

NON-FATAL OPIOID OVERDOSE SURVEILLANCE

FLORIDA 2017



Florida Department of Health –Enhanced State Opioid Overdose Surveillance

FLESOOS.com

The purpose of this report is to describe and identify non-fatal (morbidity) geographically-specific and other statistically significant changes in the rate of **any drug** and **opioid-involved overdoses**, which occurred in Florida during 2017. Non-fatal overdose data were analyzed by the Florida Department of Health's Enhanced State Opioid Overdose Surveillance Program, using Florida's Emergency Medical Services Tracking and Reporting System (EMSTARS) data.

Key Findings in Florida 2017:

- Any non-fatal drug-involved overdoses accounted for 37,696 EMS transports and are estimated to occur at a rate of 204.9 per 100,000 persons (10.0% increase from 2016).
- Non-fatal opioid-involved overdoses accounted for 15,600 EMS transports and are estimated to occur at a rate of 84.8 per 100,000 persons (22.4% increase from 2016).
- The highest rates per 100,000 persons were observed during 2017 Q2 (April—June) for any drug and opioid-involved overdose, 59.0 and 26.3 respectively.
- Persons aged 25-34 years were more likely than any other age group to experience non-fatal drug-involved or opioid-involved overdose.
- Between 2016—2017, statistically significant opioid-involved overdose rate differences were observed for blacks, non-Hispanics, and Hispanics. Overall when comparing non-Hispanic whites to other non-Hispanic races, non-Hispanic whites had the highest frequency and rate for any non-fatal drug or opioid-involved overdose. When comparing non-Hispanics to Hispanics, non-Hispanics were 1.18 times higher risk than Hispanics for non-fatal drug overdose and were 1.55 times higher risk than Hispanics for non-fatal opioid-involved overdose.
- Overall between 2016—2017, we observed statistically significant rate increases in any non-fatal drug overdose for men (217.1 to 250.1) and women (156.9 to 161.9) of “All Ages.” Likewise, we estimated statistically significant rate increases in opioid-involved drug overdose for men (79.5 to 108.8) and women (52.8 to 62.1) of “All Ages.”
- In descending order, the most substantial number of non-fatal drug-involved overdose occurred in Palm Beach, Hillsborough, Orange, Miami-Dade, and Broward counties. The highest rates, in descending order, occurred in Alachua, Palm Beach, Manatee, Hillsborough, and Walton counties. Counties with the highest positive percentage rate change from 2016 to 2017 included Columbia, Sumter, and Lake. Whereas the most substantial decline in percentage rate

change between 2016 and 2017 are Brevard, Suwannee, and Escambia counties.

- In descending order, the most substantial number of non-fatal opioid-involved overdose occurred in Palm Beach, Orange, Pinellas, Duval, and Hillsborough counties. The highest rates, in descending order, occurred in Palm Beach, Manatee, Pinellas, Duval, and Dixie counties. Counties with the highest rate increase from 2016 to 2017 included Columbia, Manatee, and Miami-Dade. Whereas the most substantial decline in percentage rate change between 2016 and 2017 are Suwannee, Highlands, and Brevard counties.

Non-fatal Overdose (Morbidity), Florida 2017

DATA SOURCE

Non-fatal overdose counts were derived from Florida's EMSTARS database, which receives information from EMS agencies that represent ~90% of the total number of prehospital EMS runs in Florida.

CASE DEFINITIONS

	EMSTARS V (1.4)	EMSTARS V (3)
<i>Any drug overdose</i>	The primary or secondary impression is "Poisoning/Drug Ingestion;" or, any case where the medication administered is Naloxone, and the patient exhibits a positive response, no matter the primary or secondary impression listed.	The primary or secondary impression is any of the following ICD-10 CM "T36 - T50, F11 - F16, F18 - F19" codes.
<i>Opioid-involved overdose</i>	EMSTARS V (1.4) The medication administered is Naloxone and patient exhibits positive response, no matter the primary or secondary impression listed.	EMSTARS V (3) The primary or secondary impression of any of the following ICD-10 CM "T40.1 - T40.4, T40.60, T40.69, F11" codes.

OTHER DEFINITIONS OR LIMITATIONS

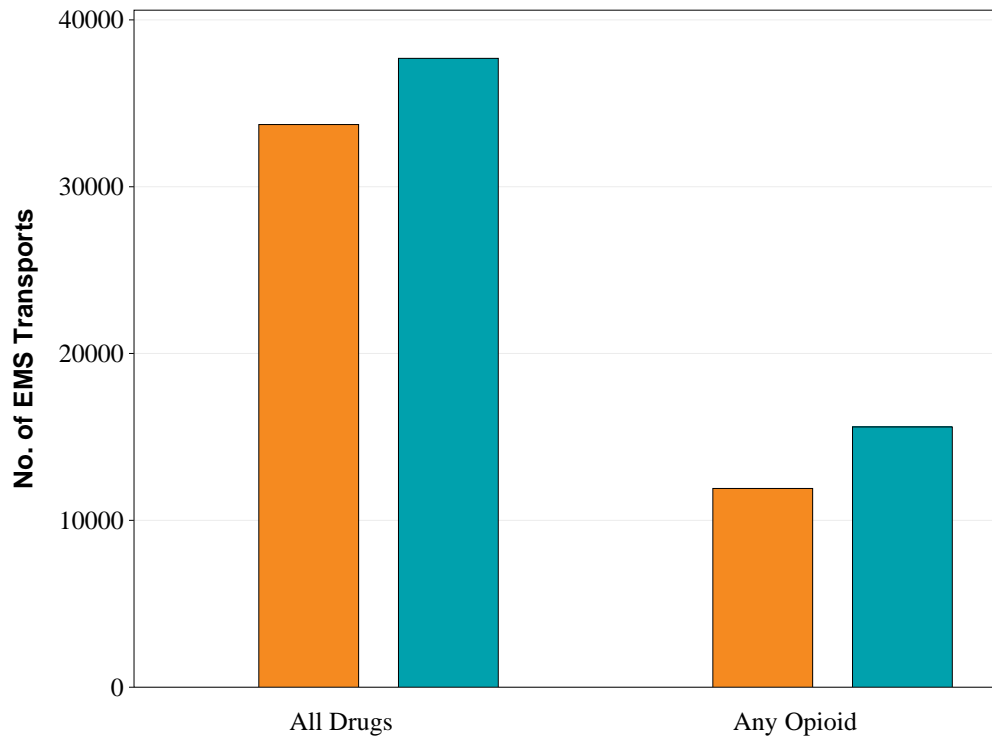
EMS transports indicate the incident-patient record meets the following criteria: 1) are responding to an emergency medical situation (e.g., response to 9-1-1 call) and transported to a hospital; or 2) are responding to an emergency medical situation where the patient was treated and refused transport to the hospital; 3) exclude EMS transfers when a patient is transferred between hospitals or medical care facilities; 4) exclude children 10 years of age or younger.

