

Drug Overdose Deaths In Kentucky, 2000-2015



Kentucky Injury Prevention and Research Center

Drug Overdose Deaths in Kentucky, 2000-2015

July, 2016

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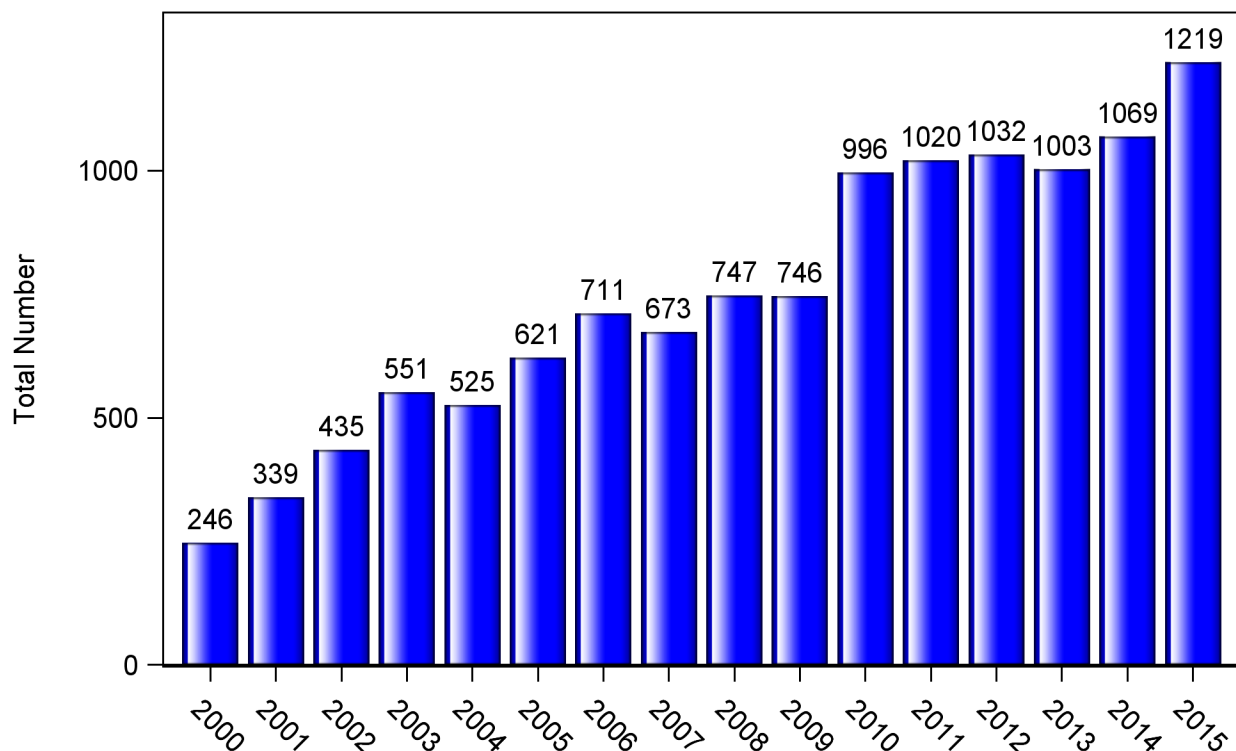
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Executive Summary

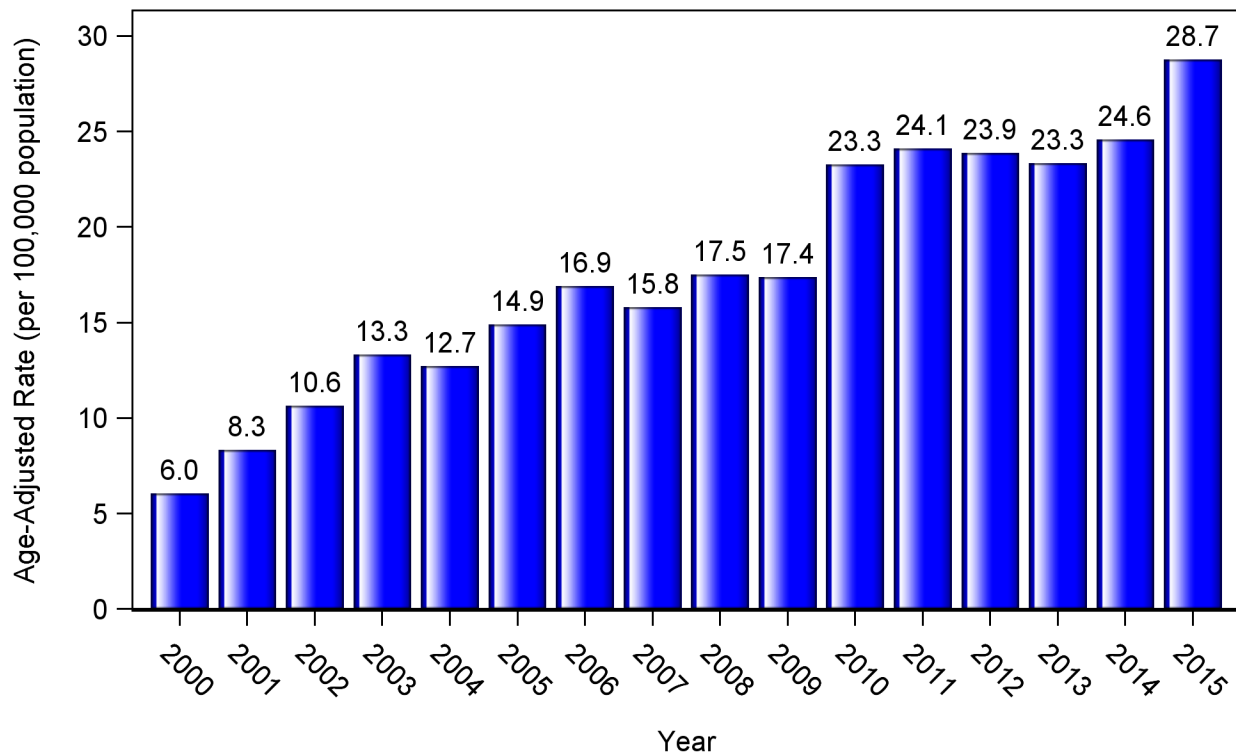
1. There were 1,219 drug overdose deaths of Kentucky residents in 2015. This is an increase of 14 percent from the 1,069 drug overdose deaths registered in 2014. This marked a second straight year of increase.
2. The 2015 age-adjusted drug overdose death rate was 28.7/100,000, up from 24.6/100,000 in 2014. This marked a second straight increase after decreases every year from 2011-2013. The U.S. age-adjusted drug overdose death rate increased from 13.8/100,000 to 14.8/100,000 from 2013 to 2014.
3. Pharmaceutical opioids remained the primary cause of drug overdose deaths in Kentucky in 2015, with 605 of the 1,219 overdose deaths involving pharmaceutical opioids. The age-adjusted rate for overdose deaths involving pharmaceutical opioids rose from 11.2/100,000 in 2014 to 14.4/100,000 in 2015, a second straight year of increase.
4. The age-adjusted rate of deaths involving synthetic opioids other than methadone rose from 1.7/100,000 in 2013 to 4.1/100,000 in 2014 and 7.4/100,000 in 2015. The corresponding U.S. rates over that time were 0.8/100,000 in 2012, 1/100,000 in 2013, and 1.7/100,000 in 2014.
5. Males remained the higher risk for drug overdose deaths in 2015, with 35.1/100,000, compared to 22.5/100,000 for females.
6. Of the 1,219 overdose deaths in 2015, 1,098 (90 percent) were declared unintentional.
7. 35 to 44-year olds had the highest overdose rate of any age group with 59.3/100,000 in 2015. Kentuckians' rates of overdose deaths for 15 to 24-year olds, 25 to 34-year olds, 35 to 44-year olds, and 45 to 54-year olds all increased from 2014 to 2015, while the rate of overdose death decreased slightly from 2014 to 2015 for the 55+ age category.
8. The counties with the highest number of overdose deaths from 2011-2015 were Jefferson with 883 deaths, Fayette with 362 deaths, and Kenton with 358 deaths.
9. The counties with the highest rates of overdose deaths for the years 2011-2015 combined were Leslie County with 69.0/100,000 annually, Clinton County with 66.9/100,000 annually, and Bell County with 60.8/100,000 annually.

Kentucky Resident Drug Overdose Deaths, 2000-2015



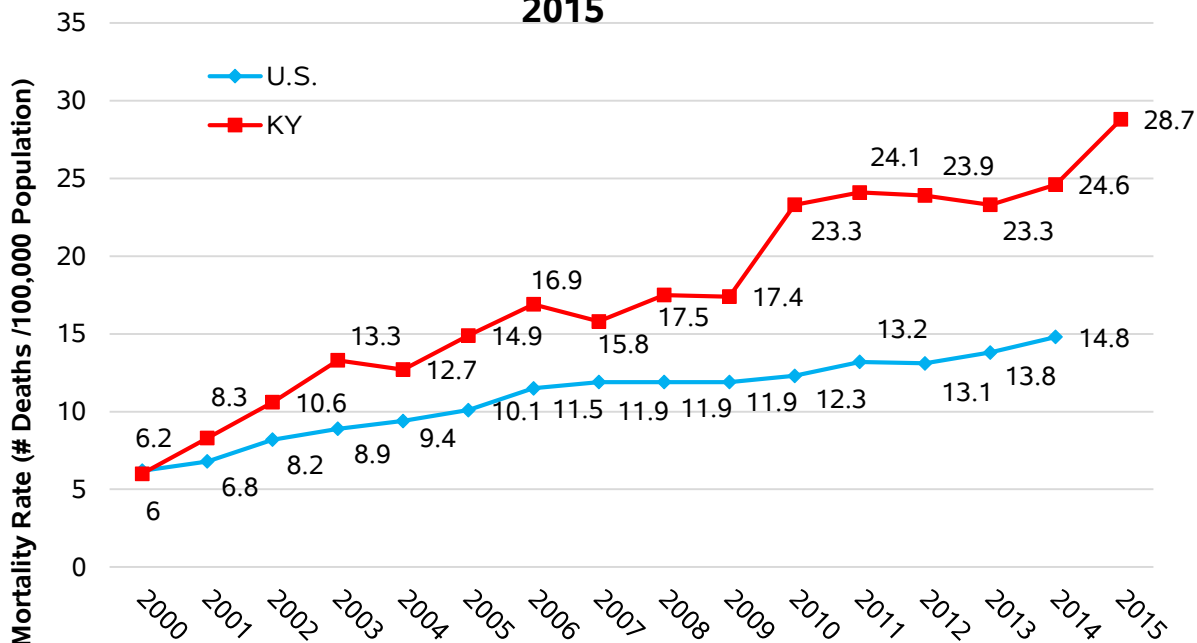
Produced by the Kentucky Injury Prevention and Research Center, July 2016. Data source: Kentucky Death Certificates Database, Kentucky Office of Vital Statistics. Data for 2009-2015 are provisional and subject to change.

