Drug Overdose Inpatient Hospitalizations in Kentucky,

2000 - 2014





Kentucky Injury Prevention and Research Center

Drug Overdose Hospitalizations in Kentucky, 2000-2014

January, 2016

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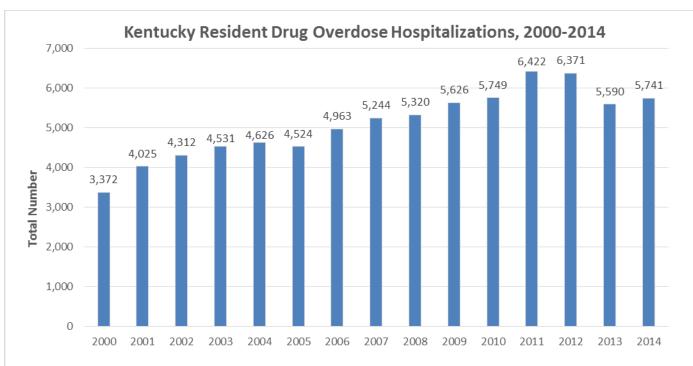
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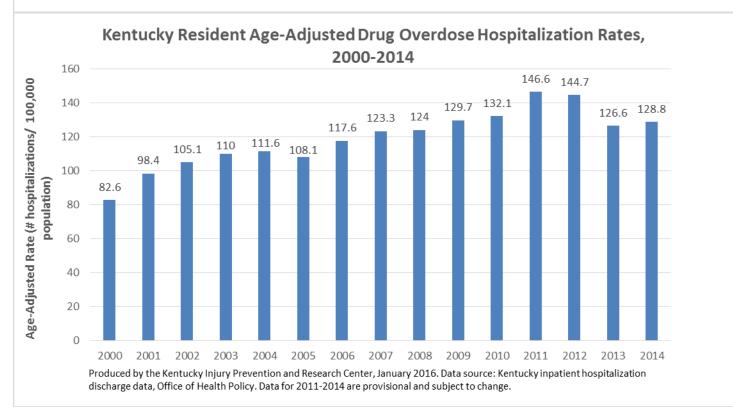
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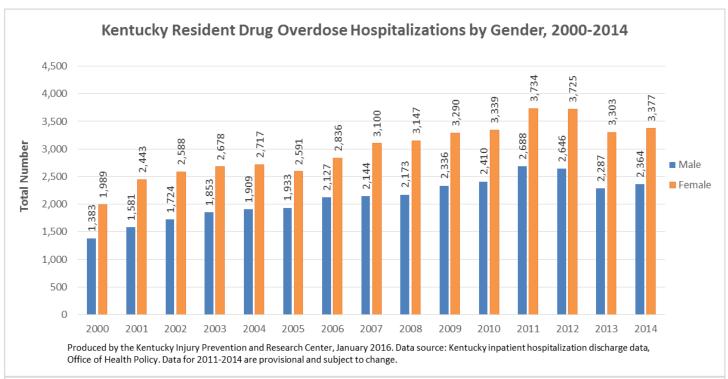
Executive Summary

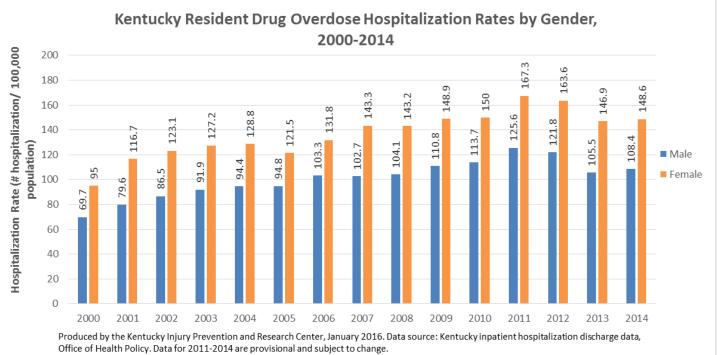
- 1. In 2014, there were 5,741 Kentucky resident hospitalizations for drug overdoses. This is an increase of 3% from the 5,590 drug overdose hospitalizations registered in 2013, ending the decreasing trend from the previous two years.
 - *Note:* The number of drug overdose hospitalizations represents instances of care (hospital admissions) rather than distinct patients. The state inpatient hospitalization discharge data do not contain personal identifiers like names, addresses, or social security numbers in order to protect patient privacy. Thus, our counts do not necessarily correspond to the number of people who overdosed in a given year: one patient could have been transferred from one hospital to another, generating two hospital admissions. Likewise, a patient who had two overdose episodes during a given year would have two distinct hospital admission records. The counts of hospital admissions describe the burden of the drug overdose epidemic on the health care facilities and the insurers and allow for better capacity planning.
- 2. The 2014 Kentucky resident age-adjusted drug overdose hospitalization rate was 128.8 per 100,000 Kentucky residents, up slightly from the 126.6 rate from 2013, and down from 144.7/100,000 in 2012.
- 3. Females remained at higher risk for drug overdose hospitalizations (148.6/100,000) compared with males (108.4/100,000) in 2014.
- 4. Adults ages 45-54 years old were at highest risk for overdose hospitalizations (201/100,000) in 2014, followed by 35-44 year olds (191/100,000), and 25-34 year olds (172/100,000).
- 5. In 2014, there were 2,325 hospitalizations for intentional self-harm (suicide attempt) with drugs and 1,977 hospitalizations for unintentional (accidental) drug overdose.
- 6. The total charges associated with the hospital treatment of Kentucky resident drug overdoses in 2014 were \$150.3 million dollars, a 16% increase from the \$129.4 million dollar total in 2013. The \$150.3 included \$53 million billed to Medicare, \$59 million Medicaid, \$7 million self-pay or charity, and \$24 million to commercial insurance. The \$59 million billed to Medicaid was almost double the \$30 million from 2013.
- 7. The total length of hospital stay for the treatment of the 5,741 Kentucky resident drug overdoses in 2014 was 21,777 days.
- 8. Pharmaceutical opioids and benzodiazepines remained the most commonly abused drugs leading to drug overdose hospitalizations. In 2014, there were 1,245 drug overdose hospitalizations involving benzodiazepines, 1,095 involving pharmaceutical opioids, and 325 involving heroin. When a drug overdose involved two or more drugs, the drugs were counted under each relevant drug category. From 2012-2014 heroin-related overdose hospitalizations were more frequent among those 25-34 years old. Pharmaceutical opioids were most often registered in drug overdose hospitalizations for Kentucky residents 55 years of age and older. Benzodiazepines were more common in drug overdose hospitalizations for those 45 to 54 years of age.
- 9. The majority of the 2012-2014 drug overdose hospitalizations among residents 55 years of age or older were unintentional. For all other age groups, drug overdose hospitalizations were more often due to intentional self-harm (suicide attempt) than to accident.
- 10. The highest rates of overdose hospitalizations involving prescription drugs were observed in the Kentucky counties in the Appalachian region. The highest rates of overdose hospitalizations involving heroin were observed in Northern Kentucky, Jefferson, and Fayette counties.
- 11. The highest number of inpatient hospitalizations for drug overdoses in 2013 were reported by the following facilities: St. Elizabeth Florence, St. Elizabeth Edgewood, University of Kentucky Good Samaritan Hospital, University of Louisville Hospital, University of Kentucky Hospital, Owensboro Medical Health System, Baptist Hospital East, and the Medical Center at Bowling Green.