Rates per 100,000 persons were estimated using data from the 2016 U.S. Census Bureau, 2012-2016 American Community Survey 5-Year Estimates. In 2016, the estimated population of Florida ≥ 11 years of age was 18,109,300. Further, the U.S. Census Bureau estimated an increase of 1.6% for the Floridian population between 2016 to 2017. In 2017, we estimated the population of Florida ≥ 11 years of age to be 18,399,049.

ICD-10 CM CODE DESCRIPTION

Poisoning by: T36-T50 (range includes all drugs), T40.1 (heroin), T40.2 (other opioids), T40.3 (methadone), T40.4 (other synthetic narcotics), T40.60 (unspecified narcotics), T40.69 (other narcotics), F11 (opioid related), F12 (cannabis related), F13 (sedative, hypnotic, or anxiolytic related), F14 (cocaine related), F15 (other stimulant related), F16 (hallucinogen related), F18 (inhalant related), and F19 (other psychoactive substance related).

Non-fatal Overdose by Year and Drug Type, Florida 2016-2017

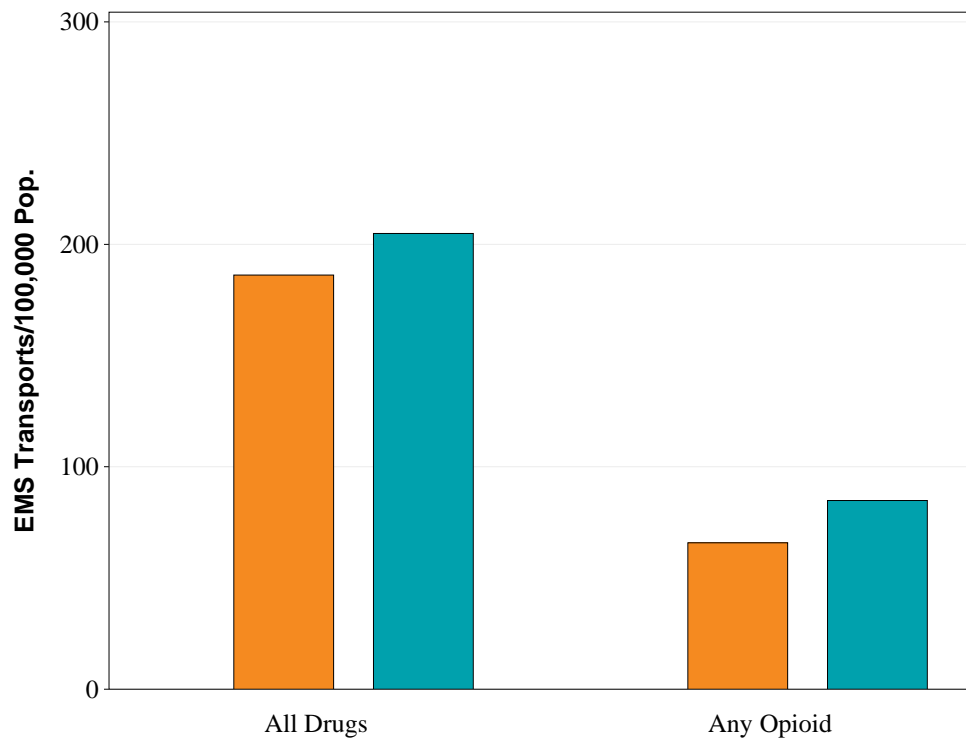


2016	33,721	11,911
2017	37,696	15,600

Note: Any opioid may include prescription or illicit opioids. Categories are not mutually exclusive.

- 37,696 total any non-fatal drug overdose occurrences were counted for 2017. Likewise, 15,600 non-fatal opioid-involved overdoses were observed.

Non-fatal Overdose Rate by Drug Type and Year, Florida 2016-2017

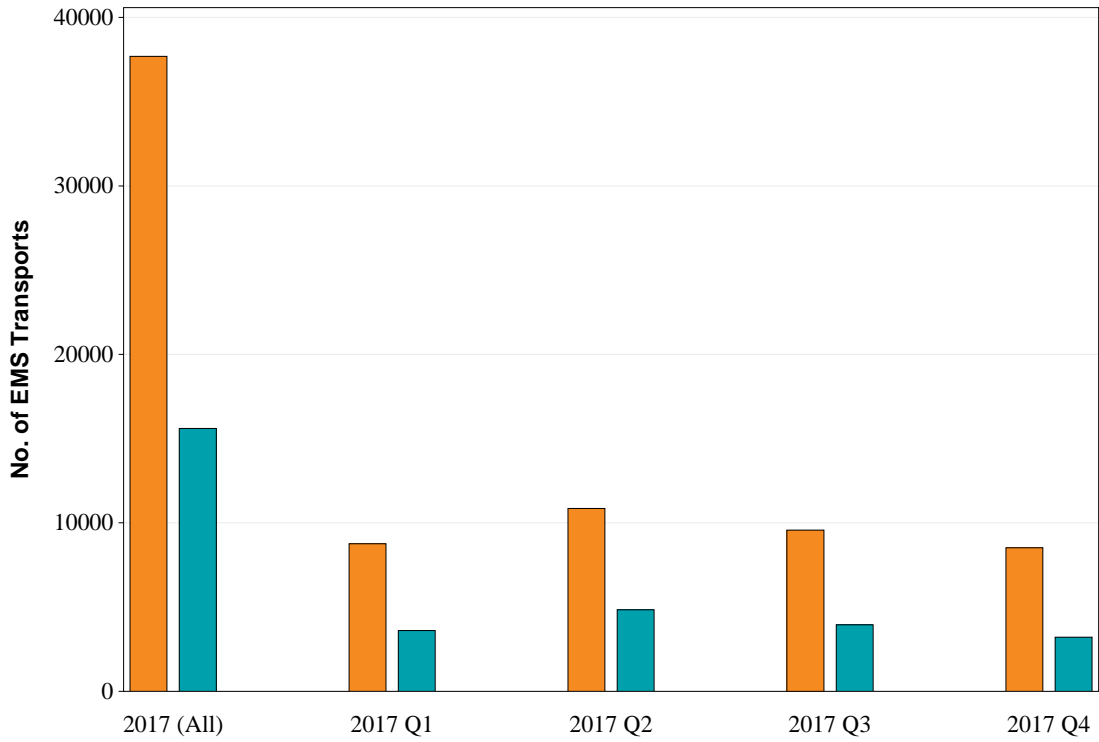


2016	186.2	65.8
2017	204.9	84.8

Note: Any opioid may include prescription or illicit opioids. Categories are not mutually exclusive.