Kentucky Resident Age-Adjusted Drug Overdose Mortality Rates, 2000-2015



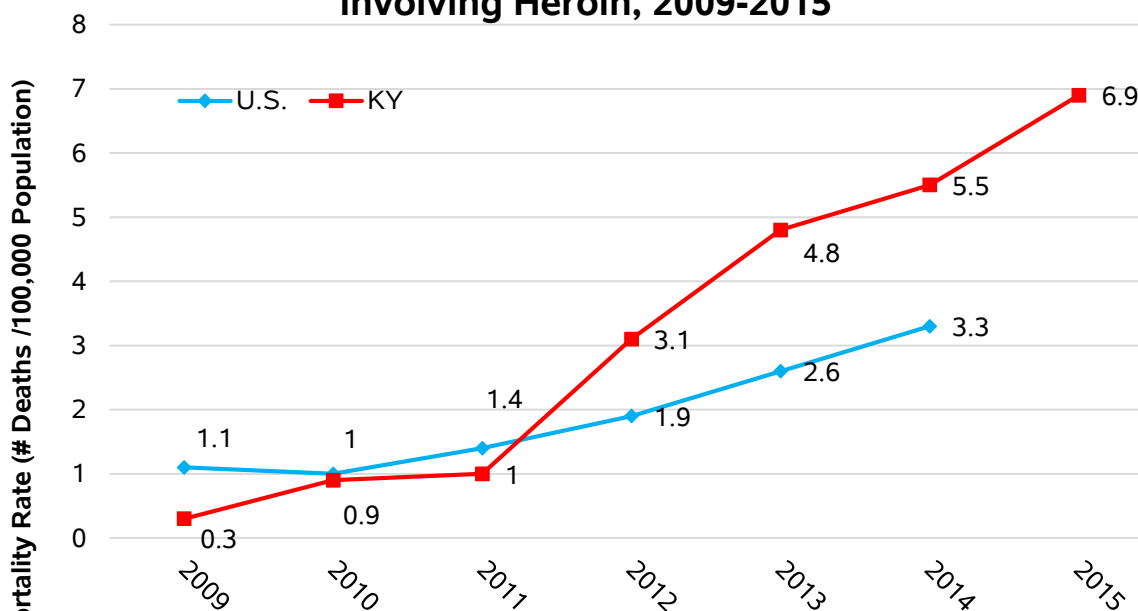
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Age-Adjusted Drug Overdose Mortality Rates, 2000-2015



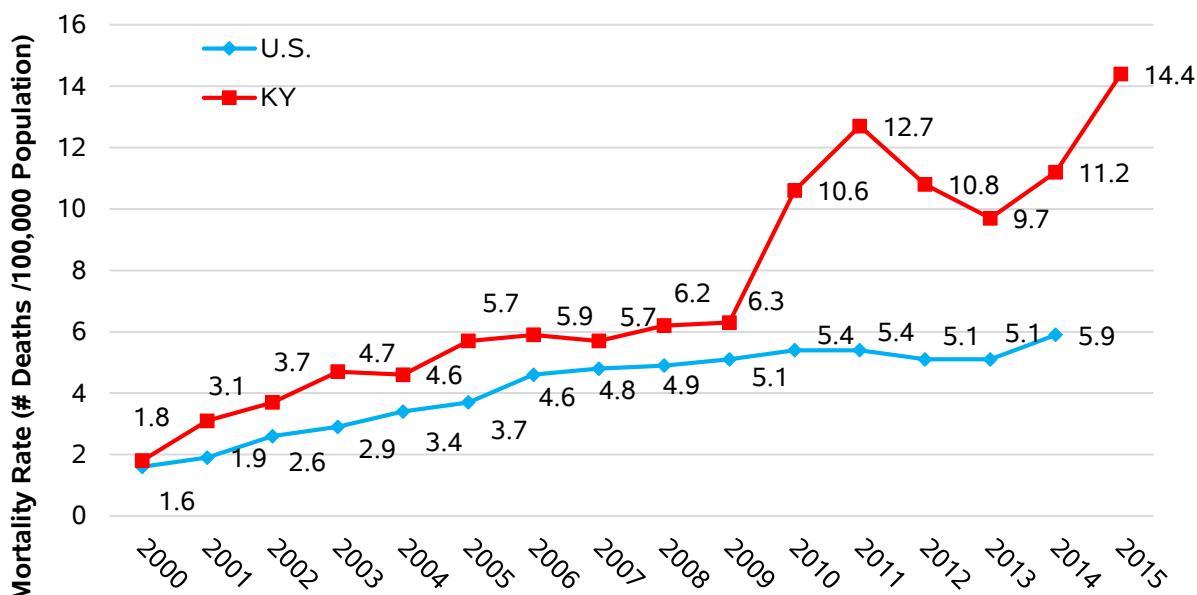
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Age-Adjusted Rates for Drug Overdose Deaths Involving Heroin, 2009-2015



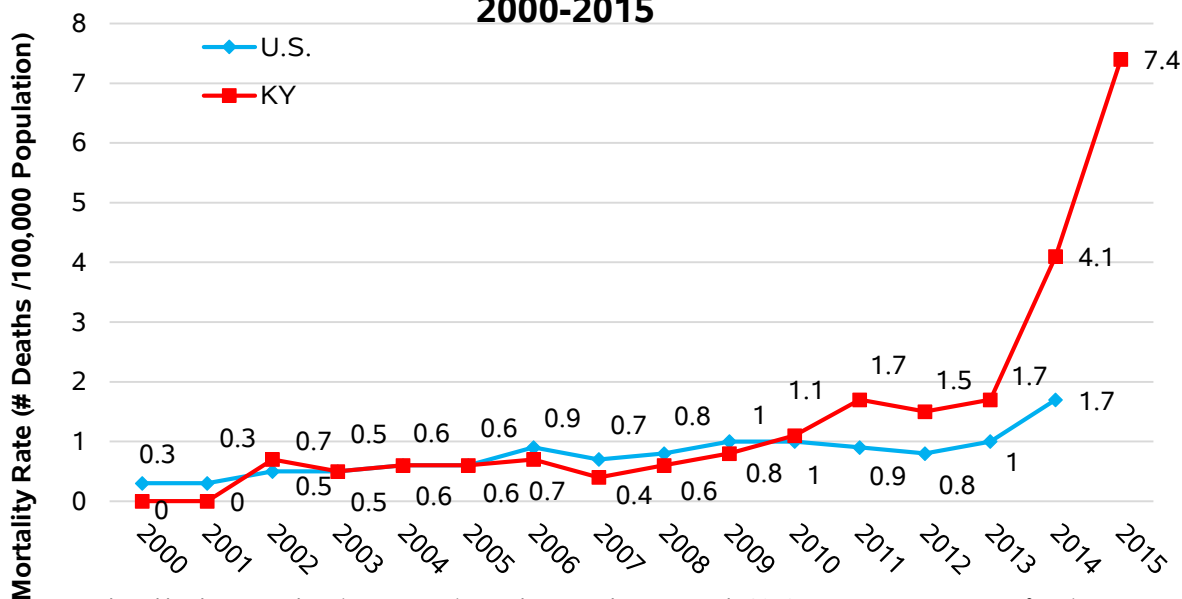
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Age-Adjusted Rates for Drug Overdose Deaths Involving Pharmaceutical Opioids, 2000-2015



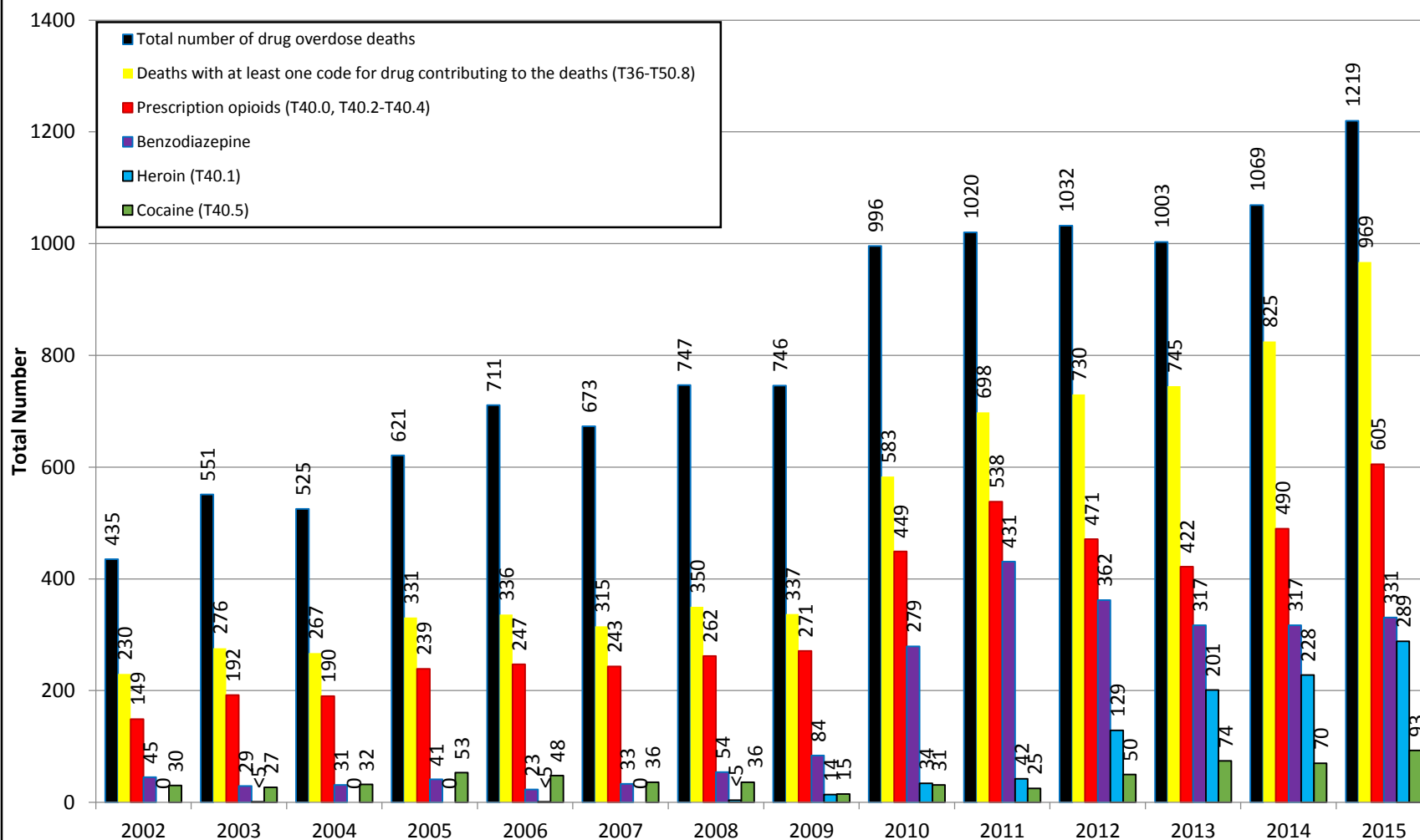
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Age-Adjusted Rates for Drug Overdose Deaths Involving Synthetic Opioids Other than Methadone, 2000-2015



