

Drug Overdose Emergency Department Visits in Kentucky, 2008-2014



Kentucky Injury Prevention and Research Center

**Drug Overdose Emergency
Department Visits
in Kentucky, 2008-2014**

January, 2016

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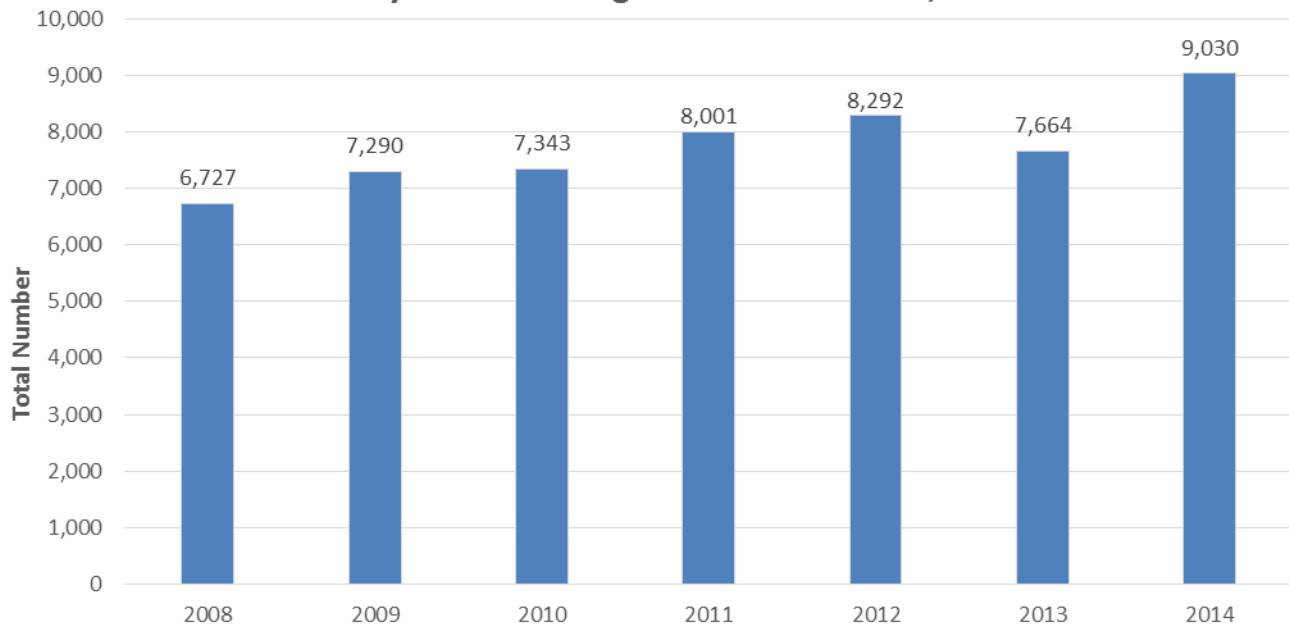
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Executive Summary

