarterly and yearly trends for the rate of ED visits involving suspected drug overdoses (e.g., ED visits involving drug overdoses divided by total ED visits and multiplied by 10,000) were analyzed overall and by sex, age group, and U.S. state. Quarterly rate changes were calculated for all quarters. Yearly change, controlling for seasonal effects, was estimated as the change from the final quarter of previous year to the final quarter of the current year (e.g., first quarter 2018 to first quarter 2019). Significance testing was conducted using chi-square tests. Data table provides quarterly and yearly estimates of change for all ESOOS states with available data overall, and by sex and age. Bolded estimates indicate statistically significant results between quarters.

§ The case definitions used by states draw from multiple fields within ED data. Please see more information on the Case Definition webpage or CDC's March 2018 Vital Signs.

¶ The following are several important caveats to consider when interpreting the data presented: (1) Data sent from facilities to health departments may be delayed or may stop for a period of time. When facilities begin sharing data again, information about visits during the lapse may never be shared; (2) For syndromic data, information from ~70% of visits arrive within 48 hours as the chief complaint of the visit. However, the chief complaint field may be incomplete. As updates to visits arrive weeks later, relevant overdose discharge diagnosis codes or revised chief complaint text may be received. Therefore, rates may change over time as the visit records are completed and new drug overdose visits are identified; (3) Because these data are not finalized based on toxicological results, they are not considered confirmed cases, but "suspected" overdoses. Data collected from syndromic surveillance should not be interpreted or represented as exact counts; and (4) Data likely represent an undercount, given inaccuracies in coding and missing chief complaint information.