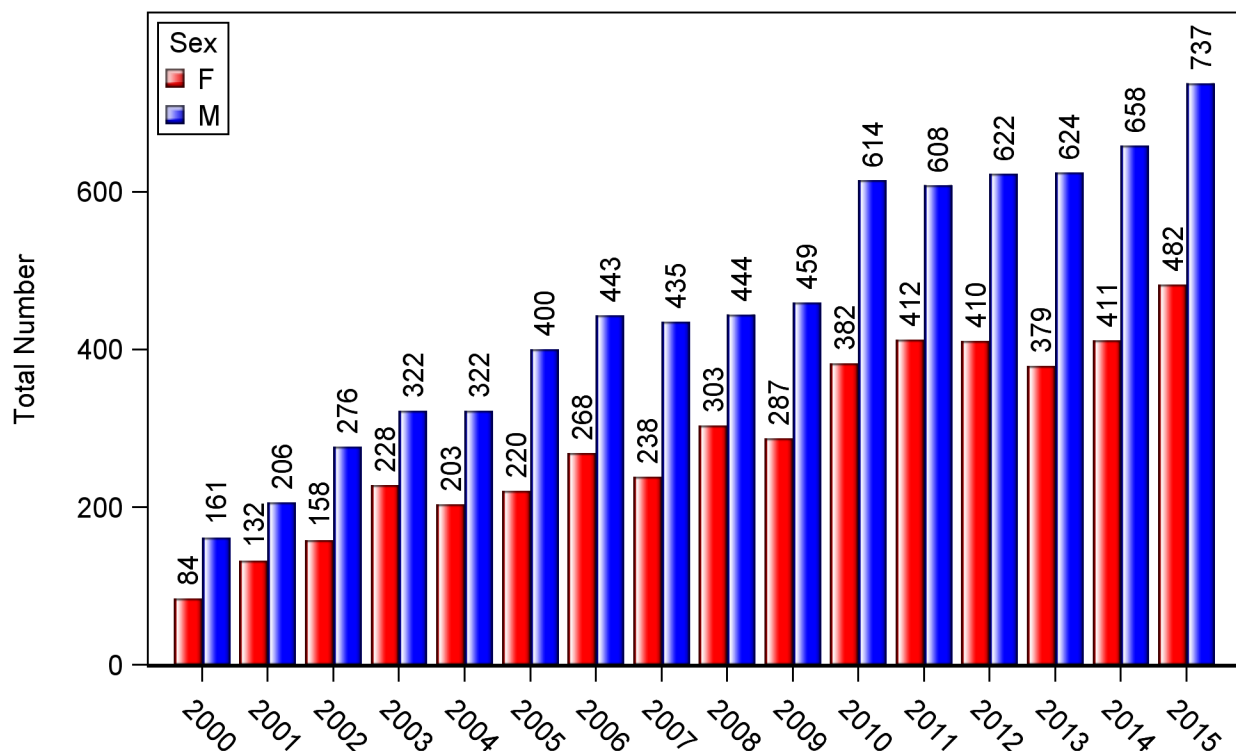
Produced by the Kentucky Injury Prevention and Research Center, July 2016. Data sources: Centers for Disease Control and Prevention, National Center for Health Statistics, Multiple Cause of Death 1999-2014 on CDC WONDER Online Database, released 2015 for the US data, Kentucky Death Certificates Database, Kentucky Office of Vital Statistics for the Kentucky data. Data were not available for 2015 for the U.S. at the time of creation. Data are provisional and subject to change.

Kentucky Resident Drug Overdose Deaths by Contributing Drugs, 2002-2015



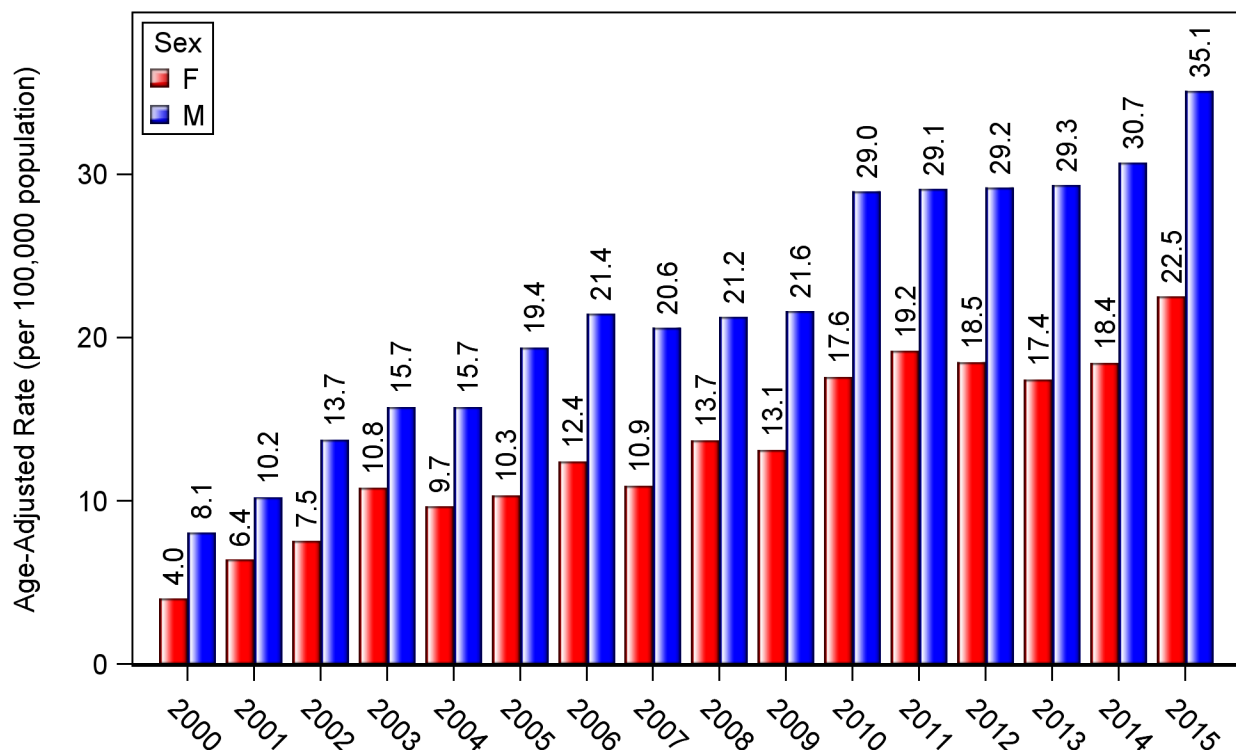
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Kentucky Resident Drug Overdose Deaths by Gender, 2000-2015

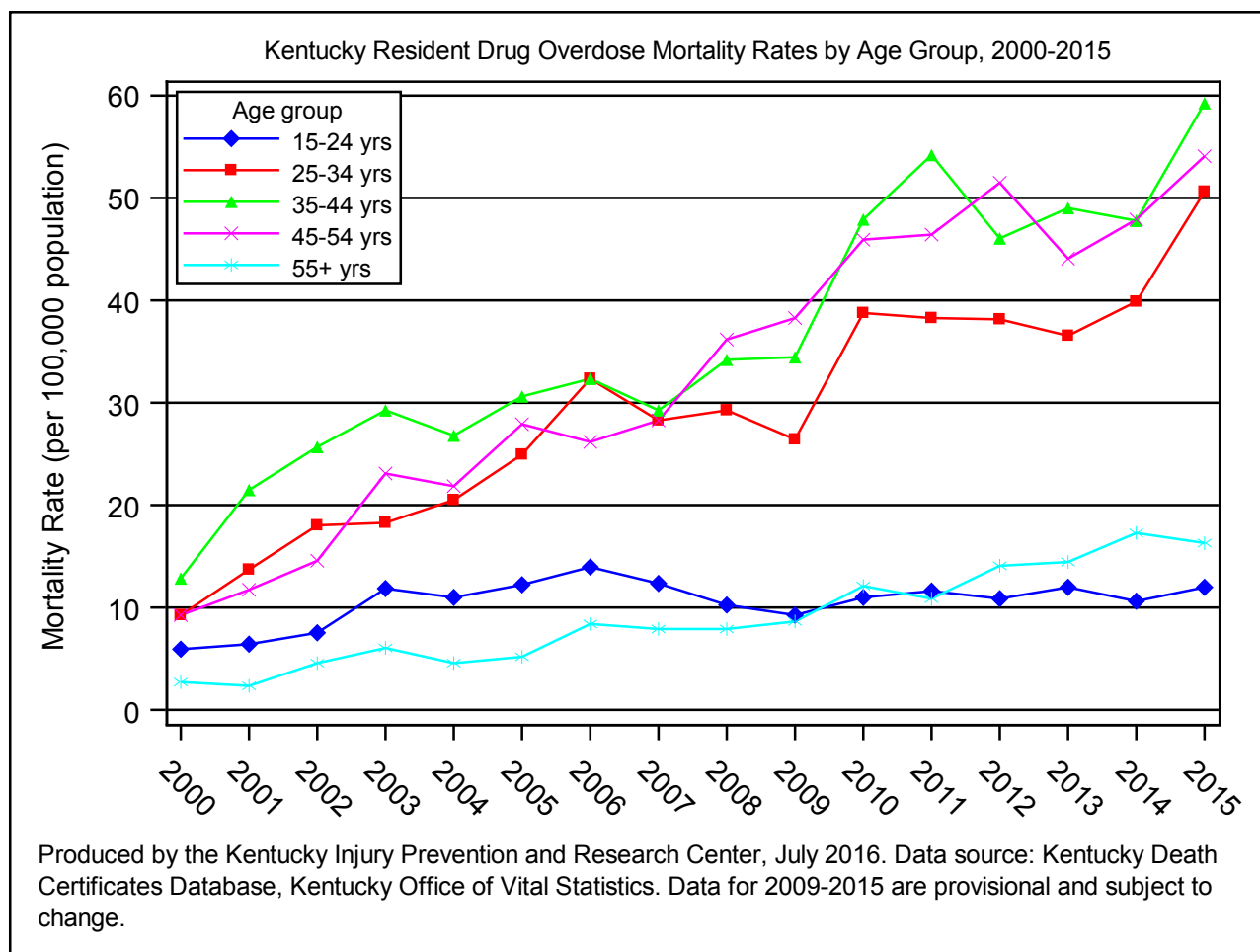
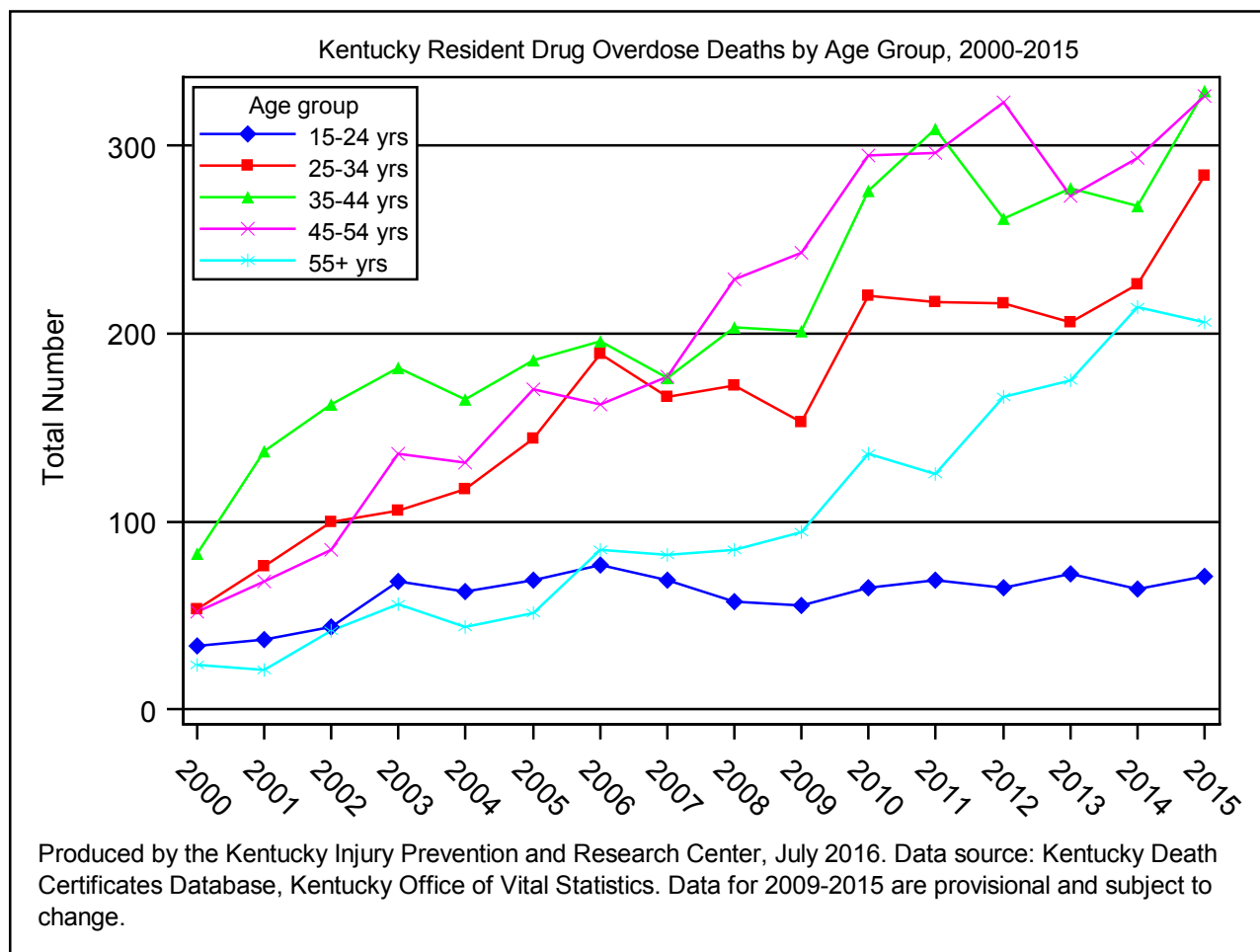