- The 2017 non-fatal all-cause drug overdose rate was 204.9 per 100,000 persons. Similarly, non-fatal opioid-involved overdose rate was 84.8 per 100,000 persons.

Non-fatal Overdose by Reporting Quarter and Drug Type, Florida 2017

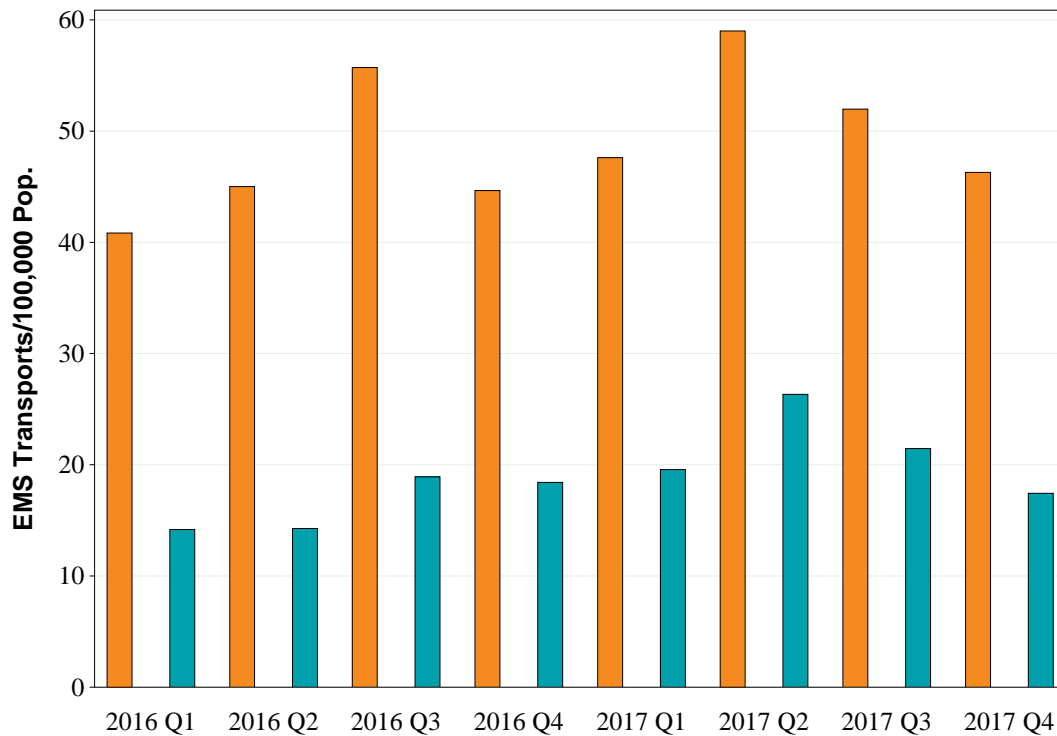


Any Drug	37,696	8,759	10,856	9,564	8,517
Opioid	15,600	3,601	4,844	3,948	3,207

Note: Any opioid may include prescription or illicit opioids. Categories are not mutually exclusive.

Note: Q1: Jan-Mar; Q2: Apr-Jun; Q3: Jul-Sep; Q4: Oct-Dec

Non-fatal Overdose Rate Trends by Drug Type, Florida 2016-2017



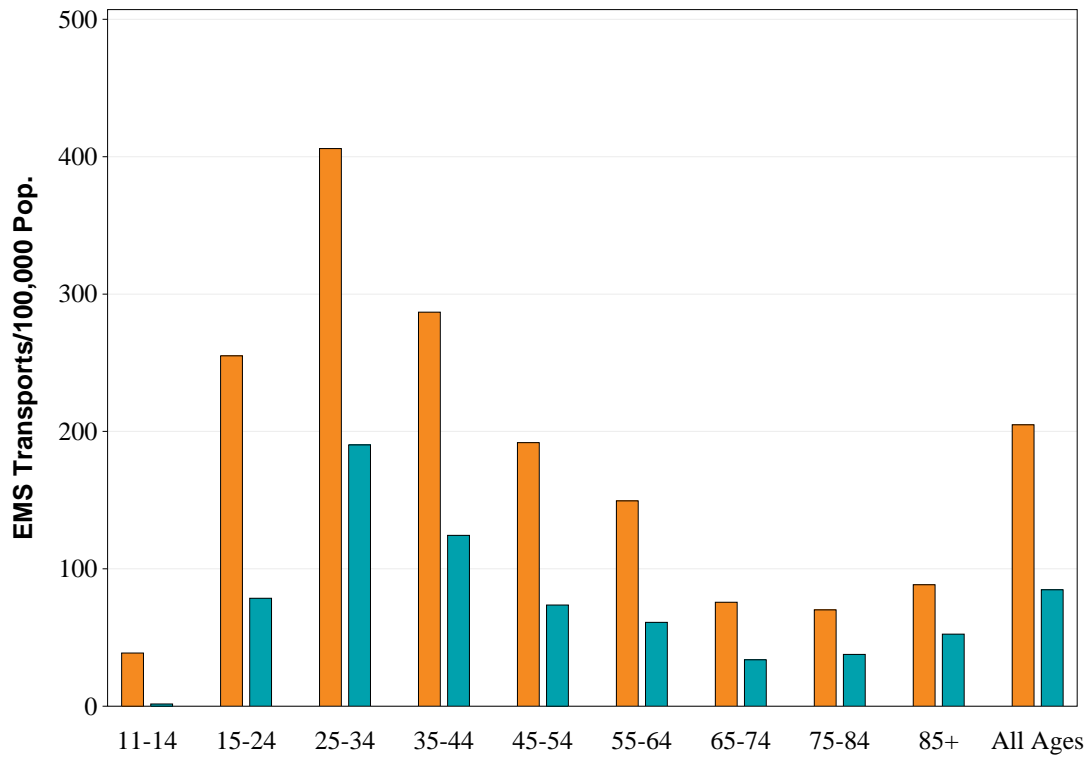
Any Drug	40.8	45.0	55.7	44.6	47.6	59.0	52.0	46.3
Opioid	14.2	14.3	18.9	18.4	19.6	26.3	21.5	17.4

Note: Any opioid may include prescription or illicit opioids. Categories are not mutually exclusive.