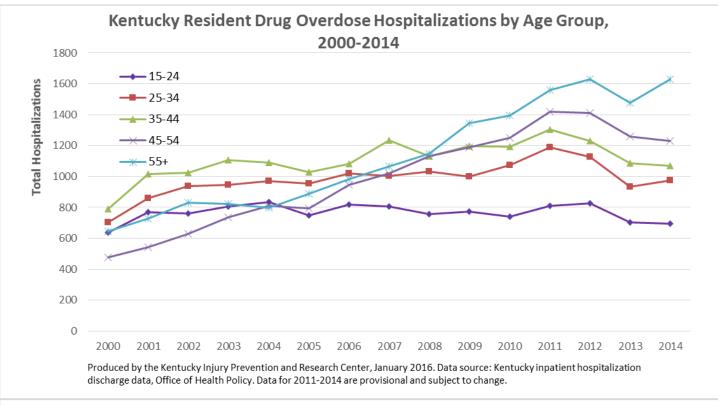


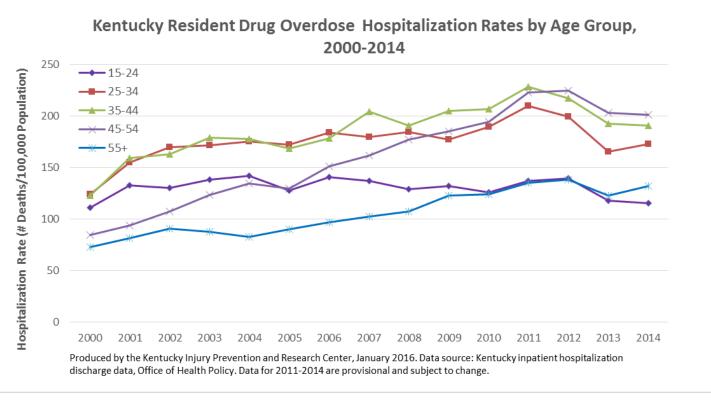
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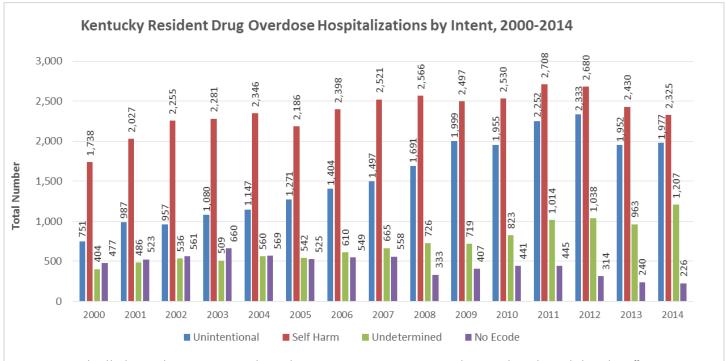


Kentucky Resident Drug Overdose Hospitalizations by Age Group, 2000-2014

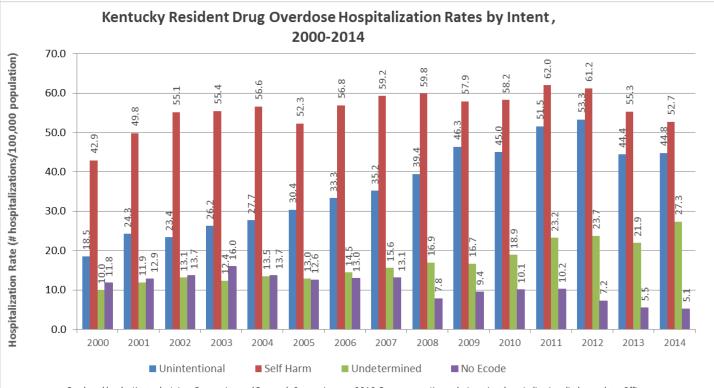
		A	ge Group	os	
Year	15-24	25-34	35-44	45-54	55+
2000	638	703	789	476	644
2001	769	861	1,015	543	728
2002	759	936	1,023	627	830
2003	806	945	1,108	736	821
2004	833	969	1,092	811	796
2005	749	954	1,028	795	887
2006	818	1,020	1,082	945	983
2007	805	1,003	1,232	1,020	1,067
2008	755	1,032	1,133	1,131	1,148
2009	775	998	1,196	1,189	1,344
2010	742	1,075	1,191	1,249	1,396
2011	811	1,190	1,302	1,418	1,558
2012	828	1,128	1,231	1,411	1,631
2013	704	932	1,086	1,257	1,478
2014	694	976	1,070	1,230	1,629

Kentucky Resident Drug Overdose Hospitalization Rates by Age Group, 2000-2014 (Rate per 100,000 Kentucky Residents)