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Kentucky Resident Age-Adjusted Drug Overdose Mortality Rates, 2000-2015



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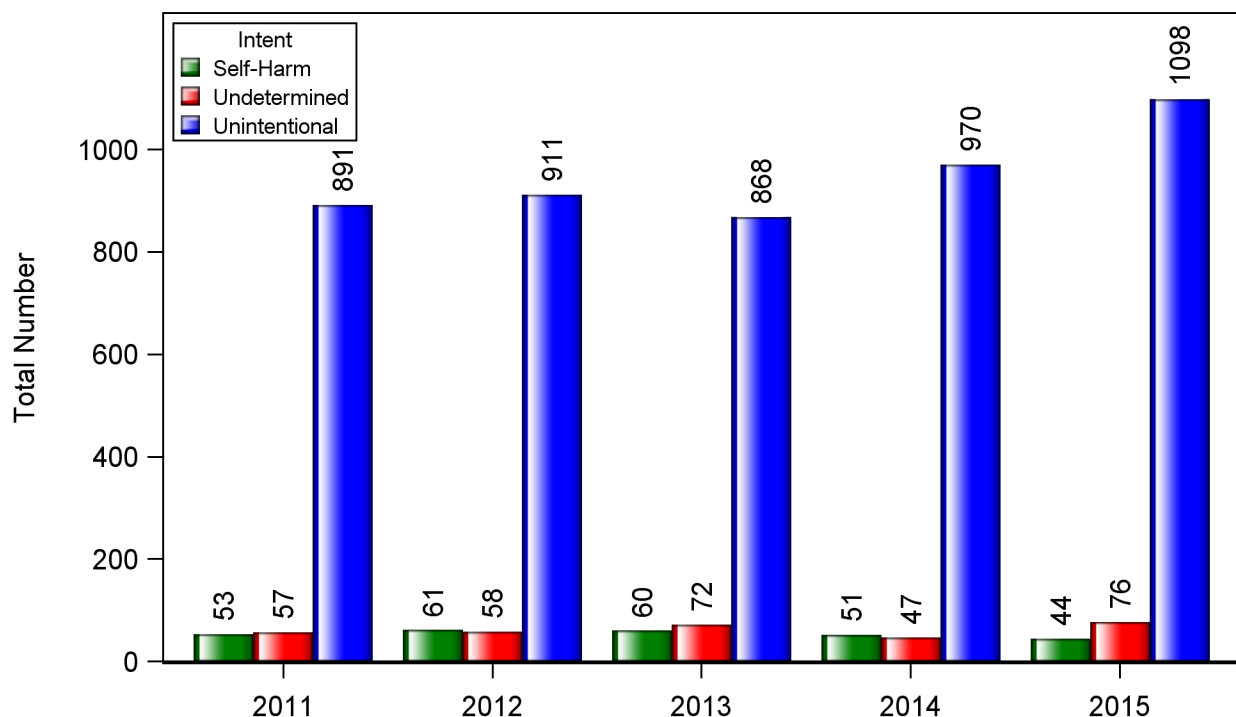
Kentucky Resident Drug Overdose Deaths by Age Group, Ages 15+, 2000-2015

	Age group				
Year	15-24	25-34	35-44	45-54	55+
2000	34	53	83	52	24
2001	37	76	137	68	21
2002	44	100	162	85	42
2003	68	106	182	136	56
2004	63	117	165	131	44
2005	69	144	186	170	51
2006	77	189	196	162	85
2007	69	166	176	177	82
2008	57	172	203	229	85
2009	55	153	201	243	94
2010	65	220	276	295	136
2011	69	217	309	296	125
2012	65	216	261	323	166
2013	72	206	277	273	175
2014	64	226	268	293	214
2015	71	284	329	326	206
Produced by the Kentucky Injury Prevention and Research Center, July 2016. Data source: Kentucky Death Certificates Database, Kentucky Office of Vital Statistics. Data for 2009-2015 are provisional and subject to change.					

Kentucky Resident Drug Overdose Death Rates by Age Group, Ages 15+, 2000-2015
Rate per 100,000 population

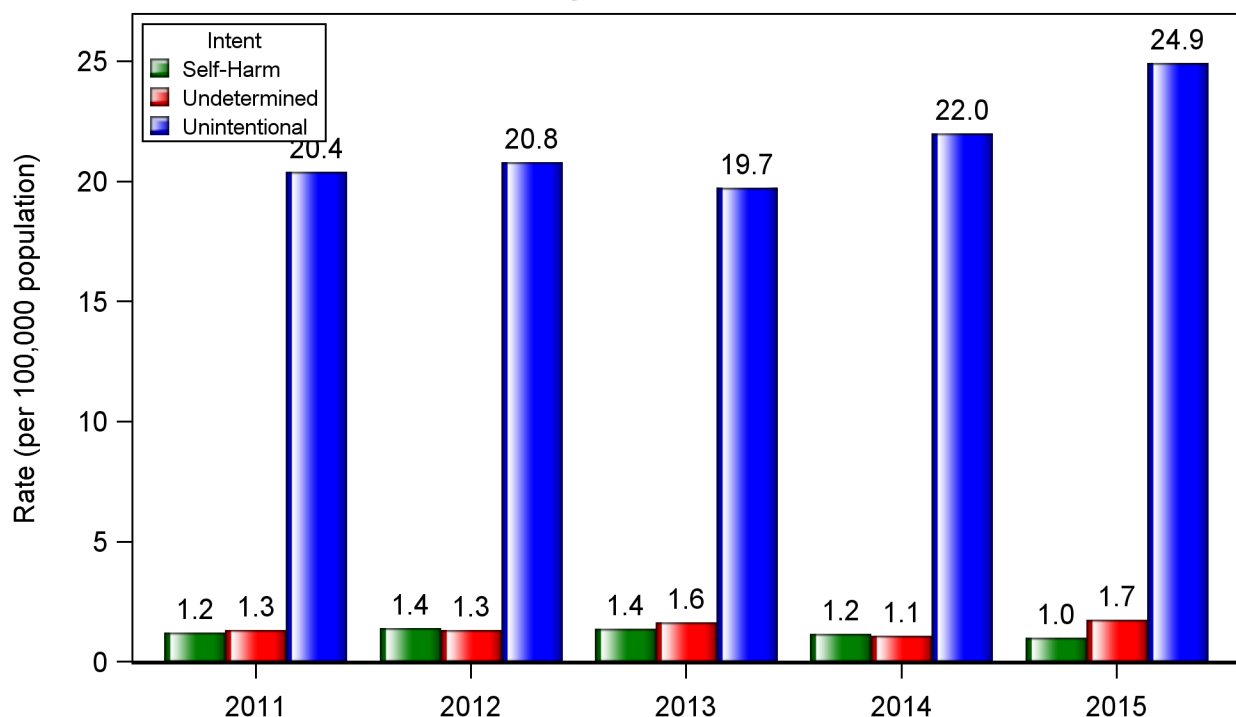
	Age group				
Year	15-24	25-34	35-44	45-54	55+
2000	5.94	9.33	12.91	9.34	2.74
2001	6.39	13.68	21.46	11.78	2.35
2002	7.52	18.02	25.67	14.59	4.61
2003	11.83	18.26	29.31	23.12	6.04
2004	10.97	20.53	26.86	21.82	4.60
2005	12.23	24.91	30.57	27.89	5.19
2006	13.94	32.41	32.30	26.16	8.41
2007	12.39	28.32	29.23	28.32	7.90
2008	10.26	29.31	34.24	36.24	7.96
2009	9.33	26.42	34.46	38.25	8.66
2010	11.01	38.80	47.93	45.88	12.10
2011	11.62	38.23	54.16	46.41	10.87
2012	10.89	38.16	46.08	51.44	14.10
2013	12.00	36.49	49.05	44.08	14.52
2014	10.65	39.94	47.76	47.96	17.36
2015	12.03	50.60	59.25	54.08	16.37
Produced by the Kentucky Injury Prevention and Research Center, July 2016. Data source: Kentucky Death Certificates Database, Kentucky Office of Vital Statistics. Data for 2009-2015 are provisional and subject to change.					