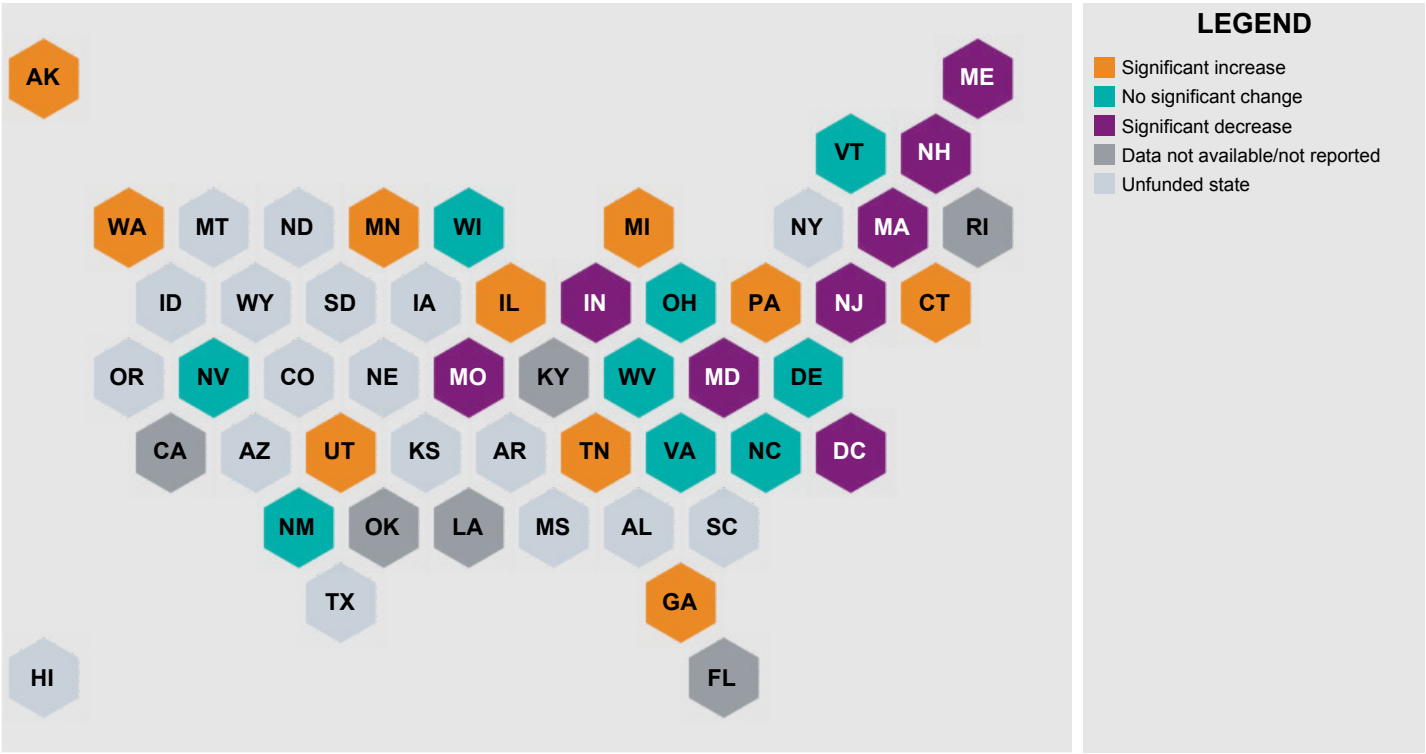
ALL OPIOIDS

Suspected overdose estimates for a given point in time may change as information on the ED visit is updated, so data should be interpreted with caution. For the most recent quarter change, the fourth quarter (October–December) of 2018 to the first quarter (January–March) of 2019, ESOOS states, including the District of Columbia, reported a 7.2% decrease in opioid overdoses.

Overall, suspected opioid overdoses in ESOOS states, including the District of Columbia, increased 3.5% from the first quarter of 2018 to the first quarter of 2019. Ten states (Alaska, Connecticut, Georgia, Illinois, Michigan, Minnesota, Pennsylvania, Tennessee, Utah, and Washington) reported a significant annual increase in all drug overdoses during this time period. Significant decreases in all drug overdoses during this time period occurred in the District of Columbia and seven states (Indiana, Maine, Maryland, Massachusetts, Missouri, New Jersey, and New Hampshire).[1]

Trends in Emergency Department Visits for Suspected Opioid Overdose, Q1 2018 to Q1 2019

CDC s Enhanced State Opioid Overdose Surveillance Program, Data Current as of July 15, 2019



CDC's Enhanced State Opioid Overdose Surveillance (ESOOS) Program:* Trends† in Emergency Department Visits for Suspected Opioid Overdose§ for Selected States Providing Data, Q4 2016 (October 1, 2016–December 31, 2016) to Q4 2018 (October 1, 2018–December 31, 2018),¶ by State