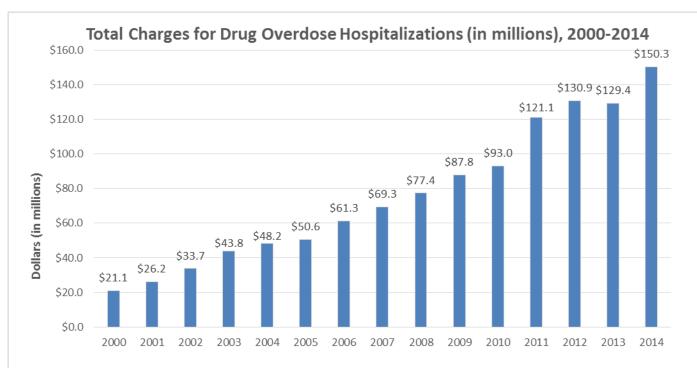
		A	ge Group	os	
Year	15-24	25-34	35-44	45-54	55+
2000	111	124	123	85	73
2001	132	155	159	94	82
2002	130	169	163	107	91
2003	138	172	179	123	88
2004	142	175	177	134	83
2005	127	172	169	129	90
2006	141	184	178	151	97
2007	137	180	204	162	102
2008	129	185	191	177	107
2009	132	177	205	185	123
2010	126	190	207	194	124
2011	137	210	228	222	135
2012	140	199	217	225	138
2013	118	165	192	203	123
2014	115	172	191	201	132



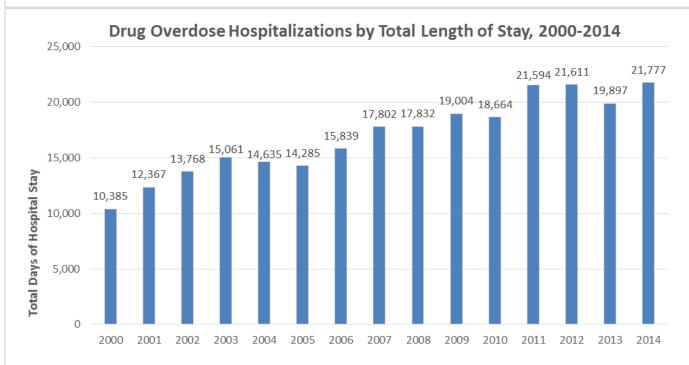
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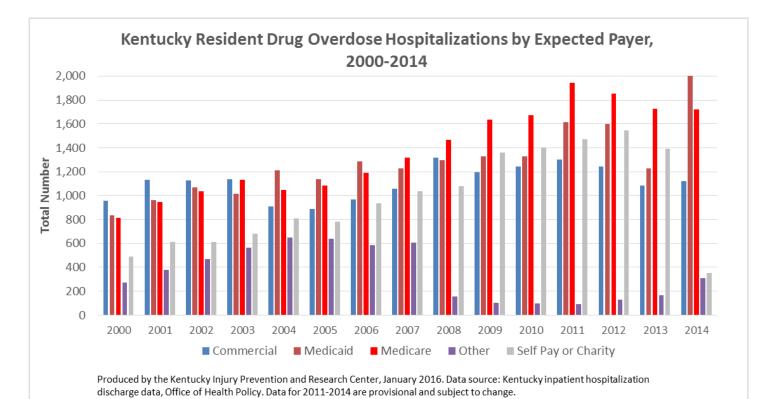
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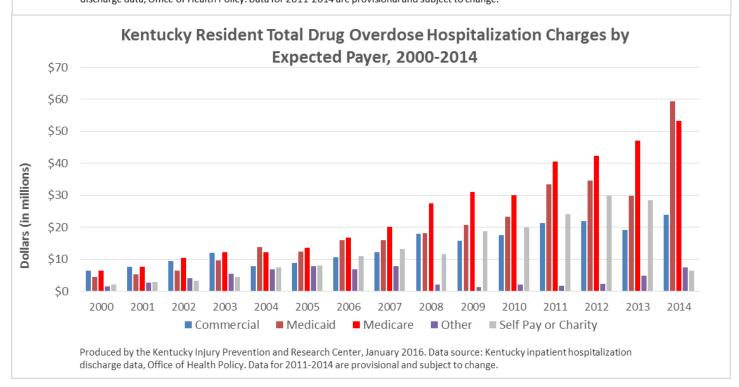


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Kentucky Resident Drug Overdose Hospitalizations by Expected Payer, 2000-2014

			Expected Payer		
Year	Commercial	Medicaid	Medicare	Other	Self Pay or Charity
2000	958	835	816	273	490
2001	1,130	960	946	379	610
2002	1,128	1,067	1,036	467	614
2003	1,135	1,016	1,132	565	683
2004	909	1,211	1,049	648	809
2005	886	1,136	1,082	640	780
2006	969	1,285	1,191	584	934
2007	1,057	1,226	1,318	607	1,036
2008	1,319	1,296	1,468	158	1,079
2009	1,197	1,330	1,633	105	1,361
2010	1,242	1,328	1,675	100	1,404
2011	1,302	1,616	1,941	92	1,471
2012	1,243	1,599	1,855	129	1,545
2013	1,082	1,227	1,724	165	1,392
2014	1,119	2,240	1,718	312	352

Kentucky Resident Drug Overdose Hospitalization Charges by Expected Payer, 2000-2014