Note: Q1: Jan-Mar; Q2: Apr-Jun; Q3: Jul-Sep; Q4: Oct-Dec

- Quarter-over-quarter trends were not observed for any drug or any opioid between 2016 and 2017.
- The highest rates per 100,000 persons were observed during 2017 Q2 (April-June) for any drug and opioid-involved overdose, 59.0 and 26.3 respectively.

Non-fatal Overdose Rate by Age and Drug Type, Florida 2017

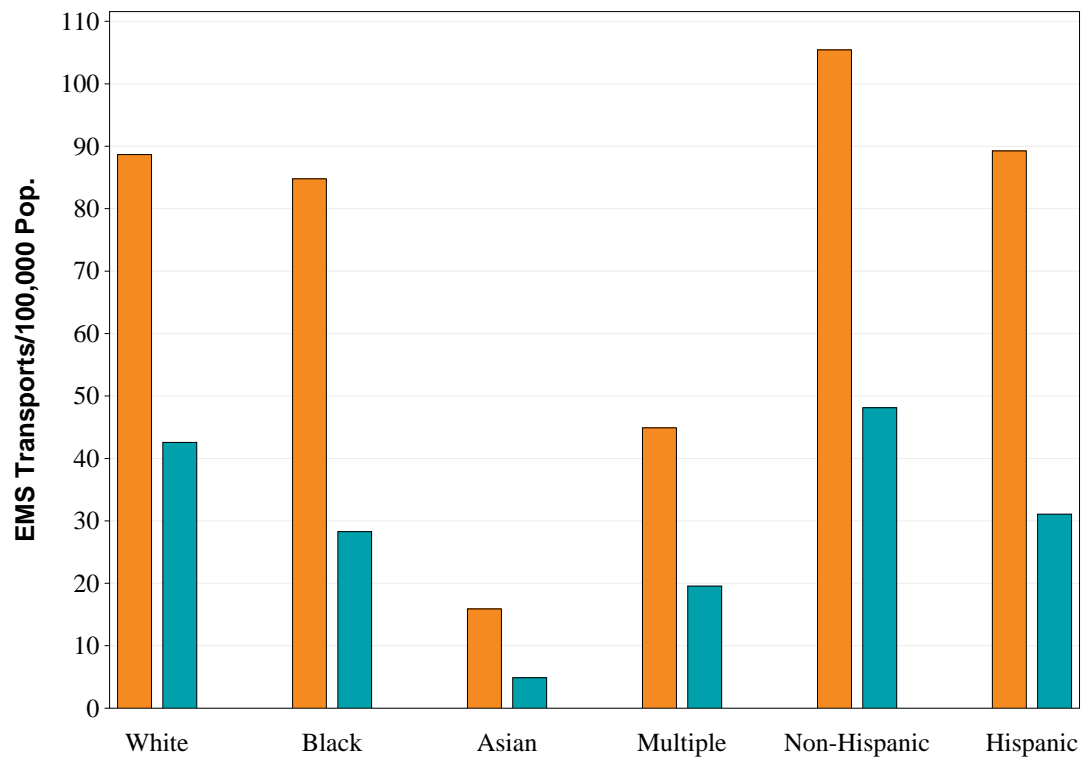


Any Drug	38.7	255.0	406.0	286.9	191.8	149.5	75.7	70.1	88.3	204.9
Opioid	1.6	78.5	190.3	124.4	73.6	61.1	33.8	37.7	52.4	84.8

Note: Any opioid may include prescription or illicit opioids. Categories are not mutually exclusive.
Note: All Ages: 11-years and older

- Persons aged 25-34 years were at higher risk than any other age group for non-fatal drug-involved or opioid-involved overdose.

Non-fatal Overdose Rate by Race/Ethnicity and Drug Type, Florida 2017



Any Drug	88.7	84.8	15.9	44.9	105.4	89.2
Opioid	42.6	28.3	4.9	19.6	48.1	31.1

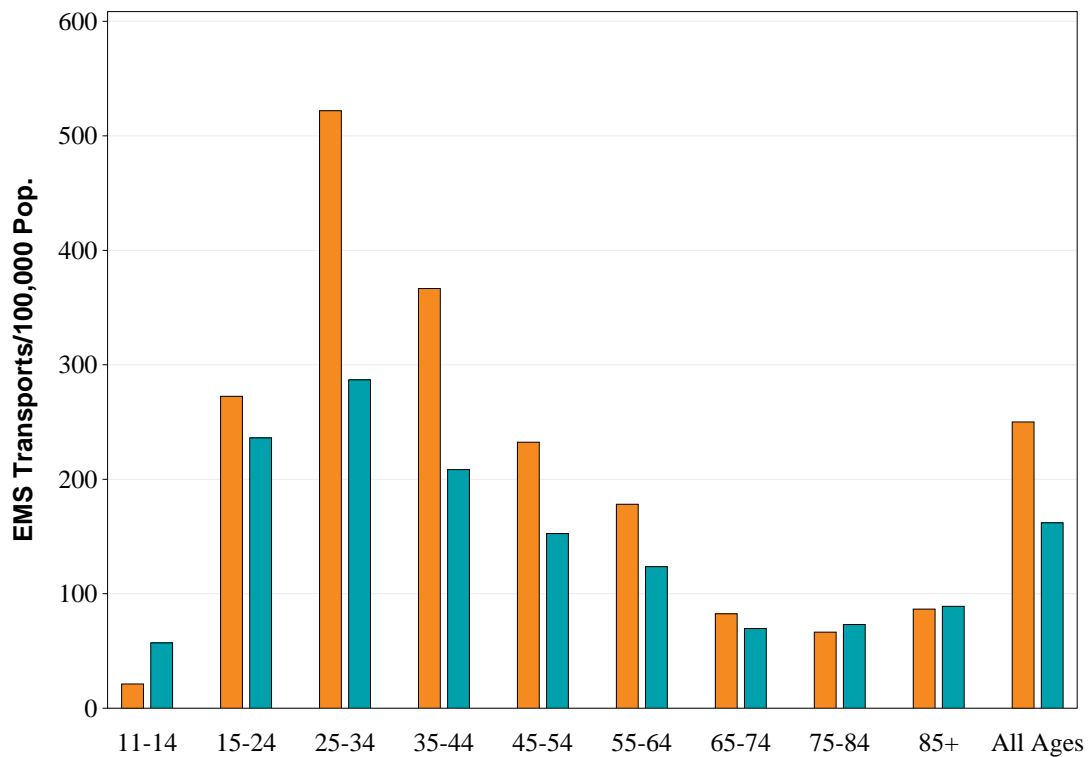
Note: Any opioid may include prescription or illicit opioids. Categories are not mutually exclusive.