	Yearly Percent Change							Quarterly Percent Change								
	Q4 2016 to Q4 2017 (20 states)	Q1 2017 to Q1 2018 (20 states)	Q2 2017 to Q2 2018 (20 states)	Q3 2017 to Q3 2018 (20 states)	Q4 2017 to Q4 2018 (20 states)	Q1 2018 to Q1 2019 (20 states)	Category, Q1 2018 to Q1 2019	Q4 2016 to Q1 2017 (20 states)	Q1 2017 to Q2 2017 (24 states)	Q2 2017 to Q3 2017 (24 states)	Q3 2017 to Q4 2017 (26 states)	Q4 2017 to Q1 2018 (30 states)	Q1 2018 to Q2 2018 (30 states)	Q2 2018 to Q3 2018 (30 states)	Q3 2018 to Q4 2018 (30 states)	Q4 2018 to Q1 2019 (28 states)
Overall	**5.43**	**-10.26**	**-10.9**	**-6.3**	0.44	**3.51**	Significant increase	**6.47**	**13.01**	-0.56	**-9.32**	**-10.02**	**12.82**	**2.8**	**-4.29**	**-7.2**
State																
Alaska	.	.	.	.	8.28	**79.18**	Significant increase	.	.	.	.	**-32.77**	30.38	1.83	21.31	11.24
California**	-1.33	**12.86**	1.57	**7.71**	**14.37**	.	Data not available/ not reported	**-12.08**	**23.98**	2.62	**-11.79**	0.56	**11.58**	**8.82**	**-6.34**	**.**
Connect-icut	.	.	.	.	**29.27**	**16.71**	Significant increase	.	.	.	.	-8.99	**49.67**	1.81	-6.8	**-17.83**
Delaware	.	**35.36**	**21.24**	**25.96**	**19.08**	9.05	No significant change	.	**35.49**	**15.36**	-6.14	-7.73	**21.36**	**19.85**	**-11.26**	**-15.51**
District of Columbia	-9.5	**-28.54**	**-56.24**	**-47.22**	**-36**	**-21.95**	Significant decrease	-4.41	**58.24**	**-19.18**	**-25.97**	**-24.53**	-3.1	-2.51	-10.23	-7.95
Florida§§							Data not available/ not reported									
Georgia	-4.83	**-15.07**	-3.47	-10.05	9.63	**25.63**	Significant increase	-2.87	-8.84	0.4	7.06	**-13.33**	3.62	-6.44	**30.48**	-0.67
Illinois	**16.26**	**7.05**	**11.33**	**-8.66**	**17.05**	**5.15**	Significant increase	3.85	1.81	**29.16**	**-14.87**	-4.38	**5.89**	**5.97**	**9.09**	**-14.1**
Indiana	**81.36**	**34.82**	**31.34**	4.08	**-20.33**	**-13.53**	Significant decrease	**10.41**	**10.48**	**21.98**	**21.88**	**-17.92**	7.63	-3.34	-6.7	**-10.91**
Kentucky**	**17.61**	**-25.72**	**-27.85**	.	.	.	Data not available/ not reported	**43.21**	-1.68	**-10.65**	-6.51	**-9.56**	-4.49	.	.	.
Louisiana**	.	.	.	.	8.33	.	Data not available/ not reported	.	.	.	.	15.06	-3.33	2.13	-4.64	.
Maine	**22.39**	8.35	-4.85	**-21.88**	**-24.02**	**-24.24**	Significant decrease	-4.14	**18.66**	5.87	1.63	**-15.14**	4.2	-13.07	-1.15	**-15.39**
Maryland	**-13.48**	-6.6	**-25.69**	**-25.34**	1.59	**-9.32**	Significant decrease	-1.34	**24.92**	**-18.77**	**-13.58**	6.5	-0.61	**-18.38**	**17.59**	-4.94
Massa-chusetts	**-14.39**	**-7.58**	2.92	**-17.85**	**-4.36**	**-5.98**	Significant decrease	**-11.69**	3.1	**18.98**	**-20.98**	**-4.66**	**14.81**	**-5.03**	**-8**	**-6.27**
Michigan	.	.	.	.	**10.16**	**27.66**	Significant increase	.	.	.	.	0	**7.93**	7.27	-4.85	**15.89**
Minnesota	.	-3.38	-1.03	**-17.38**	8.34	**65.15**	Significant increase	.	-2.5	**33.27**	-1.44	**-24.56**	-0.13	11.26	**29.24**	**15**
Missouri	-1.42	1.58	7	-4.91	-0.2	**-20.27**	Significant decrease	-2.07	**10.25**	7.02	**-14.68**	0.91	**16.13**	-4.9	**-10.45**	**-19.39**

Table of trends continues on next page.