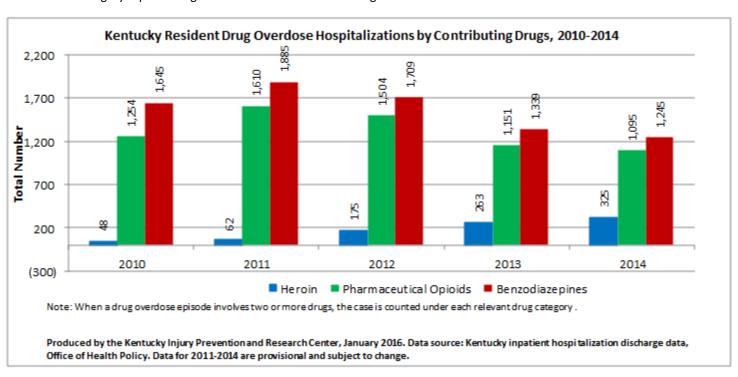
			Expected Payer		
Year	Commercial	Medicaid	Medicare	Other	Self Pay or Charity
2000	\$6,553,322	\$4,547,453	\$6,398,838	\$1,538,178	\$2,033,229
2001	\$7,604,383	\$5,301,264	\$7,721,373	\$2,723,542	\$2,846,453
2002	\$9,476,073	\$6,541,553	\$10,513,580	\$4,011,795	\$3,198,909
2003	\$12,055,865	\$9,604,757	\$12,308,818	\$5,408,263	\$4,448,617
2004	\$7,793,219	\$13,770,192	\$12,242,267	\$6,840,643	\$7,541,373
2005	\$8,787,588	\$12,416,948	\$13,615,177	\$7,826,545	\$7,982,574
2006	\$10,722,063	\$15,888,086	\$16,791,177	\$6,924,011	\$10,996,370
2007	\$12,213,703	\$16,016,008	\$20,101,074	\$7,834,895	\$13,170,368
2008	\$17,954,321	\$18,167,975	\$27,464,939	\$2,109,362	\$11,701,668
2009	\$15,832,529	\$20,823,070	\$31,132,657	\$1,272,022	\$18,755,935
2010	\$17,476,761	\$23,401,655	\$30,082,448	\$2,021,787	\$19,992,431
2011	\$21,358,582	\$33,361,910	\$40,605,366	\$1,781,603	\$24,018,543
2012	\$21,983,368	\$34,611,378	\$42,263,303	\$2,280,459	\$29,747,224
2013	\$19,188,050	\$29,769,270	\$47,058,063	\$4,929,608	\$28,482,762
2014	\$23,878,678	\$59,283,366	\$53,270,172	\$7,386,431	\$6,518,948

Kentucky Resident Drug Overdose Hospitalizations

by Drug Type, Gender, and Year, 2010-2014

			Male		Female					
Drug Type	2010	2011	2012	2013	2014	2010	2011	2012	2013	2014
Heroin	30	41	106	172	205	18	21	69	91	120
Pharmaceutical Opioids	618	710	636	501	452	636	900	868	650	643
Benzodiazepines	708	743	679	515	482	937	1,142	1,030	824	763
Cocaine	54	110	132	123	114	50	103	87	81	90
Heroin & Pharmaceutical Opioids	*	*	9	9	6	*	*	7	6	8
Heroin & Benzodiazepines	8	*	18	22	16	*	*	10	11	19
Heroin & Cocaine	*	*	12	14	13	*	*	5	9	13
Pharmaceutical Opioids & Benzodiazepines	277	312	253	187	143	267	393	366	222	231
Pharmaceutical Opioids & Cocaine	13	31	21	35	27	8	30	27	22	28
Benzodiazepines & Cocaine	15	35	28	27	30	13	36	30	27	24

^{*}Numbers are suppressed, per state's data management policy, when the counts represent zero to four (0-4) hospitalizations. When a drug overdose episode involves two or more drugs, the case is counted under each relevant drug category as well as under the category representing the combination of the two drugs that contributed to the overdose.



Kentucky Resident Drug Overdose Hospitalizations by Drug Type and Age Group, 2012-2014 Combined

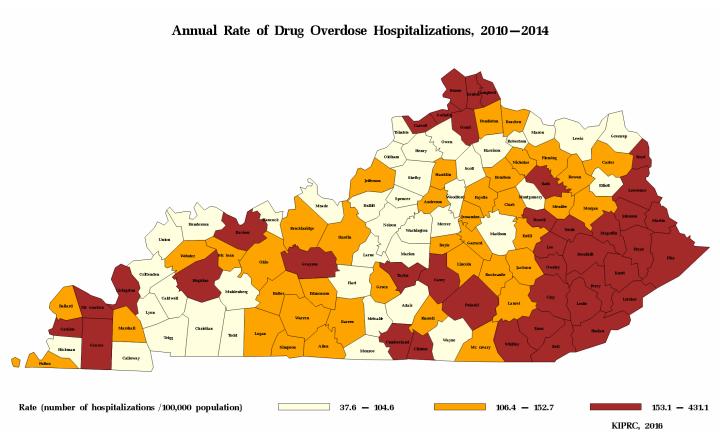
Davis Time		-	Age Group		
Drug Type	15-24	25-34	35-44	45-54	55+
Heroin	173	290	153	111	36
Pharmaceutical Opioids	243	524	684	994	1,283
Benzodiazepines	339	755	965	1,120	1,091
Cocaine	51	137	166	150	108
Heroin & Pharmaceutical Opioids	13	12	11	9	0
Heroin & Benzodiazepines	23	37	21	14	*
Heroin & Cocaine	11	21	20	12	*
Pharmaceutical Opioids & Benzodiazepines	86	259	292	391	372
Pharmaceutical Opioids & Cocaine	15	47	45	33	19
Benzodiazepines & Cocaine	18	53	55	33	17

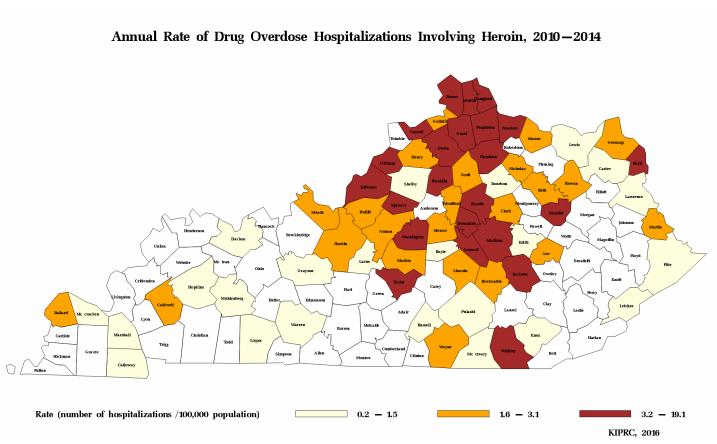
^{*}Numbers are suppressed, per state's data management policy, when the counts represent zero to four (0-4) hospitalizations.