Kentucky Resident Drug Overdose Deaths by Intent, 2011-2015
Missing code for intent excluded



Produced by the Kentucky Injury Prevention and Research Center, July 2016. Data source: Kentucky Death Certificates Database, Kentucky Office of Vital Statistics. Data for 2009-2015 are provisional and subject to change.

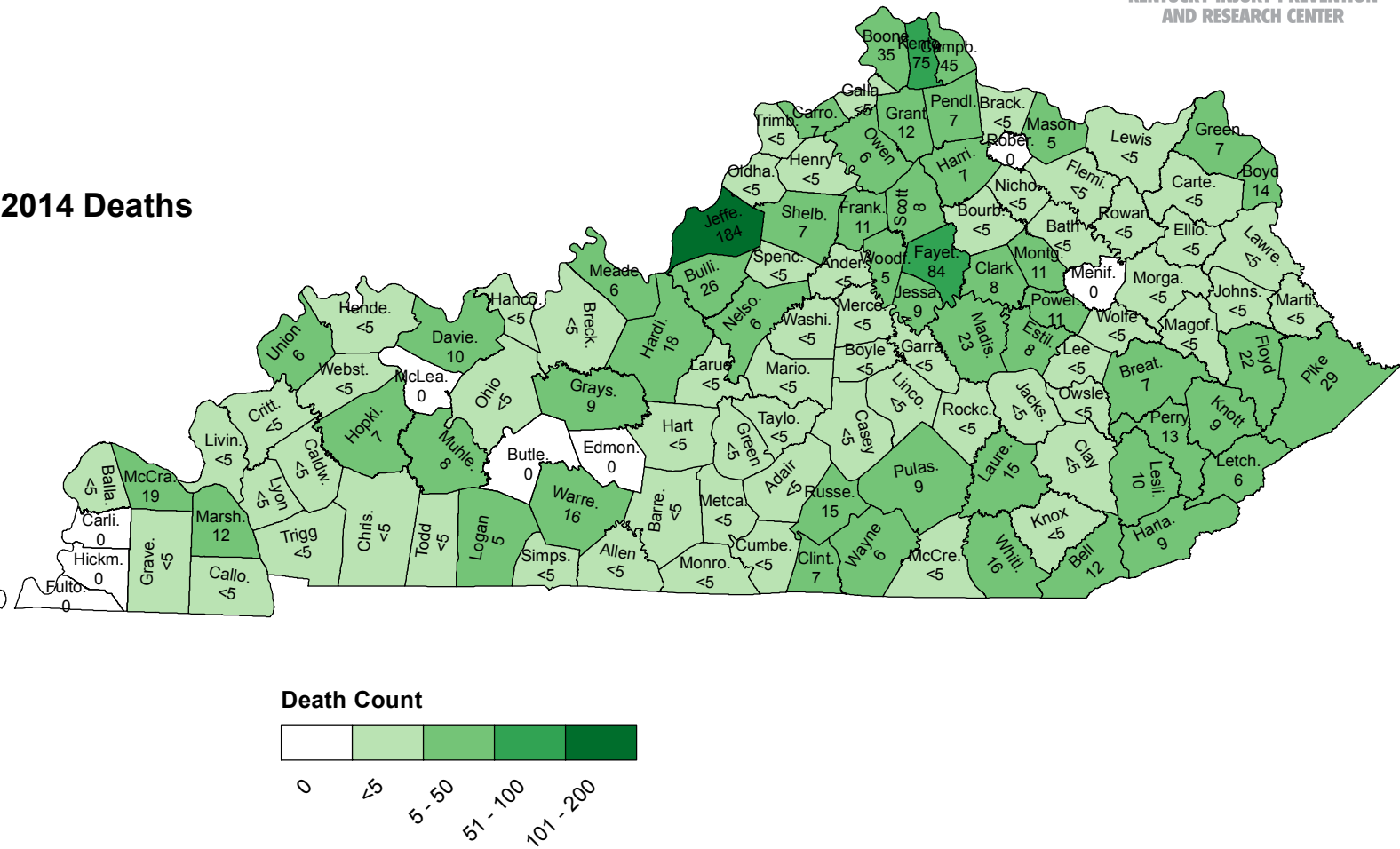
Kentucky Resident Drug Overdose Death Rates by Intent, 2010-2015
Missing code for intent excluded



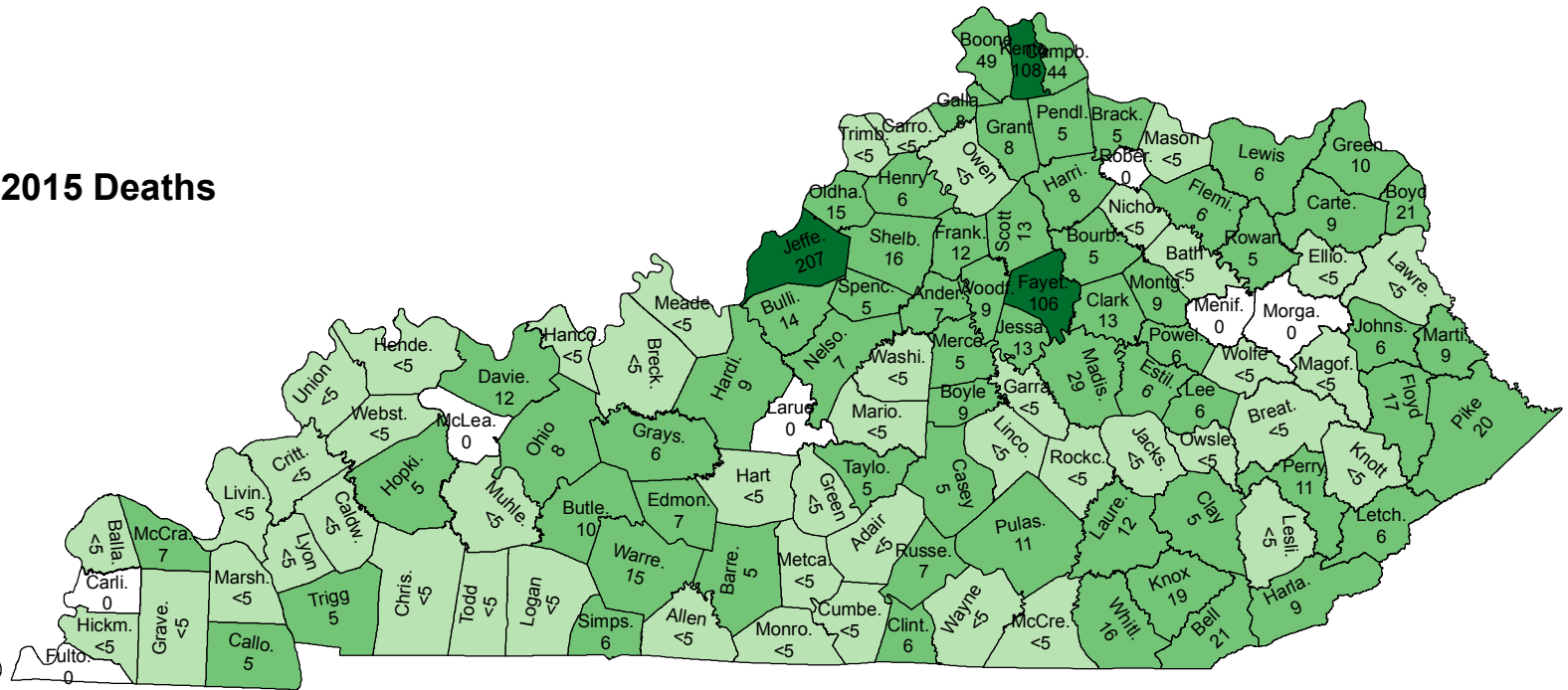
Produced by the Kentucky Injury Prevention and Research Center, July 2016. Data source: Kentucky Death Certificates Database, Kentucky Office of Vital Statistics. Data for 2009-2015 are provisional and subject to change.