Note: White: Whites only; Black: Blacks only; Asian: Asian only; Multiple: more than one race; Hispanic: regardless of race; Non-Hispanic: regardless of race.

- From 2016 to 2017, we observed significant declines in any drug-involved overdose rate for whites (25.9% decrease), blacks (21.3% decrease), Asians (41.3% decrease), multiple races (22.5% decrease), and non-Hispanics (25.1% decrease).
- Among the Hispanic population, we estimated a significant 14.4% rate increase in any drug-related non-fatal overdose from 2016 to 2017.
- Between 2016 to 2017, we observed declines in opioid-involved overdose rate only among Asians (32.9% decrease).
- We estimated statistically significant opioid-involved overdose rate differences for blacks, non-Hispanics, and Hispanics between 2016 and 2017.

- Overall when comparing non-Hispanic whites to other non-Hispanic races, non-Hispanic whites had the highest frequency and rate for any non-fatal drug or opioid-involved overdose.
- When comparing non-Hispanics to Hispanics, non-Hispanics were 1.18 times higher risk than Hispanics for non-fatal drug overdose and were 1.55 times higher risk than Hispanics for non-fatal opioid-involved overdose.

Non-fatal Any Drug Overdose Rate by Sex and Age, Florida 2017



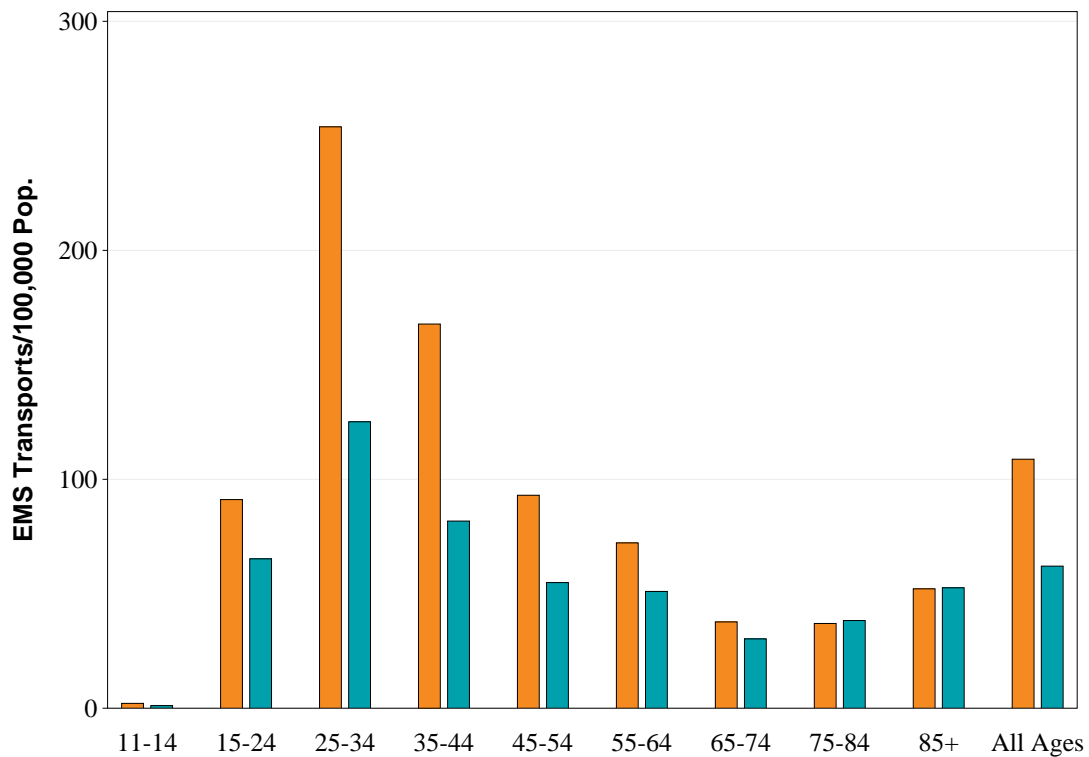
Male	21.2	272.5	522.0	366.6	232.3	178.2	82.5	66.4	86.5	250.1
Female	57.0	236.1	286.9	208.4	152.6	123.6	69.6	73.1	88.9	161.9

Note: Any opioid may include prescription or illicit opioids. Categories are not mutually exclusive.

Note: All Ages: 11-years and older

- Overall between 2016—2017, we observed statistically significant rate increases in any non-fatal drug overdose for men (217.1 to 250.1) and women (156.9 to 161.9) of “All Ages.”
 - Among males 15-24, 25-34, and 35-44-year age groups, significant rate differences for any drug-involved overdose were observed.
 - Among females 25-34 and 35-44-year age groups, significant rate differences for any drug-involved overdose were observed.
- Males aged 25-34 years experienced non-fatal all-cause drug overdose more frequently and at a higher rate than females of the same age category, in 2017.
- Overall in 2017, males, particularly younger men, were transported for any non-fatal drug overdose at a higher rate than females.