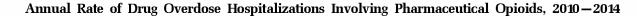
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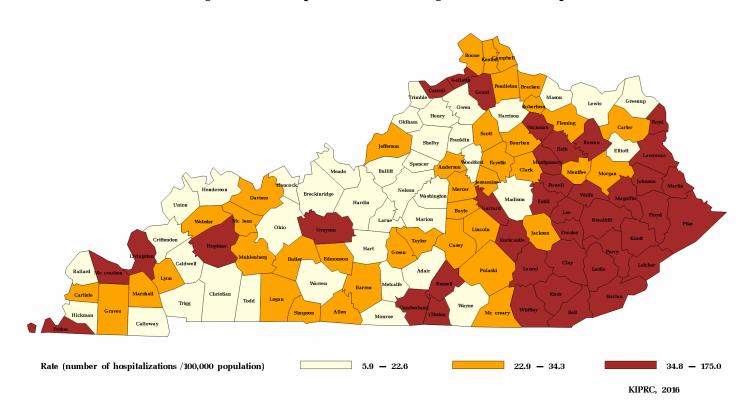
Kentucky Resident Drug Overdose Hospitalizations by Age Group, Payer Source and Intent, 2012-2014 Combined

		Num	ber of Drug O	verdose Hosp	italizations		
Age Group	Intent		by P	ayer Source			Total
		Commercial	Medicaid	Medicare	Self-Pay	Other	
15-24	Self-Harm	510	508	19	312	45	1,394
15-24	Unintentional	117	137	14	147	12	427
25-34	Self-Harm	262	515	156	494	73	1,500
25-34	Unintentional	120	261	69	42	297	789
25.44	Self-Harm	397	488	261	423	67	1,636
35-44	Unintentional	161	309	203	214	22	909
45.54	Self-Harm	401	421	405	308	72	1,607
45-54	Unintentional	224	402	480	41	205	1,352
55+	Self-Harm	212	181	594	76	30	1,093
))	Unintentional	344	323	1,832	58	49	3,699

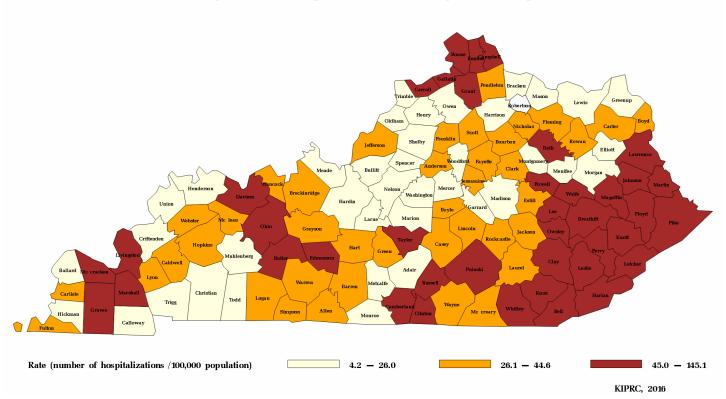












Number of Drug Overdose Hospitalizations and Rates per 100,000 Residents, by County, 2010-2014

		All Drugs		Heroin		Pharmac	eutical Opioids	Benzodia	zepines
	County (FIPS Code)	Number	Rate	Number	Rate	Number		Number	
1	Adair, KY (21001)	97	102	*	*	21	22	22	23
2	Allen, KY (21003)	112	111	*	*	30	30	30	30
3	Anderson, KY (21005)	134	124	*	*	32	30	36	33
4	Ballard, KY (21007)	44	106	*	*	8	*	8	*
5	Barren, KY (21009)	232	109	*	*	59	28	73	34
6	Bath, KY (21011)	107	180	*	*	28	47	30	51
7	Bell, KY (21013)	369	261	*	*	154	109	147	104
8	Boone, KY (21015)	956	155	56	9	168	27	277	45
9	Bourbon, KY (21017)	136	136	*	*	28	28	33	33
10	Boyd, KY (21019)	406	165	12	*	89	36	95	39
11	Boyle, KY (21021)	182	125	*	*	36	25	54	37
12	Bracken, KY (21023)	47	111	*	*	11	*	11	*
13	Breathitt, KY (21025)	185	271	*	*	64	94	57	83
14	Breckinridge, KY (21027)	128	128	*	*	22	22	32	32
15	Bullitt, KY (21029)	320	84	11	*	70	18	78	21
16	Butler, KY (21031)	88	138	*	*	16	*	30	47
17	Caldwell, KY (21033)	54	84	*	*	13	*	22	34
18	Calloway, KY (21035)	188	99	*	*	21	11	39	21
19	Campbell, KY (21037)	759	166	78	17	156	34	218	48
20	Carlisle, KY (21039)	44	175	*	*	6	*	9	*
21	Carroll, KY (21041)	97	178	*	*	21	39	29	53
22	Carter, KY (21043)	161	117	*	*	47	34	40	29
23	Casey, KY (21045)	169	211	*	*	22	27	33	41
24	Christian, KY (21047)	179	48	*	*	22	6	41	11
25	Clark, KY (21049)	203	114	*	*	61	34	54	30
26	Clay, KY (21051)	316	295	*	*	114	106	143	133
27	Clinton, KY (21053)	94	184	*	*	29	57	34	67
28	Crittenden, KY (21055)	38	82	*	*	9	*	7	*
29	Cumberland, KY (21057)	64	187	*	*	21	62	24	70
30	Daviess, KY (21059)	923	189	6	*	129	26	256	52
31	Edmonson, KY (21061)	71	117	*	*	20	33	29	48
32	Elliott, KY (21063)	31	80	*	*	8	*	10	*
	Estill, KY (21065)	96	132	*	*	32	44	26	36
34	Fayette, KY (21067)	1,847	121	75	5	381	25	410	27
35	Fleming, KY (21069)	80	110	*	*	20	28	26	36
36	Floyd, KY (21071)	428	219	*	*	163	83	157	80
37	Franklin, KY (21073)	322	130	9	*	56	23	76	31
38	Fulton, KY (21075)	50	153	*	*	18	*	14	*
39	Gallatin, KY (21077)	97	227	*	*	20	47	32	75
40	Garrard, KY (21079)	104	123	*	*	30	36	20	24

Number of Drug Overdose Hospitalizations and Rates per 100,000 Residents, by County, 2010-2014