Drug Overdose Deaths by County of Residence 2014 & 2015

2014 Deaths

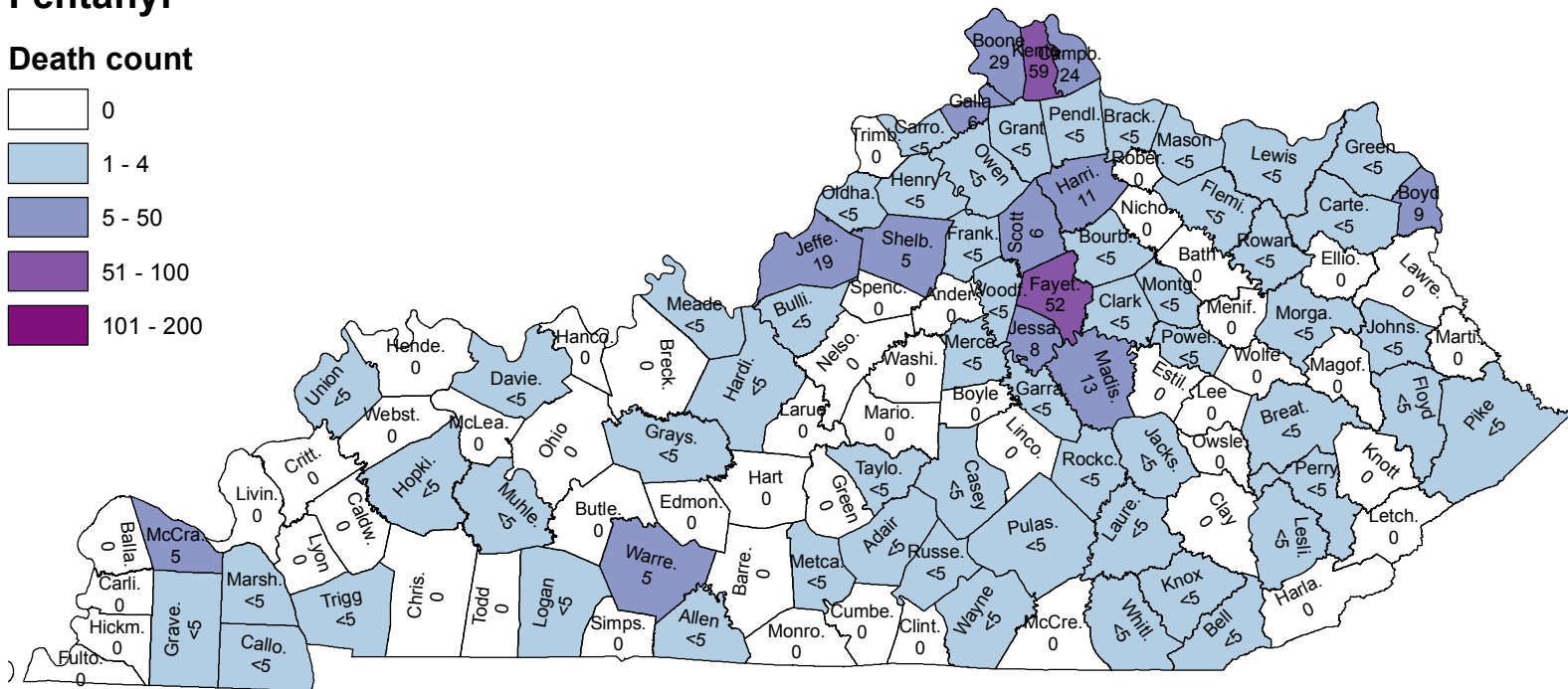


2015 Deaths

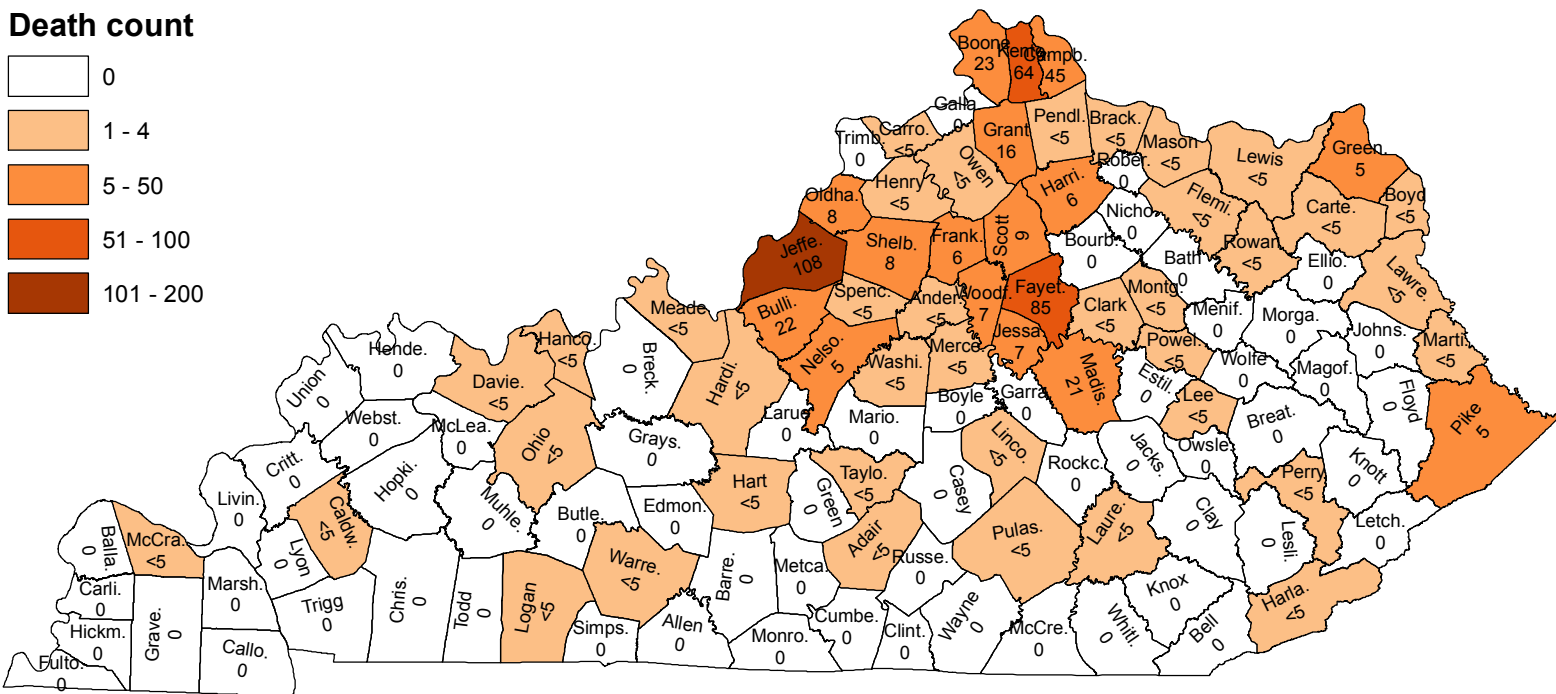


Note: Produced by the Kentucky Injury Prevention and Research Center (<http://www.mc.uky.edu/kiprc/>), July 2016. Data are provisional and subject to change. Numbers between 0 and 5 were suppressed according to state data release policy.

0
1 - 4
5 - 50
51 - 100
101 - 200



0
1 - 4
5 - 50
51 - 100
101 - 200



Created: 7/20/2016
Data Source: Kentucky Office of Vital Statistics
Additional data requests can be submitted to:
KIPRCrequests@uky.edu

Kentucky Resident Drug Overdose Deaths, 2011-2015

County	Total drug overdose deaths, 2011-2015	Annual rate per 100,000 population
Adair	17	17.84+
Allen	19	18.68+
Anderson	25	22.97
Ballard	5	12.10+
Barren	27	12.57
Bath	18	30.02+
Bell	85	60.80
Boone	171	27.42
Bourbon	21	21.00
Boyd	60	24.50
Boyle	26	17.70
Bracken	6	14.24+
Breathitt	23	33.85
Breckinridge	12	11.96+
Bullitt	86	22.36
Butler	19	29.59+
Caldwell	10	15.60+
Calloway	22	11.53
Campbell	199	43.48
Carlisle	<5	*
Carroll	22	40.55
Carter	27	19.77
Casey	13	16.28+
Christian	23	6.19
Clark	62	34.77
Clay	47	44.11
Clinton	34	66.85
Crittenden	8	17.34+
Cumberland	9	26.44+
Daviess	69	14.06
Edmonson	16	26.45+
Elliott	7	18.10+
Estill	37	51.10
Fayette	362	23.50
Fleming	17	23.36+
Floyd	110	56.92
Franklin	47	18.91
Fulton	<5	*
Gallatin	21	49.07
Garrard	23	27.15
Produced by the Kentucky Injury Prevention and Research Center, July 2016. Data source: Kentucky Death Certificates Database, Kentucky Office of Vital Statistics. Data are provisional and subject to change. Counts <5 were suppressed. * indicates rate <5 suppressed according to state data release policy. + indicates rate is based on count <20, and should be interpreted with caution.		

Kentucky Resident Drug Overdose Deaths, 2011-2015

County	Total drug overdose deaths, 2011-2015	Annual rate per 100,000 population
Grant	48	38.89
Graves	24	12.80
Grayson	42	32.28
Green	<5	*
Greenup	44	24.12
Hancock	<5	*
Hardin	61	11.35
Harlan	54	37.98
Harrison	25	26.84
Hart	11	11.91+
Henderson	27	11.63
Henry	14	18.10+
Hickman	<5	*
Hopkins	43	18.47
Jackson	<5	*
Jefferson	883	23.37
Jessamine	43	17.11
Johnson	46	39.40
Kenton	358	43.95
Knott	39	48.73
Knox	66	41.47
Larue	5	7.06+
Laurel	72	24.10
Lawrence	24	30.34
Lee	14	37.39+
Leslie	38	69.02
Letcher	51	43.08
Lewis	11	15.93+
Lincoln	22	17.97
Livingston	13	27.66+
Logan	18	13.41+
Lyon	6	14.26+
Madison	100	23.18
Magoffin	22	33.91
Marion	21	21.13
Marshall	41	26.32
Martin	29	45.91
Mason	17	19.63+
McCracken	74	22.62
McCreary	12	13.34+
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Kentucky Resident Drug Overdose Deaths, 2011-2015

County	Total drug overdose deaths, 2011-2015	Annual rate per 100,000 population
McLean	6	12.62+
Meade	16	11.02+
Menifee	<5	*
Mercer	16	15.01+
Metcalfe	<5	*
Monroe	17	31.56+
Montgomery	29	21.33
Morgan	6	8.94+
Muhlenberg	27	17.25
Nelson	27	12.12
Nicholas	12	33.97+
Ohio	27	22.47
Oldham	36	11.50
Owen	13	24.26+
Owsley	8	34.61+
Pendleton	24	33.01
Perry	69	49.23
Pike	132	41.45
Powell	34	54.52
Pulaski	65	20.43
Robertson	<5	*
Rockcastle	26	30.70
Rowan	21	17.80
Russell	43	48.68
Scott	44	17.54
Shelby	31	14.01
Simpson	16	18.09+
Spencer	16	18.21+
Taylor	31	24.62
Todd	8	12.78+
Trigg	10	14.03+
Trimble	7	15.89+
Union	28	36.98
Warren	84	14.13
Washington	5	8.38+
Wayne	22	21.30
Webster	9	13.47+
Whitley	87	48.81
Wolfe	17	46.87+
Woodford	26	20.55
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Kentucky Resident Drug Overdose Deaths by Year, 2011-2015

County	Year				
	2011	2012	2013	2014	2015
Adair	<5	<5	5	<5	<5
Allen	<5	<5	<5	<5	<5
Anderson	6	5	5	<5	7
Ballard	<5	0	<5	<5	<5
Barren	<5	<5	10	<5	5
Bath	6	<5	<5	<5	<5
Bell	17	11	24	12	21
Boone	18	30	39	35	49
Bourbon	<5	<5	7	<5	5
Boyd	10	10	5	14	21
Boyle	6	<5	<5	<5	9
Bracken	0	0	0	<5	5
Breathitt	<5	7	5	7	<5
Breckinridge	<5	<5	<5	<5	<5
Bullitt	13	22	11	26	14
Butler	<5	<5	<5	0	10
Caldwell	<5	<5	<5	<5	<5
Calloway	5	6	<5	<5	5
Campbell	26	55	29	45	44
Carlisle	0	0	<5	0	0
Carroll	5	<5	<5	7	<5
Carter	5	<5	7	<5	9
Casey	<5	<5	<5	<5	5
Christian	5	5	9	<5	<5
Clark	13	18	10	8	13
Clay	25	8	7	<5	5
Clinton	6	10	5	7	6
Crittenden	<5	<5	<5	<5	<5
Cumberland	<5	<5	<5	<5	<5
Daviess	11	13	23	10	12
Edmonson	<5	<5	<5	0	7
Elliott	<5	<5	<5	<5	<5
Estill	9	11	<5	8	6
Fayette	55	54	63	84	106
Fleming	<5	0	5	<5	6
Floyd	37	16	18	22	17
Franklin	6	<5	14	11	12
Fulton	<5	<5	0	0	0
Gallatin	<5	5	<5	<5	8
Garrard	8	5	<5	<5	<5
Overdose deaths involving any drug. Produced by the Kentucky Injury Prevention and Research Center, July 2016. Data source: Kentucky Death Certificates Database, Kentucky Office of Vital Statistics. Data are provisional and subject to change. Counts <5 were suppressed according to the state data release policy.					