Non-fatal Opioid-Involved Overdose Rate by Sex and Age, Florida 2017

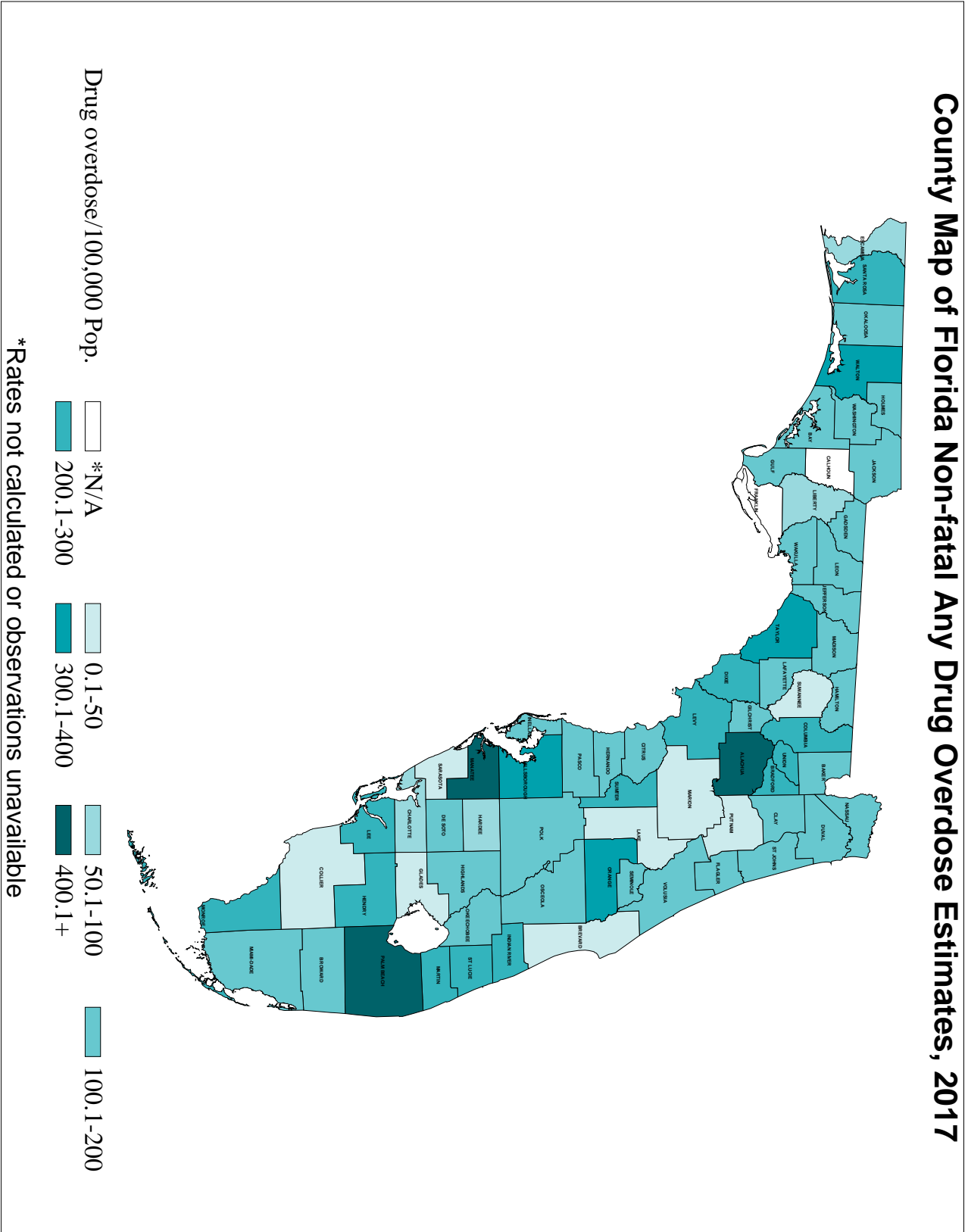


Male	2.1	91.1	253.9	167.8	93.0	72.2	37.7	37.0	52.2	108.8
Female	1.1	65.2	125.1	81.8	54.9	51.0	30.3	38.3	52.6	62.1

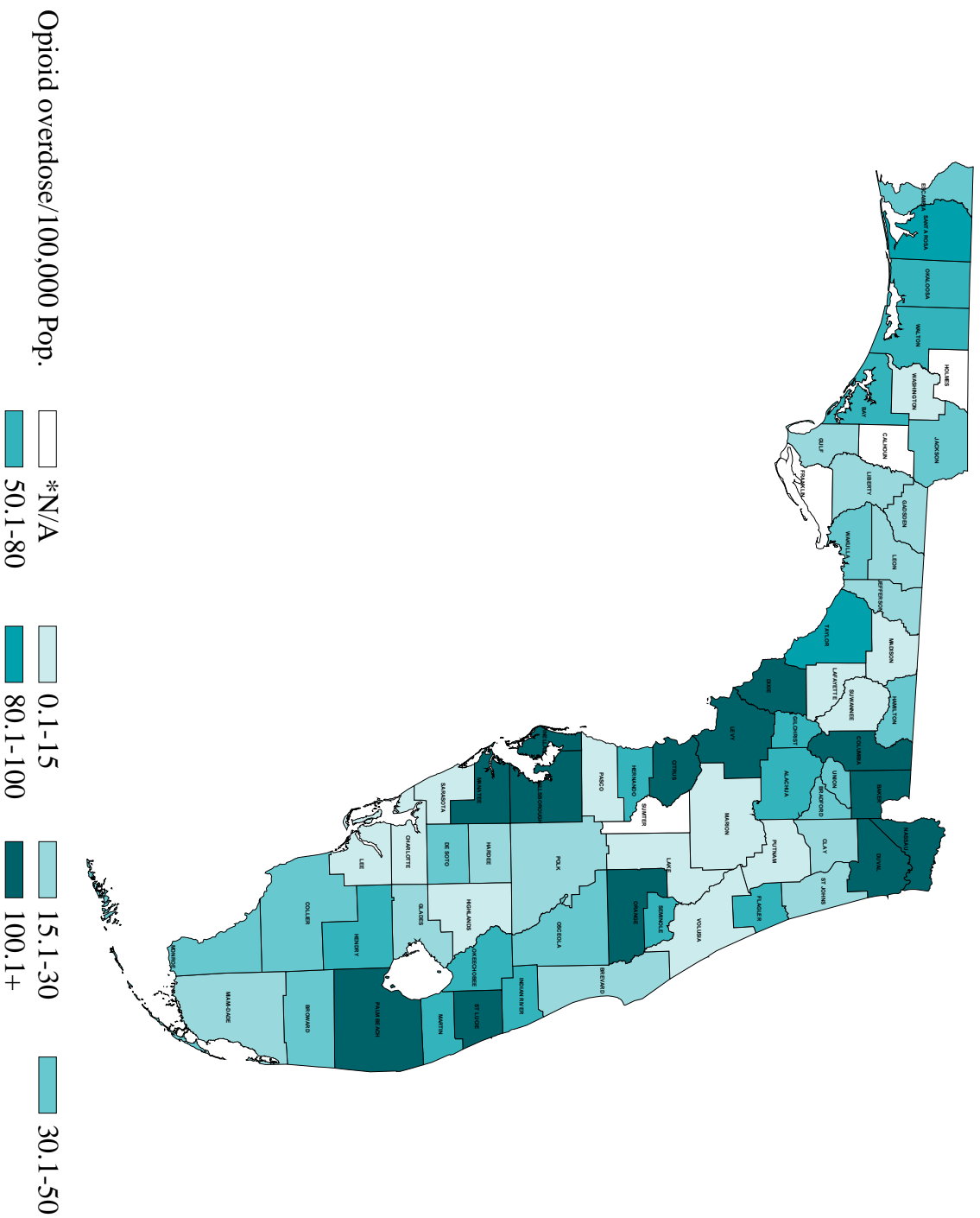
Note: Any opioid may include prescription or illicit opioids. Categories are not mutually exclusive.
Note: All Ages: 11-years and older