		All D	rugs	Hero	oin	Pharmac	eutical Opioids	Benzodi	azepines
	County (FIPS Code)	Number	Rate	Number	Rate	Number	Rate	Number	Rate
41	Grant, KY (21081)	295	239	18	*	59	48	80	65
42	Graves, KY (21083)	296	158	*	*	60	32	90	48
43	Grayson, KY (21085)	250	193	*	*	54	42	54	42
44	Green, KY (21087)	65	116	*	*	13	*	23	41
45	Greenup, KY (21089)	174	95	*	*	35	19	33	18
46	Hancock, KY (21091)	44	102	*	*	*	*	15	*
47	Hardin, KY (21093)	605	112	10	*	111	21	138	26
48	Harlan, KY (21095)	299	208	*	*	95	66	89	62
49	Harrison, KY (21097)	69	74	*	*	14	*	23	25
50	Hart, KY (21099)	96	104	*	*	17	*	25	27
51	Henderson, KY (21101)	213	92	*	*	31	13	44	19
52	Henry, KY (21103)	65	84	*	*	15	*	15	*
53	Hickman, KY (21105)	9	*	*	*	*	*	*	*
54	Hopkins, KY (21107)	364	156	*	*	87	37	104	45
55	Jackson, KY (21109)	78	117	*	*	22	33	21	31
56	Jefferson, KY (21111)	4,656	124	262	7	951	25	1,021	27
57	Jessamine, KY (21113)	323	130	17	*	71	29	73	29
58	Johnson, KY (21115)	290	248	*	*	58	50	71	61
59	Kenton, KY (21117)	1,532	189	155	19	249	31	420	52
60	Knott, KY (21119)	203	252	*	*	44	55	44	55
61	Knox, KY (21121)	448	281	*	*	74	46	85	53
62	Larue, KY (21123)	58	82	*	*	16	*	17	*
63	Laurel, KY (21125)	376	126	*	*	112	38	122	41
64	Lawrence, KY (21127)	146	184	*	*	41	52	42	53
65	Lee, KY (21129)	87	227	*	*	28	73	38	99
66	Leslie, KY (21131)	110	198	*	*	29	52	27	49
67	Letcher, KY (21133)	240	200	*	*	58	48	55	46
68	Lewis, KY (21135)	39	56	*	*	9	*	11	*
69	Lincoln, KY (21137)	150	122	*	*	40	33	37	30
70	Livingston, KY (21139)	95	201	*	*	26	55	26	55
71	Logan, KY (21141)	144	107	*	*	31	23	39	29
72	Lyon, KY (21143)	44	105	*	*	11	*	14	*
73	Madison, KY (21151)	712	217	*	*	140	43	183	56
74	Magoffin, KY (21153)	125	138	*	*	25	28	37	41
75	Marion, KY (21155)	68	143	*	*	11	*	16	*
76	Marshall, KY (21157)	363	85	14	*	95	22	77	18
77	Martin, KY (21159)	169	258	*	*	32	49	40	61
78	Mason, KY (21161)	93	93	*	*	10	*	19	*
79	McCracken, KY (21145)	235	151	*	*	44	28	76	49
80	McCreary, KY (21147)	129	202	*	*	37	58	41	64

Number of Drug Overdose Hospitalizations and Rates per 100,000 Residents, by County, 2010-2014

	County (FIPS Code)	All Di	rugs	Hero	oin	Pharmac	eutical Opioids	Benzodia	azepines
	county (FIF 3 code)	Number	Rate	Number	Rate	Number	Rate	Number	Rate
81	McLean, KY (21149)	80	92	*	*	19	*	21	24
82	Meade, KY (21163)	72	49	*	*	18	*	17	*
83	Menifee, KY (21165)	45	142	*	*	10	*	*	*
84	Mercer, KY (21167)	105	99	*	*	30	28	25	23
85	Metcalfe, KY (21169)	46	92	*	*	10	*	12	*
86	Monroe, KY (21171)	50	92	*	*	12	*	14	*
87	Montgomery, KY (21173)	138	102	*	*	47	35	30	22
88	Morgan, KY (21175)	78	115	*	*	17	*	14	*
89	Muhlenberg, KY (21177)	136	87	*	*	36	23	36	23
90	Nelson, KY (21179)	188	85	5	*	42	19	38	17
91	Nicholas, KY (21181)	45	127	*	*	13	*	13	*
92	Ohio, KY (21183)	169	141	*	*	27	23	58	48
93	Oldham, KY (21185)	203	66	10	*	30	10	46	15
94	Owen, KY (21187)	44	82	6	*	10	*	13	*
95	Owsley, KY (21189)	101	431	*	*	41	175	34	145
96	Pendleton, KY (21191)	108	148	9	*	20	27	28	38
97	Perry, KY (21193)	486	344	*	*	89	63	91	64
98	Pike, KY (21195)	604	188	*	*	202	63	207	64
99	Powell, KY (21197)	108	172	*	*	34	54	30	48
100	Pulaski, KY (21199)	486	153	*	*	96	30	148	47
101	Robertson, KY (21201)	6	*	*	*	*	*	*	*
102	Rockcastle, KY (21203)	103	121	*	*	34	40	35	41
103	Rowan, KY (21205)	170	145	*	*	54	46	51	43
104	Russell, KY (21207)	117	133	*	*	37	42	40	45
105	Scott, KY (21209)	243	99	6	*	76	31	74	30
106	Shelby, KY (21211)	172	79	*	*	34	16	33	15
107	Simpson, KY (21213)	103	117	*	*	27	31	35	40
108	Spencer, KY (21215)	73	84	*	*	14	*	22	25
109	Taylor, KY (21217)	236	188	8	*	36	29	86	69
110	Todd, KY (21219)	31	50	*	*	9	*	6	*
111	Trigg, KY (21221)	50	70	*	*	8	*	11	*
112	Trimble, KY (21223)	35	79	*	*	7	*	6	*
113	Union, KY (21225)	38	50	*	*	6	*	6	*
114	Warren, KY (21227)	639	109	*	*	115	20	172	29
115	Washington, KY (21229)	43	72	*	*	5	*	8	*
116	Wayne, KY (21231)	100	96	*	*	20	19	27	26
117	Webster, KY (21233)	79	117	*	*	21	31	18	*
118	Whitley, KY (21235)	413	232	6	*	129	73	109	61
119	Wolfe, KY (21237)	104	286	*	*	35	96		91
120	Woodford, KY (21239)	111	88	*	*	26	21	25	20

^{*}Counts less than 5 were suppressed according to the state data management policy. Rates based on less than 20 events are unreliable and were suppressed by the state data management policy.