Kentucky Resident Drug Overdose Deaths by Year, 2011-2015

County	Year				
	2011	2012	2013	2014	2015
Grant	7	12	9	12	8
Graves	<5	7	6	<5	<5
Grayson	12	9	6	9	6
Green	0	0	<5	<5	<5
Greenup	10	<5	14	7	10
Hancock	0	<5	0	<5	<5
Hardin	10	12	12	18	9
Harlan	10	14	12	9	9
Harrison	<5	<5	5	7	8
Hart	<5	<5	<5	<5	<5
Henderson	<5	8	8	<5	<5
Henry	<5	<5	<5	<5	6
Hickman	0	<5	0	0	<5
Hopkins	10	<5	17	7	5
Jackson	0	<5	0	<5	<5
Jefferson	141	172	179	184	207
Jessamine	8	9	<5	9	13
Johnson	19	8	9	<5	6
Kenton	55	55	65	75	108
Knott	8	11	7	9	<5
Knox	21	13	10	<5	19
Larue	<5	0	<5	<5	0
Laurel	20	16	9	15	12
Lawrence	6	8	<5	<5	<5
Lee	<5	0	<5	<5	6
Leslie	8	11	5	10	<5
Letcher	19	11	9	6	6
Lewis	<5	<5	0	<5	6
Lincoln	6	7	<5	<5	<5
Livingston	<5	<5	<5	<5	<5
Logan	<5	<5	<5	5	<5
Lyon	<5	<5	<5	<5	<5
Madison	16	20	13	23	28
Magoffin	9	5	5	<5	<5
Marion	<5	7	<5	<5	<5
Marshall	8	6	11	12	<5
Martin	8	5	<5	<5	9
Mason	<5	<5	<5	5	<5
McCracken	13	19	16	19	7
McCreary	0	<5	<5	<5	<5
Overdose deaths involving any drug. Produced by the Kentucky Injury Prevention and Research Center, July 2016. Data source: Kentucky Death Certificates Database, Kentucky Office of Vital Statistics. Data are provisional and subject to change. Counts <5 were suppressed according to the state data release policy.					

Kentucky Resident Drug Overdose Deaths by Year, 2011-2015

County	Year				
	2011	2012	2013	2014	2015
McLean	<5	<5	<5	0	0
Meade	<5	<5	<5	6	<5
Menifee	<5	0	<5	0	0
Mercer	<5	<5	<5	<5	5
Metcalfe	0	0	0	<5	<5
Monroe	8	<5	<5	<5	<5
Montgomery	<5	<5	<5	11	9
Morgan	<5	<5	<5	<5	0
Muhlenberg	5	<5	8	8	<5
Nelson	5	<5	5	6	7
Nicholas	6	<5	<5	<5	<5
Ohio	<5	6	8	<5	8
Oldham	7	<5	6	<5	15
Owen	<5	<5	<5	6	<5
Owsley	<5	<5	<5	<5	<5
Pendleton	5	<5	<5	7	5
Perry	20	16	9	13	11
Pike	35	29	19	29	20
Powell	5	7	5	11	6
Pulaski	15	19	11	9	11
Robertson	<5	0	0	0	0
Rockcastle	7	8	<5	<5	<5
Rowan	<5	6	<5	<5	5
Russell	8	7	6	15	7
Scott	5	11	7	8	13
Shelby	<5	<5	<5	7	16
Simpson	5	<5	<5	<5	6
Spencer	<5	<5	<5	<5	6
Taylor	7	10	8	<5	5
Todd	0	<5	<5	<5	<5
Trigg	<5	<5	<5	<5	5
Trimble	0	<5	<5	<5	<5
Union	5	7	6	6	<5
Warren	20	17	16	16	15
Washington	<5	<5	0	<5	<5
Wayne	6	<5	<5	6	<5
Webster	<5	<5	<5	<5	<5
Whitley	16	25	14	16	16
Wolfe	<5	<5	<5	<5	<5
Woodford	<5	<5	5	5	9

Overdose deaths involving any drug. Produced by the Kentucky Injury Prevention and Research Center, July 2016. Data source: Kentucky Death Certificates Database, Kentucky Office of Vital Statistics. Data are provisional and subject to change. Counts <5 were suppressed according to the state data release policy.

Kentucky Resident Drug Overdose Deaths Involving Heroin by Year, 2011-2015

County	Year				
	2011	2012	2013	2014	2015
Adair	0	0	0	<5	0
Allen	0	0	0	0	0
Anderson	0	<5	0	<5	0
Ballard	0	0	0	0	0
Barren	0	0	0	0	0
Bath	0	0	0	0	0
Bell	0	0	0	0	0
Boone	<5	13	20	10	13
Bourbon	0	0	<5	0	0
Boyd	0	0	0	<5	<5
Boyle	0	0	0	0	0
Bracken	0	0	0	0	<5
Breathitt	0	0	0	0	0
Breckinridge	0	0	<5	0	0
Bullitt	0	6	<5	14	8
Butler	0	0	0	0	0
Caldwell	0	0	0	<5	0
Calloway	0	<5	0	0	0
Campbell	7	28	14	21	24
Carlisle	0	0	0	0	0
Carroll	<5	<5	<5	<5	<5
Carter	0	0	<5	<5	0
Casey	0	0	0	0	0
Christian	0	0	0	0	0
Clark	0	0	<5	0	<5
Clay	0	0	0	0	0
Clinton	0	0	0	0	0
Crittenden	0	0	0	0	0
Cumberland	0	0	0	0	0
Daviess	0	0	0	<5	0
Edmonson	0	0	0	0	0
Elliott	0	0	0	0	0
Estill	0	0	0	0	0
Fayette	<5	11	36	41	44
Fleming	0	0	0	0	<5
Floyd	0	0	<5	0	0
Franklin	0	0	<5	<5	<5
Fulton	0	0	0	0	0
Gallatin	0	<5	<5	0	0
Garrard	0	0	0	0	0

Overdose deaths involving heroin. Deaths were listed under all relevant drug categories. For example, a death involving heroin and fentanyl will be included here and on the fentanyl table. Produced by the Kentucky Injury Prevention and Research Center, July 2016. Data source: Kentucky Death Certificates Database, Kentucky Office of Vital Statistics. Data are provisional and subject to change. Counts <5 were suppressed according to the state data release policy.

Kentucky Resident Drug Overdose Deaths Involving Heroin by Year, 2011-2015

County	Year				
	2011	2012	2013	2014	2015
Grant	<5	<5	<5	8	8
Graves	0	0	0	0	0
Grayson	0	0	0	0	0
Green	0	0	0	0	0
Greenup	<5	0	<5	<5	<5
Hancock	0	0	0	<5	0
Hardin	0	<5	<5	<5	0
Harlan	0	0	0	<5	0
Harrison	0	0	<5	<5	<5
Hart	0	0	0	0	<5
Henderson	0	0	0	0	0
Henry	0	0	0	0	<5
Hickman	0	0	0	0	0
Hopkins	0	0	0	0	0
Jackson	0	0	0	0	0
Jefferson	11	33	57	46	62
Jessamine	<5	0	<5	<5	5
Johnson	0	0	0	0	0
Kenton	12	15	29	24	40
Knott	0	0	0	0	0
Knox	0	0	<5	0	0
Larue	0	0	0	0	0
Laurel	0	0	<5	0	<5
Lawrence	0	0	0	0	<5
Lee	0	0	0	0	<5
Leslie	0	0	0	0	0
Letcher	0	0	0	0	0
Lewis	0	<5	0	0	<5
Lincoln	0	0	<5	0	<5
Livingston	0	0	<5	0	0
Logan	0	0	0	0	<5
Lyon	0	0	0	0	0
Madison	0	<5	<5	10	11
Magoffin	0	0	0	0	0
Marion	0	0	<5	0	0
Marshall	0	0	0	0	0
Martin	0	0	0	0	<5
Mason	0	0	0	0	<5
McCracken	0	0	<5	0	<5
McCreary	0	0	0	0	0

Overdose deaths involving heroin. Deaths were listed under all relevant drug categories. For example, a death involving heroin and fentanyl will be included here and on the fentanyl table. Produced by the Kentucky Injury Prevention and Research Center, July 2016. Data source: Kentucky Death Certificates Database, Kentucky Office of Vital Statistics. Data are provisional and subject to change. Counts <5 were suppressed according to the state data release policy.

Kentucky Resident Drug Overdose Deaths Involving Heroin by Year, 2011-2015

County	Year				
	2011	2012	2013	2014	2015
McLean	0	0	0	0	0
Meade	0	<5	0	<5	<5
Menifee	0	0	0	0	0
Mercer	0	0	<5	<5	<5
Metcalfe	0	0	0	0	0
Monroe	0	0	0	0	0
Montgomery	0	0	<5	<5	<5
Morgan	0	0	0	0	0
Muhlenberg	0	0	0	0	0
Nelson	0	0	<5	<5	<5
Nicholas	0	0	0	0	0
Ohio	0	0	0	0	<5
Oldham	0	<5	0	<5	6
Owen	0	0	<5	<5	0
Owsley	0	0	0	0	0
Pendleton	0	<5	<5	<5	<5
Perry	0	0	0	<5	0
Pike	<5	0	0	<5	<5
Powell	0	0	0	0	<5
Pulaski	0	<5	0	0	<5
Robertson	0	0	0	0	0
Rockcastle	0	0	<5	0	0
Rowan	0	0	<5	<5	0
Russell	0	0	<5	0	0
Scott	0	<5	<5	<5	6
Shelby	0	<5	0	<5	<5
Simpson	0	0	0	0	0
Spencer	0	0	<5	<5	<5
Taylor	0	<5	0	0	<5
Todd	0	0	0	0	0
Trigg	0	0	0	0	0
Trimble	0	0	<5	0	0
Union	0	0	0	0	0
Warren	0	0	<5	0	<5
Washington	0	0	0	<5	<5
Wayne	0	0	0	0	0
Webster	0	0	0	0	0
Whitley	0	0	0	0	0
Wolfe	0	0	0	0	0
Woodford	<5	0	<5	<5	<5
Overdose deaths involving heroin. Deaths were listed under all relevant drug categories. For example, a death involving heroin and fentanyl will be included here and on the fentanyl table. Produced by the Kentucky Injury Prevention and Research Center, July 2016. Data source: Kentucky Death Certificates Database, Kentucky Office of Vital Statistics. Data are provisional and subject to change. Counts <5 were suppressed according to the state data release policy.					

Kentucky Resident Drug Overdose Deaths Involving Fentanyl by Year, 2011-2015

County	Year				
	2011	2012	2013	2014	2015
Adair	<5	0	0	0	<5
Allen	<5	<5	<5	0	<5
Anderson	0	<5	<5	0	0
Ballard	0	0	<5	0	0
Barren	<5	0	<5	0	0
Bath	0	0	0	0	0
Bell	0	0	<5	<5	<5
Boone	<5	0	0	13	16
Bourbon	<5	0	0	0	<5
Boyd	<5	<5	0	<5	5
Boyle	0	0	0	0	0
Bracken	0	0	0	0	<5
Breathitt	0	0	0	0	<5
Breckinridge	0	<5	0	0	0
Bullitt	0	<5	0	<5	<5
Butler	0	0	0	0	0
Caldwell	0	0	0	0	0
Calloway	0	0	0	0	<5
Campbell	<5	<5	0	11	13
Carlisle	0	0	0	0	0
Carroll	<5	0	0	<5	<5
Carter	0	0	0	<5	<5
Casey	<5	0	0	<5	0
Christian	0	0	0	0	0
Clark	<5	0	<5	<5	<5
Clay	0	<5	<5	0	0
Clinton	0	<5	<5	0	0
Crittenden	0	0	0	0	0
Cumberland	0	0	0	0	0
Daviess	<5	0	0	0	<5
Edmonson	0	0	0	0	0
Elliott	0	0	0	0	0
Estill	0	0	0	0	0
Fayette	7	<5	<5	14	38
Fleming	0	0	0	<5	<5
Floyd	<5	0	<5	<5	0
Franklin	0	<5	0	0	<5
Fulton	0	0	0	0	0
Gallatin	0	0	0	0	6
Garrard	0	0	0	0	<5

Overdose deaths involving fentanyl. Deaths were listed under all relevant drug categories. For example, a death involving fentanyl and heroin will be included here and on the heroin table. Produced by the Kentucky Injury Prevention and Research Center, July 2016. Data source: Kentucky Death Certificates Database, Kentucky Office of Vital Statistics. Data are provisional and subject to change. Counts <5 were suppressed according to the state data release policy.