- Overall between 2016—2017, we observed statistically significant rate increases in opioid-involved drug overdose for men (79.5 to 108.8) and women (52.8 to 62.1) of “All Ages.”
 - Among male 15-24, 25-34, 35-44, 45-54, and 55-64-year age groups, significant rate differences for opioid-involved overdose were estimated.
 - Among female 15-24, 25-34, and 35-44-year age groups, significant rate differences for opioid-involved overdose were observed.
- Males aged 25-34 years experienced non-fatal opioid-involved overdose more frequently and at a higher rate than females of the same age category, in 2017.
- Overall in 2017, males, particularly younger men, were transported for a non-fatal opioid-involved overdose at a higher rate than females.

County Map of Florida Non-fatal Any Drug Overdose Estimates, 2017



County Map of Florida Non-fatal Opioid-Involved Overdose Estimates, 2017



*Rates not calculated or observations unavailable

Florida Counties with the Highest Count and Rate of Non-fatal Drug-Involved Overdoses—Florida 2017

ANY DRUG-INVOLVED NON-FATAL OVERDOSE

RANK	COUNTY (COUNT)	RANK	COUNTY (RATE PER 100,000)
1	PALM BEACH (6,706)	1	ALACHUA (601.3)
2	HILLSBOROUGH (4,293)	2	PALM BEACH (510.6)
3	ORANGE (3,889)	3	MANATEE (501.0)
4	MIAMI-DADE (3,244)	4	HILLSBOROUGH (352.1)
5	BROWARD (2,158)	5	WALTON (346.1)
6	MANATEE (1,717)	6	ORANGE (332.8)
7	PINELLAS (1,512)	7	TAYLOR (325.0)
8	ALACHUA (1,439)	8	BRADFORD (292.2)
9	DUVAL (1,425)	9	SUMTER (290.9)
10	LEE (1,381)	10	ST LUCIE (289.4)

OPIOID-INVOLVED NON-FATAL OVERDOSE

RANK	COUNTY (COUNT)	RANK	COUNTY (RATE PER 100,000)
1	PALM BEACH (5,154)	1	PALM BEACH (392.4)
2	ORANGE (1,528)	2	MANATEE (169.8)
3	PINELLAS (1,506)	3	PINELLAS (169.6)
4	DUVAL (1,371)	4	DUVAL (167.8)
5	HILLSBOROUGH (1,360)	5	DIXIE (147.9)
6	BROWARD (631)	6	COLUMBIA (131.0)
7	MANATEE (582)	7	ORANGE (130.8)
8	MIAMI-DADE (462)	8	NASSAU (121.4)
9	ST LUCIE (288)	9	LEVY (118.8)
10	SEMINOLE (285)	10	HILLSBOROUGH (111.6)

Non-fatal Drug Overdose (Morbidity), Florida 2017

RATE PER 100,000 FLORIDIANS ≥11-YEARS.
OPIOID-INVOLVED MAY INCLUDE PRESCRIPTION, AND ILLICIT OPIOIDS,
CATEGORIES ARE NOT MUTUALLY EXCLUSIVE

	ANY DRUG			OPIOID-INVOLVED		
	No.	Rate	2016-2017 Rate Δ%	No.	Rate	2016-2017 Rate Δ%
TOTAL	37,696	204.9	+10.0	15,600	84.8	+22.4
Q1	8,759	47.6	+16.7	3,601	19.6	+38.0
Q2	10,856	59.0	+31.1	4,844	26.3	+83.9
Q3	9,564	52.0	-6.6	3,948	21.5	+13.8
Q4	8,517	46.3	+3.8	3,207	17.4	-5.4
AGE						
11-14	362	38.7	+18.7	15	1.6	0.0
15-24	6,381	255.0	+3.1	1,965	78.5	+14.9
25-34	11,069	406.0	+19.2	5,187	190.3	+43.9
35-44	7,183	286.9	+23.7	3,115	124.4	+62.0
45-54	5,371	191.8	+0.9	2,061	73.6	+26.0
55-64	4,142	149.5	-0.2	1,692	61.1	+9.9
65-74	1,751	75.7	-1.9	781	33.8	-5.6
75-84	898	70.1	+3.7	483	37.7	-2.1
85+	499	88.3	-6.0	296	52.4	-14.8
ETHNICITY (RACE)						
HISPANIC	3,749	89.2	+14.4	1,305	31.1	+46.0
NON-HISPANIC	14,969	105.4	-25.1	6,834	48.1	+4.1
WHITE	12,308	88.7	-25.9	5,911	42.6	+2.4
BLACK	2,366	84.8	-21.3	789	28.3	+16.0
ASIAN	75	15.9	-41.3	23	4.9	-32.9
MULTIPLE RACES	163	44.9	-22.5	71	19.6	+32.4
SEX (AGE)						
MALE	22,344	250.1	+15.2	9,718	108.8	+36.9
11-14	101	21.2	+30.9	10	2.1	+90.9
15-24	3,493	272.5	+7.2	1,168	91.1	+15.3
25-34	7,197	522.0	+22.3	3,501	253.9	+43.6
35-44	4,547	366.6	+32.4	2,081	167.8	+73.3
45-54	3,191	232.3	+4.9	1,278	93.0	+38.2
55-64	2,332	178.2	+3.1	945	72.2	+20.3
65-74	887	82.5	+4.0	405	37.7	+10.2
75-84	384	66.4	+3.3	214	37.0	-4.6
85+	189	86.5	-4.6	114	52.2	-18.7
FEMALE	15,323	161.9	+3.2	5,877	62.1	+17.6
11-14	261	57.0	+14.7	5	1.1	-50.0
15-24	2,881	236.1	-1.7	796	65.2	+14.2