Discharge Status for the Drug Overdose Hospitalizations			Υe	ar		
	2010	2011	2012	2013	2014	Total
Routine discharge (home/self care)	3,652	4,131	3,995	3,484	3,652	18,914
Inpatient-other short-term hospital	166	175	129	121	160	751
Skilled nursing facility (SNF)	139	172	165	182	188	846
Intermediate care facility (ICF)	15	17	29	12	10	83
Designated cancer center or children's hospital	99	76	89	65	52	381
Home health	260	272	275	227	279	1,313
Left/discontinued care against medical advice	275	322	338	261	274	1,470
Expired/did not recover	89	87	104	110	126	516
Discharge/transfer to court/law enforcement	49	65	115	72	56	357
Discharge/transfer to a federal hospital	19	12	16	9	11	67
Hospice-home	14	9	19	11	19	72
Hospice-medical facility	9	11	8	17	47	92
Transfer within institution to Medicare swing bed	23	13	13	9	7	65
Discharge/transfer to a rehab facility or a hospital unit	43	56	60	69	68	296
Discharge/transfer to a long-term care hospital	11	19	23	18	28	99
Discharge/transfer to a psychiatric hospital or a psychiatric unit of a hospital	860	962	961	889	720	4,392
Other	26	23	32	34	44	159
Total	5,749	6,422	6,371	5,590	5,741	29,873

	Kent	-	sident D spitaliza	orug Ove tions	rdose
Kentucky Hospitals			Year		
	2010	2011	2012	2013	2014
	N	N	N	N	N
Baptist Hospital East	205	230	229	219	223
Baptist Hospital Northeast	21	15	21	21	13
Baptist Regional Medical Center	64	103	123	93	103
Bluegrass Community Hospital	*	*	*	*	0
Bourbon Community Hospital	22	28	19	23	19
Breckinridge Memorial Hospital	18	6	*	5	*
Caldwell Medical Center	*	6	*	*	*
Cardinal Hill Specialty Hospital	0	0	*	*	0
Carroll County Memorial Hospital	7	*	*	5	*
Casey County Hospital	42	8	10	*	*
Caverna Memorial Hospital Inc	5	6	*	5	*
Central Baptist Hospital	58	89	99	83	96
Clark Regional Medical Center	23	38	46	30	33
Clinton County Hospital	15	7	16	20	12
Commonwealth Regional Specialty Hospital	0	0	0	*	0
Crittenden Health System	8	*	5	*	*
Cumberland County Hospital	13	10	16	6	6
Ephraim McDowell Fort Logan Hospital	7	*	*	0	0
Ephraim McDowell Reg Medical Center	102	76	98	88	93
Flaget Memorial Hospital	15	21	22	25	19
Fleming County Hospital	7	6	6	9	12
Frankfort Regional Medical Center	70	60	63	75	71
Georgetown Community Hospital	33	33	36	36	39
Greenview Regional Hospital	18	21	18	15	20
Hardin Memorial Hospital	135	150	139	136	148
Harlan ARH Hospital	35	58	69	46	64
Harrison Memorial Hospital	*	11	13	6	*
Hazard ARH Regional Medical Center	162	191	172	123	143
Highlands Regional Medical Center	47	48	51	40	72
Jackson Purchase Medical Center	61	62	68	34	38
Jane Todd Crawford Memorial Hospital	*	6	*	6	*
Jennie Stuart Medical Center Inc	43	53	62	44	24
Jewish Hospital & St Marys Healthcare	77	83	81	69	86
Jewish Hospital Shelbyville	11	16	32	11	12

Kentucky Hospitals	Kent	Kentucky Resident Drug Overdose Hospitalizations				
		Year				
	2010	2011	2012	2013	2014	
	N	N	N	N	N	
Kentucky River Medical Center	82	92	81	47	44	
King's Daughters Medical Center	124	113	102	123	105	
Knox County Hospital	74	79	88	43	77	
Kosair Children's Hospital	72	90	106	128	157	
Lake Cumberland Regional Hospital	133	183	198	141	159	
Livingston Hosp & Healthcare Svcs Inc	9	*	*	*	*	
Logan Memorial Hospital	9	8	18	7	7	
Lourdes Hospital	123	136	163	170	182	
Marcum and Wallace Memorial Hospital	*	6	5	0	*	
Marshall County Hospital	10	15	17	10	10	
Mary Breckinridge Hospital	*	*	*	*	7	
McDowell ARH Hospital	26	23	11	9	6	
Meadowview Regional Medical Center	22	22	17	21	14	
Memorial Hospital Inc	28	64	81	32	29	
Methodist Hospital	31	45	63	53	47	
Methodist Hospital Union County	*	*	0	0	*	
Middlesboro ARH Hospital	46	82	34	27	34	
Monroe County Medical Center	5	10	6	*	5	
Morgan County ARH Hospital	0	*	0	0	*	
Muhlenberg Community Hospital	8	14	22	11	21	
Murray Calloway County Hospital	47	40	29	18	44	
New Horizons Medical Center	0	*	0	0	*	
Nicholas County Hospital	*	0	*	*	0	
Norton Audubon Hospital	100	119	133	119	128	
Norton Brownsboro Hospital	20	33	28	39	48	
Norton Hospital	81	52	76	69	116	
Norton Suburban Hospital	61	61	73	53	60	
Ohio County Hospital	8	9	13	*	5	
Our Lady of Bellefonte Hospital	43	32	34	34	32	
Owensboro Medical Health System	234	261	256	219	226	
Parkway Regional Hospital	11	8	7	8	5	
Pattie A Clay Regional Medical Ctr	47	34	0	29	45	
Paul B Hall Regional Medical Center	95	108	64	60	44	
Pikeville Medical Center	123	126	133	128	179	