Nevada	-6.62	3.35	1.71	-9.81	-7.79	-10.72	No significant change	-8.51	10.86	1.83	-9.59	1.26	9.1	-9.71	-7.56	-1.96
New Hampshire	**-13.43**	-7.06	**-32.46**	**-23.82**	**-23.83**	**-23.87**	Significant decrease	**-17.91**	**29.67**	-8.76	-10.86	-11.87	-5.77	2.91	-10.86	-11.92
New Jersey	1.47	**-8.62**	**9.42**	**20.57**	**14.17**	**-6.9**	Significant decrease	**9.48**	**6**	**-6.25**	**-6.73**	-1.4	**26.93**	3.3	**-11.68**	**-19.6**
New Mexico	-10.72	-12.33	11.14	7.57	-12.64	9.78	No significant change	2.93	-5.53	-9.62	1.58	1.08	**19.76**	-12.52	**-17.51**	**27.02**
North Carolina	**13.55**	2.96	-2.62	**-11.18**	**-7.99**	-3.55	No significant change	2.27	**14.35**	**12.69**	**-13.84**	**-7.27**	**8.15**	2.79	**-10.74**	-2.79
Ohio	-4.3	**-49.41**	**-54.15**	**-19.62**	**-26.7**	1.6	No significant change	**25.86**	**21.66**	**-31.99**	**-8.1**	**-33.46**	**10.26**	**19.22**	**-16.19**	**-7.78**
Oklahoma[§§]							Data not available/ not reported									
Pennsylvania	**19.95**	**-21.85**	**-20.42**	**-5.38**	-1.01	**15.26**	Significant increase	**18.24**	**25.27**	**-5.75**	**-14.08**	**-22.96**	**27.57**	**12.06**	**-10.11**	**-10.31**
Rhode Island[**]	.	.	.	.	.	.	Data not available/ not reported	.	.	.	.	.	.	1.94	7.19	-9.98
Tennessee	.	.	.	**15.6**	3.23	**21.99**	Significant increase	.	.	.	**19.41**	**-7.99**	5.42	-0.2	6.64	**8.72**
Utah	.	**161.27**	**128.35**	**100.09**	**36**	**15.78**	Significant increase	.	15.73	14.45	**58.43**	**24.5**	1.15	0.29	7.68	5.99
Vermont	.	-2.22	**33.23**	-5.16	-20.38	-21.37	No significant change	.	-14.02	**33.46**	-7.42	-7.96	17.15	-4.99	-22.28	-9.11
Virginia	7.67	**-15.51**	-2.32	4.82	0.53	-5.46	No significant change	8.11	**11.26**	-4.35	-6.42	**-15.17**	**28.64**	2.64	**-10.25**	**-20.22**
Washington				-3.78	**10.97**	**14.24**	Significant increase	.	.	.	-5.17	-7.68	**15.7**	-5.02	**9.37**	-4.96
West Virginia	**-41.86**	**-39.18**	**-35.35**	10.65	1.61	6.53	No significant change	**-14.41**	-0.64	**-20.52**	**-13.98**	-10.46	5.61	**36.02**	**-21**	-6.13
Wisconsin	**14.43**	**-39.4**	**-23.36**	**-40.52**	3.96	7.23	No significant change	**64.65**	0.51	-2.64	**-28.97**	**-12.81**	**27.12**	**-24.44**	**24.15**	-10.07

[*] Data come from states participating in CDC's Enhanced State Opioid Overdose Surveillance (ESOOS) program and are current as of April 15, 2019. Every three months, states share overdose data from ED visits to CDC, including syndromic or hospital billing data to identify all drug, opioid, and/or heroin overdoses that presented in the ED and demographic characteristics of those who overdosed, such as sex, age, and county of patient residence. States have several options for how they relay their ED data to CDC. States choose to share ED visits for suspected overdoses (e.g., all drug, opioid, and heroin) either directly with CDC using a secure server or they can allow CDC to have access to their states' data in the National Syndromic Surveillance Program's (NSSP) BioSense Platform. The number of states included in the calculations of quarterly and yearly change will vary and will increase over time as additional states share data with CDC. Comparisons between states should not be made due to variations in data quality, completeness, and reporting across states.

[†] To account for changes occurring across time, quarterly and yearly trends for the rate of ED visits involving suspected drug overdoses (e.g., ED visits involving drug overdoses divided by total ED visits and multiplied by 10,000) were analyzed by U.S. state. Yearly change, controlling for seasonal effects, was estimated as the change from the final quarter of previous year to the final quarter of the current year (e.g., fourth quarter 2017 to fourth quarter 2018). Quarterly rate changes were calculated for all quarters. Significance testing was conducted using chi-square tests. Data table provides the yearly and quarterly rate changes by state. Bolded estimates indicate statistically significant results between quarters.

[§] The case definitions used by states draw from multiple fields within ED data. Please see more information on the Case Definition webpage or CDC's March 2018 Vital Signs.