25-34	3,866	286.9	+13.7	1,686	125.1	+44.6
35-44	2,633	208.4	+11.2	1,033	81.8	+43.3
45-54	2,177	152.6	-4.3	783	54.9	+10.2
55-64	1,807	123.6	-4.3	745	51.0	-1.2
65-74	862	69.6	-7.6	375	30.3	-18.3
75-84	514	73.1	+3.8	269	38.3	+0.3
85+	308	88.9	-7.0	182	52.6	-11.7
COUNTY						
ALACHUA	1,439	601.3	+11.8	159	66.4	+4.2
BAKER	42	170.2	-32.2	27	109.4	-24.1
BAY	233	142.1	-42.8	87	53.1	-61.0
BRADFORD	71	292.2	+45.6	11	45.3	-39.8
BREVARD	150	28.3	N/A	85	16.0	N/A
BROWARD	2,158	126.0	-4.0	631	36.8	+33.8
CALHOUN	0	N/A	N/A	0	N/A	N/A
CHARLOTTE	140	82.5	-61.9	5	2.9	N/A
CITRUS	191	141.9	+14.6	144	107.0	+4.2
CLAY	221	118.6	+3.6	47	25.2	+0.4
COLLIER	141	42.0	+11.1	130	38.7	+17.3
COLUMBIA	149	241.0	N/A	81	131.0	N/A
DE SOTO	33	101.9	-33.7	14	43.2	-40.1
DIXIE	42	282.3	-15.6	22	147.9	+14.0
DUVAL	1,425	174.4	N/A	1,371	167.8	N/A
ESCAMBIA	244	86.5	N/A	90	31.9	N/A
FLAGLER	177	176.5	+17.7	60	59.8	+15.7
FRANKLIN	0	N/A	N/A	0	N/A	N/A
GADSDEN	51	124.4	+6.8	7	17.1	+14.8
GILCHRIST	23	148.0	-16.1	11	70.8	+80.6
GLADES	6	46.1	-1.5	2	15.4	+97.4
GULF	22	148.0	-51.9	3	20.2	-73.1
HAMILTON	19	145.6	-30.7	6	46.0	-34.4
HARDEE	20	84.3	+31.1	6	25.3	+96.1
HENDRY	75	222.0	-1.6	24	71.0	-32.5
HERNANDO	230	136.9	-17.4	91	54.2	-8.6
HIGHLANDS	135	145.7	+42.8	7	7.6	-86.1
HILLSBOROUGH	4,293	352.1	+9.0	1,360	111.6	+35.4
HOLMES	26	147.2	+2.4	0	N/A	N/A
INDIAN RIVER	298	212.2	+4.0	78	55.5	+0.9
JACKSON	75	170.1	+39.3	19	43.1	-6.5
JEFFERSON	21	164.9	N/A	2	15.7	N/A
LAFAYETTE	13	164.9	+59.9	1	12.7	-1.6
LAKE	23	7.5	N/A	6	2.0	N/A
LEE	1,381	208.7	+42.5	84	12.7	-13.6
LEON	322	122.8	-9.7	55	21.0	+25.7
LEVY	92	254.2	+10.4	43	118.8	+3.2
LIBERTY	5	66.1	-18.0	2	26.5	+97.8
MADISON	24	145.3	-15.6	2	12.1	-1.6
MANATEE	1,717	501.0	N/A	582	169.8	N/A

MARION	121	38.0	+43.4	8	2.5	-13.8
MARTIN	339	229.9	-44.9	105	71.2	-29.2
MIAMI-DADE	3,244	132.8	N/A	462	18.9	N/A
MONROE	171	233.1	+3.9	27	36.8	-33.6
NASSAU	138	188.2	-13.0	89	121.4	-12.4
OKALOOSA	307	172.6	-1.3	116	65.2	-1.7
OKEECHOBEE	54	150.2	-28.2	25	69.5	+2.5
ORANGE	3,889	332.8	+26.7	1,528	130.8	+45.5
OSCEOLA	338	114.0	-33.3	122	41.1	-6.2
PALM BEACH	6,706	510.6	+31.0	5,154	392.4	+41.1
PASCO	711	153.1	+72.0	58	12.5	-82.1
PINELLAS	1,512	170.3	+14.8	1,506	169.6	+14.6
POLK	667	112.2	-4.0	109	18.3	-24.1
PUTNAM	20	30.9	N/A	6	9.3	N/A
ST JOHNS	243	114.5	-30.3	62	29.2	-24.7
ST LUCIE	804	289.4	+13.4	288	103.7	+17.2
SANTA ROSA	320	209.2	N/A	134	87.6	N/A
SARASOTA	98	25.3	-7.3	31	8.0	+53.8
SEMINOLE	712	172.9	+1.4	285	69.2	N/A
SUMTER	352	290.9	N/A	0	N/A	N/A
SUWANNEE	15	38.0	-83.2	2	5.1	-94.2
TAYLOR	65	325.0	+25.4	18	90.0	+61.0
UNION	39	283.5	+16.3	5	36.4	N/A
VOLUSIA	600	123.5	+34.2	3	0.6	N/A
WAKULLA	34	118.0	-27.3	9	31.2	-53.4
WALTON	205	346.1	+0.9	41	69.2	-10.4
WASHINGTON	27	120.8	-24.0	3	13.4	-70.5

N/A: Rates not calculated or not enough observations available.