		Kentucky Resident Drug Overdose				
Kentucky Hospitals	Hospitalizations Year					
	N	N	N	N	N	
Pineville Community Hospital	36	21	19	12	10	
Regional Medical Center of Hopkins County	82	85	119	98	95	
Rockcastle Regional Hospital & Respiratory Care Center	21	19	7	17	10	
Russell County Hospital	16	20	12	7	*	
Saint Joseph Berea	7	20	7	11	8	
Saint Joseph East	41	55	69	68	57	
Saint Joseph Hospital	134	139	106	103	75	
Saint Joseph Hospital London	54	81	72	66	54	
Saint Joseph Hospital Martin	5	5	*	*	*	
Saint Joseph Mount Sterling	18	14	8	15	12	
Saints Mary & Elizabeth Hospital	150	142	125	161	158	
Springview Hospital	31	16	18	17	9	
St Claire Regional Medical Center	104	90	83	100	79	
St Elizabeth Edgewood	378	341	353	339	299	
St Elizabeth Florence	256	314	313	311	308	
St Elizabeth Fort Thomas	96	134	136	123	120	
St Elizabeth Grant	*	6	5	0	*	
T J Samson Community Hospital	81	61	60	45	39	
Taylor Regional Hospital	51	55	48	47	25	
The James B Haggin Memorial Hospital	6	*	*	0	*	
The Medical Center at Bowling Green	196	255	227	201	205	
The Medical Center at Franklin	6	*	*	*	*	
The Medical Center at Scottsville	0	*	*	*	*	
Three Rivers Medical Center	50	43	34	21	22	
Trigg County Hospital Inc	*	*	0	0	0	
Twin Lakes Regional Medical Center	35	43	47	33	37	
UK HealthCare Good Samaritan Hospital	248	328	279	253	270	
University of Kentucky Hospital	198	250	290	215	239	
University of Louisville Hospital	249	373	358	302	262	
Wayne County Hospital Inc	0	0	*	0	0	
Western Baptist Hospital	107	96	100	56	57	
Westlake Regional Hospital	15	11	8	*	*	
Whitesburg ARH Hospital	34	42	40	41	37	
Williamson ARH Hospital	17	26	15	19	29	

About This Report

This report presents drug overdose hospitalization data for Kentucky residents treated in Kentucky acute care hospitals. The data source is the Kentucky Inpatient Hospitalization (IH) Discharge Files, Cabinet for Health and Family Services, Office of Health Policy, 2000-2014 (data for 2011-2014 are provisional and subject to change). Inpatient hospitalization data were coded according to the International Classification of Disease, 9th revision, Clinical Modification (ICD-9-CM, http://www.cdc.gov/nchs/icd/icd9cm.htm). The ICD-9-CM system describes a drug overdose (also called drug poisoning) using diagnosis codes and E-codes. The Kentucky data system includes up to 25 diagnosis code fields for each hospitalization. The first diagnosis code is called the principal diagnosis code. The principal diagnosis for a hospitalized patient is the main reason for the patient's hospital stay and is based on the clinical findings during the patient's stay. Other conditions/diagnoses that exist at the time of the hospitalization and affect the diagnosis, treatment, or length of stay in the health facility are also coded in the remaining 24 diagnosis code fields and are called secondary diagnoses. ICD-9-CM diagnosis codes describing drug poisonings are in the range 960-979. Drug overdose (drug poisoning) diagnoses should be supplemented (when circumstances of the overdose are known) with additional codes called external-cause-of-injury codes (E-codes), that describe the intent of injury. Based on the external-cause-of-injury code, a drug poisoning can be classified by intent as accidental (unintentional, E850-E858), intentional (self-harm, E950.0-E950.5; or assault, E962.0), or undetermined (E980.0-E980.5, when there is insufficient documentation in the medical chart to determine whether the drug overdose was accidental or intentional). Some drug overdose hospitalization records, however, do not list any E-codes. We treat such records as a separate category ("No E-code") when reporting the intent of the overdose. On average, 90 to 95 percent of the Kentucky drug overdose hospitalization records listed valid external-cause-ofinjury codes describing the intent of the overdose.

Definition: A hospitalization was considered a drug overdose hospitalization if:

- 1) any of the ICD-9-CM codes in the range 960-979 were listed in any diagnosis (principal or secondary) fields: or
- 2) any of the ICD-9-CM codes in the range E850-E858, E950.0-E950.5, E962.0, or E980.0-E980.5 were listed in the E-code fields.

Appendix A describes the ICD-9-CM codes that identify specific drugs/classes of drugs contributing to the drug overdose.

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

Limitations:

- 1. Only records for Kentucky residents treated in Kentucky acute care hospitals were included in this report. Data for Kentucky residents treated in neighboring states were not available. Therefore, the counts and rates presented likely underestimate the full extent of drug overdoses in Kentucky.
- 2. Reported counts reflect the number of hospitalizations or encounters of care for drug overdoses, rather than number of distinct patients. The inpatient hospital discharge data do not include personal identifiers such as names, addresses, or social security numbers in order to protect patient privacy. Thus, our counts do not necessarily correspond to the number of people who were hospitalized for an overdose in a given year: one patient could have been transferred from one hospital to another, generating two hospital admissions. Likewise, a patient who had two overdose episodes requiring inpatient hospital treatment during a given year would have two distinct hospital discharge records. The counts of hospital admissions better describe the burden of the drug overdose epidemic on the health care facilities and the insurers and allow for better capacity planning.

APPENDIX A

ICD-9-CM codes for acute poisonings due to the effects of drugs (drug overdoses)

Type of Poison	ICD-9-CM codes
DRUG	E850-E858, E950(.05), E962.0,
	E980(.05), 960-979
-Nonopioid analgesics, Antipyretics, and Antirheumatics	E850(.38), 965(.18)
4-Aminophenol derivatives	E850.4, 965.4
-Opiates/opioids	E850(.02), 965.0
Heroin	E850.0, 965.01
Pharmaceutical Opioids	E850(.12), 965(.00,.0209)
Methadone	E850.1,965.02
-Cocaine	E854.3*, E855.2*, 968.5*, 970.81
-Antidepressants, barbiturates and other	E851-E853, E854(.02,.8), E855.0,
antiepileptics, sedative-hypnotics, and	E950(.13), E980(.13), 966, 967,
psychotropic drugs not elsewhere classified	969, 970(.0,.1,.89)
Benzodiazepines	E853.2, 969.4
Psychostimulants with abuse potential	
including methamphetamine, MDMA	E854.2, 969.7
(Ecstasy)	
-Anticoagulants	964.2
-Other specified and unspecified drugs	E850(.9), E855(.1,.39), E856-E858,
	E950(.0,.4,.5), E962.0, E980(.0,.4,.5),
	960-963, 964(.0,.1,.39), 965.9,
	968(.04,.69), 970(.9),971-979

^{*}Not the only drug in this category.

For more information, please refer to:

Consensus Recommendations for National and State Poisoning Surveillance, Safe States, April 2012.