Kentucky Resident Drug Overdose Deaths Involving Fentanyl by Year, 2011-2015

County	Year				
	2011	2012	2013	2014	2015
Grant	0	0	0	<5	<5
Graves	0	0	0	<5	0
Grayson	<5	<5	<5	<5	<5
Green	0	0	0	0	0
Greenup	<5	0	<5	<5	<5
Hancock	0	0	0	0	0
Hardin	<5	<5	0	0	<5
Harlan	<5	0	<5	0	0
Harrison	<5	0	0	<5	7
Hart	0	0	0	0	0
Henderson	0	<5	0	0	0
Henry	0	0	0	0	<5
Hickman	0	0	0	0	0
Hopkins	0	0	<5	0	<5
Jackson	0	0	0	0	<5
Jefferson	<5	<5	<5	5	14
Jessamine	0	0	0	<5	<5
Johnson	0	0	0	<5	0
Kenton	<5	<5	<5	20	39
Knott	0	0	0	0	0
Knox	0	0	<5	0	<5
Larue	0	0	0	0	0
Laurel	0	0	0	<5	<5
Lawrence	0	0	0	0	0
Lee	0	0	<5	0	0
Leslie	<5	<5	<5	<5	0
Letcher	<5	0	0	0	0
Lewis	0	0	0	0	<5
Lincoln	0	0	<5	0	0
Livingston	0	0	0	0	0
Logan	0	0	0	<5	0
Lyon	0	0	0	0	0
Madison	<5	<5	0	<5	10
Magoffin	0	<5	0	0	0
Marion	0	0	0	0	0
Marshall	0	0	<5	<5	0
Martin	0	0	0	0	0
Mason	0	0	0	0	<5
McCracken	<5	0	<5	<5	<5
McCreary	0	0	0	0	0

Overdose deaths involving fentanyl. Deaths were listed under all relevant drug categories. For example, a death involving fentanyl and heroin will be included here and on the heroin table. Produced by the Kentucky Injury Prevention and Research Center, July 2016. Data source: Kentucky Death Certificates Database, Kentucky Office of Vital Statistics. Data are provisional and subject to change. Counts <5 were suppressed according to the state data release policy.

Kentucky Resident Drug Overdose Deaths Involving Fentanyl by Year, 2011-2015

County	Year				
	2011	2012	2013	2014	2015
McLean	0	0	<5	0	0
Meade	<5	0	0	0	<5
Menifee	0	0	0	0	0
Mercer	0	0	0	<5	<5
Metcalfe	0	0	0	0	<5
Monroe	<5	0	0	0	0
Montgomery	0	0	0	<5	<5
Morgan	0	0	0	<5	0
Muhlenberg	0	0	<5	<5	0
Nelson	0	0	0	0	0
Nicholas	<5	0	0	0	0
Ohio	0	0	<5	0	0
Oldham	<5	0	<5	0	<5
Owen	0	0	0	<5	0
Owsley	0	0	0	0	0
Pendleton	0	0	0	<5	<5
Perry	0	0	0	<5	0
Pike	<5	0	0	<5	<5
Powell	<5	0	0	<5	<5
Pulaski	<5	<5	0	0	<5
Robertson	0	0	0	0	0
Rockcastle	<5	0	<5	<5	0
Rowan	0	0	0	0	<5
Russell	<5	0	<5	<5	<5
Scott	<5	0	0	<5	<5
Shelby	0	<5	0	0	5
Simpson	0	0	0	0	0
Spencer	0	0	<5	0	0
Taylor	0	<5	0	<5	0
Todd	0	0	<5	0	0
Trigg	0	0	0	0	<5
Trimble	0	0	0	0	0
Union	0	0	<5	<5	0
Warren	0	<5	0	<5	<5
Washington	0	0	0	0	0
Wayne	0	0	0	<5	0
Webster	0	0	0	0	0
Whitley	0	<5	0	0	<5
Wolfe	0	0	0	0	0
Woodford	0	0	<5	<5	<5

Overdose deaths involving fentanyl. Deaths were listed under all relevant drug categories. For example, a death involving fentanyl and heroin will be included here and on the heroin table. Produced by the Kentucky Injury Prevention and Research Center, July 2016. Data source: Kentucky Death Certificates Database, Kentucky Office of Vital Statistics. Data are provisional and subject to change. Counts <5 were suppressed according to the state data release policy.

Appendix

This report presents drug overdose mortality data for Kentucky residents. The data source for the report is the Kentucky Death Certificates Database, Kentucky Office of Vital Statistics for the Kentucky resident data. Data are provisional and subject to change. The data source for the U.S. data is the U.S. Multiple Cause of Death files, 1999-2014, accessible through the CDC WONDER online query system <http://wonder.cdc.gov/mcd-icd10.html>. The Multiple Cause of Death database contains mortality and population counts for all U.S. counties. Data are based on death certificates for U.S. residents.

Typically, when a drug overdose death occurs, the coroner completes a death certificate and lists the causes of death and information on how the death occurred. This information/text is then transferred in an electronic record which is sent to the National Center for Health Statistics (NCHS) at the Centers for Disease Control and Prevention (CDC) to be coded according to the guidelines of the Tenth Revision of the International Classification of Diseases (ICD-10) [www.who.int/classifications/icd10/] to allow standardized classification of the causes of death. Each death certificate is assigned a single underlying cause of death and up to twenty additional multiple causes of death. The underlying cause of death is defined as the reason that initiated the chain of events leading directly to death.

For example, the death described below is coded with an underlying cause of death being unintentional drug overdose (X42 Accidental poisoning and exposure to narcotics and psychodysleptics). The following additional multiple causes of death were assigned based on the information listed on the death certificate: T40.3 Methadone, G93.1 Anoxic brain damage, T50.9 Other and unspecified drugs.

CAUSE OF DEATH (See instructions and examples)				Approximate Interval: Onset to death
32. PART I. Enter the <u>chain of events</u> -- diseases, injuries, or complications -- that directly caused the death. DO NOT enter terminal events such as cardiac arrest, respiratory arrest, or ventricular fibrillation. Abbreviate. Enter only one cause on a line. Add additional lines if necessary.				
IMMEDIATE CAUSE (Final disease or condition resulting in death)		G93.1 Anoxic brain damage, NEC		
a. ANOXIA BRAIN INJURY		Due to (or as a consequence of):		
b. SECONDARY TO INGESTION OF METHADONE		T40.3 Methadone		
c.		Due to (or as a consequence of):		
d.		Due to (or as a consequence of):		
PART II. Enter other significant conditions contributing to death but not resulting in the underlying cause given in Part I.				33. WAS AN AUTOPSY PERFORMED? <input type="checkbox"/> Yes <input type="checkbox"/> No
X42 Accidental poisoning and exposure to narcotics and psychodysleptics, NEC				34. WERE AUTOPSY FINDINGS AVAILABLE TO COMPLETE THE CAUSE OF DEATH? <input type="checkbox"/> Yes <input type="checkbox"/> No
35. DID TOBACCO USE CONTRIBUTE TO DEATH? <input type="checkbox"/> Yes <input type="checkbox"/> Probably <input type="checkbox"/> No <input type="checkbox"/> Unknown	36. IF FEMALE: <input type="checkbox"/> Not pregnant within past year <input type="checkbox"/> Pregnant at time of death <input type="checkbox"/> Not pregnant but pregnant within 42 days of death <input type="checkbox"/> Not pregnant but pregnant 43 days to 1 year before death <input type="checkbox"/> Unknown if pregnant within the past year	37. MANNER OF DEATH <input type="checkbox"/> Natural <input type="checkbox"/> Pending investigation <input type="checkbox"/> Accident <input type="checkbox"/> Could not be determined <input type="checkbox"/> Suicide <input type="checkbox"/> Homicide		
38. DATE OF INJURY (Mo/Day/YY)(Spcl. Work)	39. TIME OF INJURY	40. PLACE OF INJURY (e.g., Decedent's home, construction site, restaurant, wooded area) HOME	41. INJURY AT WORK? <input type="checkbox"/> Yes <input type="checkbox"/> No	
42. LOCATION OF INJURY: State: _____ City or Town: _____		Zip Code: _____		
43. DESCRIBE HOW INJURY OCCURRED DRUG INGESTION		T50.9 Other and unspecified drug		
TRANSPORTATION INJURY, SPECIFY <input type="checkbox"/> Driver/Operator <input type="checkbox"/> Passenger <input type="checkbox"/> Pedestrian <input type="checkbox"/> Other (Specify): _____				

When the information on the death certificate is not specific enough and there is no mention of a particular drug contributing to the death, the death cannot be associated with a drug/drug class. For example, about one third of the death certificates for drug overdose cases in Kentucky list only “drug overdose”, “drug toxicity”, “acute drug intoxication”, or “polypharmacy intoxication”, with no mention of particular drugs involved. Therefore, the involvement of pharmaceutical opioids or heroin in Kentucky resident overdose deaths could be underestimated as about one third of the overdose deaths are not associated with specific drugs. When an overdose death involves multiple drugs from different classes (for example heroin and methadone), each drug will receive appropriate ICD-10-coded cause of death (T40.1 for heroin, T40.3 for methadone) and the death will be counted under both categories of drugs (heroin-associated deaths and pharmaceutical opioid-associated deaths). If an overdose death involves multiple drugs from the same drug class, only one multiple cause of death ICD-10 code will be assigned. For example, if oxycodone and hydrocodone are both listed on a death certificate, their involvement will be coded with one ICD-10 code (T40.2) that represents the involvement of natural or semi-synthetic opioids.

Definition: Drug overdose deaths were identified as deaths with an underlying cause of death in the following ICD-10 code range: X40-X44(accidental/unintentional drug poisoning), X60-X64(suicide by drug poisoning), X85(homicide by drug poisoning), and Y10-Y14 (drug poisoning with undetermined intent).

The types of drugs contributing to drug overdose deaths can be identified using ICD-10 codes T36-T50.9 listed in any of the multiple causes of death fields. In this report we included statistics on drug overdose deaths involving heroin (T40.1), pharmaceutical opioids (T40.2, T40.3, or T40.4), cocaine (T40.5), or benzodiazepines (T42.4).

Involvement of fentanyl was determined by searching the literal text in the cause of death field for the word fentanyl. These fields are written by the medical examiner or coroner on the death certificate.

Age-adjusted morbidity and mortality rates were based on 2000 U.S. standard population data.