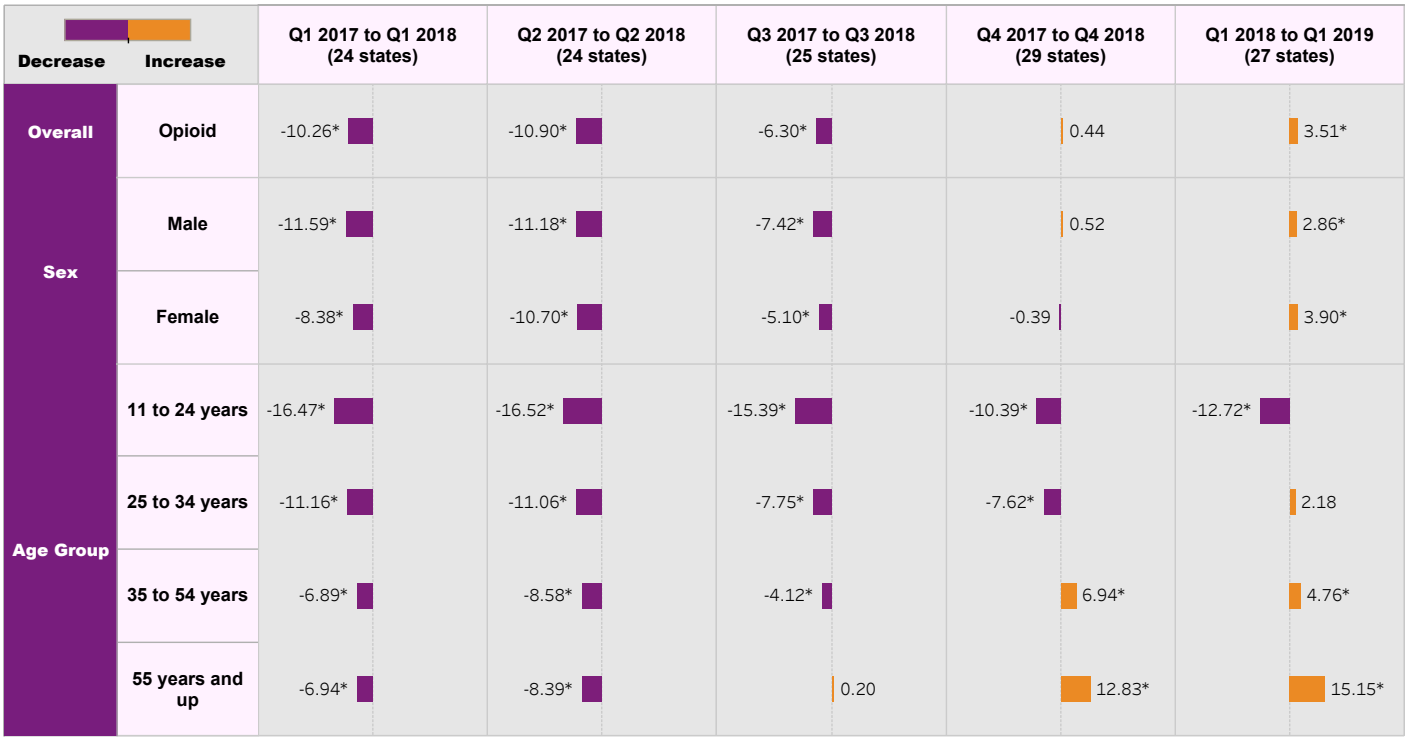
[¶] The following are several important caveats to consider when interpreting the data presented: (1) Data sent from facilities to health departments may be delayed or may stop for a period of time. When facilities begin sharing data again, information about visits during the lapse may never be shared; (2) For syndromic data, information from ~70% of visits arrive within 48 hours as the chief complaint of the visit. However, the chief complaint field may be incomplete. As updates to visits arrive weeks later, relevant overdose discharge diagnosis codes or revised chief complaint text may be received. Therefore, rates may change over time as the visit records are completed and new drug overdose visits are identified; (3) Because these data are not finalized based on toxicological results, they are not considered confirmed cases, but "suspected" overdoses. Data collected from syndromic surveillance should not be interpreted or represented as exact counts; and (4) Data likely represent an undercount, given inaccuracies in coding and missing chief complaint information.

[**] The funded ESOOS state did not provide CDC enough quarters of data to calculate yearly percent change. Some states provided enough data to calculate some quarterly changes.

[§§] The funded ESOOS state does not provide CDC ED data.

Annual Percent Changes in Opioid Overdoses for Selected States Providing Data, Q1 2017 to Q1 2019, by Sex and Age Group

CDC s Enhanced State Opioid Overdose Surveillance Program, Data Current as of July 15, 2019



*Statistically Significant

CDC's Enhanced State Opioid Overdose Surveillance (ESOOS) Program:[*] Annual Percent Changes[†] in Opioid Overdoses[§] for Selected States Providing Data,[¶] Q1 2017 (January 1, 2017–March 31, 2017) to Q1 2019 (January 1, 2019–March 31, 2019), by Sex and Age Group

	Yearly Percent Change				
	Q1 2017 to Q1 2018 (24 states)	Q2 2017 to Q2 2018 (24 states)	Q3 2017 to Q3 2018 (25 states)	Q4 2017 to Q4 2018 (29 states)	Q1 2018 to Q1 2019 (27 states)
Overall	**-10.26**	**-10.9**	**-6.3**	0.44	**3.51**
Sex					
Male	**-11.59**	**-11.18**	**-7.42**	0.52	**2.86**
Female	**-8.38**	**-10.7**	**-5.1**	-0.39	**3.9**
Age group					
11–24	**-16.47**	**-16.52**	**-15.39**	**-10.39**	**-12.72**
25–34	**-11.16**	**-11.06**	**-7.75**	**-7.62**	2.18
35–54	**-6.89**	**-8.58**	**-4.12**	**6.94**	**4.76**
55 and up	**-6.94**	**-8.39**	0.2	**12.83**	**15.15**

[*] Data come from states participating in CDC's Enhanced State Opioid Overdose Surveillance (ESOOS) program. Every three months, states share overdose data from ED visits to CDC, including syndromic or hospital billing data to identify all drug, opioid, and/or heroin overdoses that presented in the ED and demographic characteristics of those who overdosed, such as sex, age, and county of patient residence. States have several options for how they relay their ED data to CDC. States choose to share ED visits for suspected overdoses (e.g., all drug, opioid, and heroin) either directly with CDC using a secure server or they can allow CDC to have access to their states' data in the National Syndromic Surveillance Program's (NSSP) BioSense Platform. The number of states included in the calculations of quarterly and yearly change will vary and will increase over time as additional states share data with CDC. Comparisons between states should not be made due to variations in data quality, completeness, and reporting across states.

[†] To account for changes occurring across time, quarterly and yearly trends for the rate of ED visits involving suspected drug overdoses (e.g., ED visits involving drug overdoses divided by total ED visits and multiplied by 10,000) were analyzed overall and by sex, age group, and U.S. state. Quarterly rate changes were calculated for all quarters. Yearly change, controlling for seasonal effects, was estimated as the change from the final quarter of previous year to the final quarter of the current year (e.g., fourth quarter 2016 to fourth quarter 2017). Significance testing was conducted using chi-square tests. Data table provides quarterly and yearly estimates of change for all ESOOS states with available data overall, and by sex and age. Bolded estimates indicate statistically significant results between quarters.

[§] The case definitions used by states draw from multiple fields within ED data. Please see more information on the Case Definition webpage or CDC's March 2018 Vital Signs.

[¶] The following are several important caveats to consider when interpreting the data presented: (1) Data sent from facilities to health departments may be delayed or may stop for a period of time. When facilities begin sharing data again, information about visits during the lapse may never be shared; (2) For syndromic data, information from ~70% of visits arrive within 48 hours as the chief complaint of the visit. However, the chief complaint field may be incomplete. As updates to visits arrive weeks later, relevant overdose discharge diagnosis codes or revised chief complaint text may be received. Therefore, rates may change over time as the visit records are completed and new drug overdose visits are identified; (3) Because these data are not finalized based on toxicological results, they are not considered confirmed cases, but "suspected" overdoses. Data collected from syndromic surveillance should not be interpreted or represented as exact counts; and (4) Data likely represent an undercount, given inaccuracies in coding and missing chief complaint information.

REFERENCE

[1]CDC's Enhanced State Opioid Overdose Surveillance (ESOOS) Program, 32 states and the District of Columbia reporting, July 2019.