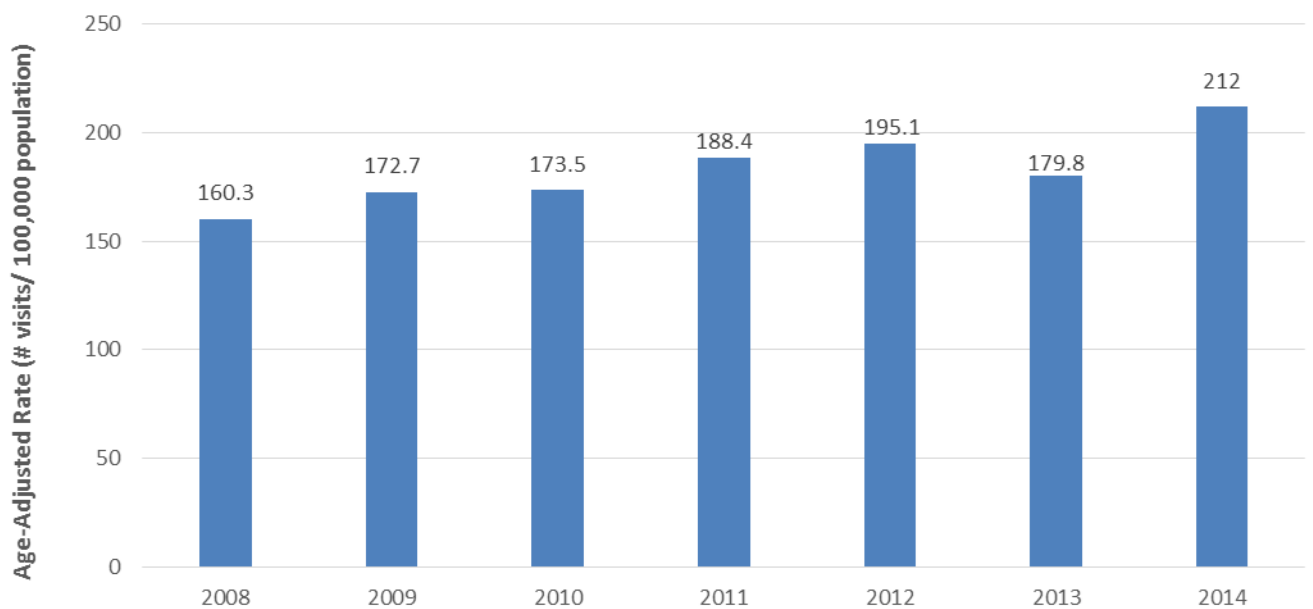
1. In 2014, there were 9,030 Kentucky resident emergency department (ED) visits for drug overdoses. This is an increase of 18% from the 7,664 drug overdose ED visits registered in 2013, following the drop from 2012.
Note: The number of drug overdose ED visits represents instances of care (ED visits) rather than distinct patients. The state outpatient ED visit 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: a patient who had two overdose episodes during a given year would have two distinct ED admission records. The counts of ED 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 ED visit rate was 212 per 100,000 Kentucky residents, up from the 179.8 rate in 2013, and from 195.1/100,000 in 2012.
3. Females remained at higher risk for drug overdose ED visits (219.8/100,000) compared with males (203.9/100,000) in 2014.
4. Of all age groups 15 and older, adults ages 25-34 years old were at highest risk for overdose ED visits (345/100,000) in 2014, followed by 15-24 year olds (315/100,000), and 35-44 year olds (240/100,000).
5. In 2014, there were 4,599 ED visits for unintentional (accidental) overdose with drugs and 2,138 ED visits for intentional (self harm) drug overdose.
6. The total charges associated with the ED visits for Kentucky resident drug overdoses in 2014 were \$32.8 million dollars, a 30% increase from the \$25.2 million dollar total in 2013. The \$32.8 million total included \$6.4 million billed to Medicare, \$14.3 million Medicaid, \$3.6 million self-pay or charity, and \$6.6 million to commercial insurance. The \$14.3 million billed to Medicaid was more than double the \$6.4 million from 2013.
7. In 2014, Heroin was the most commonly abused drug leading to an ED visit. In 2014, there were 1,638 drug overdose ED visits involving heroin, 895 involving pharmaceutical opioids, and 1,005 involving benzodiazepines. When a drug overdose involved two or more drugs, the drugs were counted under each relevant drug category. From 2012-2014 heroin-related overdose ED visits were more frequent among those 25-34 years old. Pharmaceutical opioids were most often registered in drug overdose ED visits 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.
8. The majority of the 2012-2014 drug overdose ED visits were coded as unintentional rather than intentional self-harm (suicide attempt). However, this difference was small among 15-24 year olds (1,983 ED visits vs. 2,080 ED visits).
9. The highest rates of overdose ED visits involving prescription drugs were observed in the Kentucky counties in the Appalachian region. The highest rates of overdose ED visits involving heroin were observed in Northern Kentucky, Jefferson, and Fayette counties.
10. The highest number of ED visits for drug overdoses in 2014 were reported by the following facilities: University of Louisville, St. Elizabeth Medical Center North, University of Kentucky Hospital, St. Elizabeth Ft. Thomas, Baptist Hospital East, and St. Elizabeth Florence.

Kentucky Resident Drug Overdose ED Visits, 2008-2014



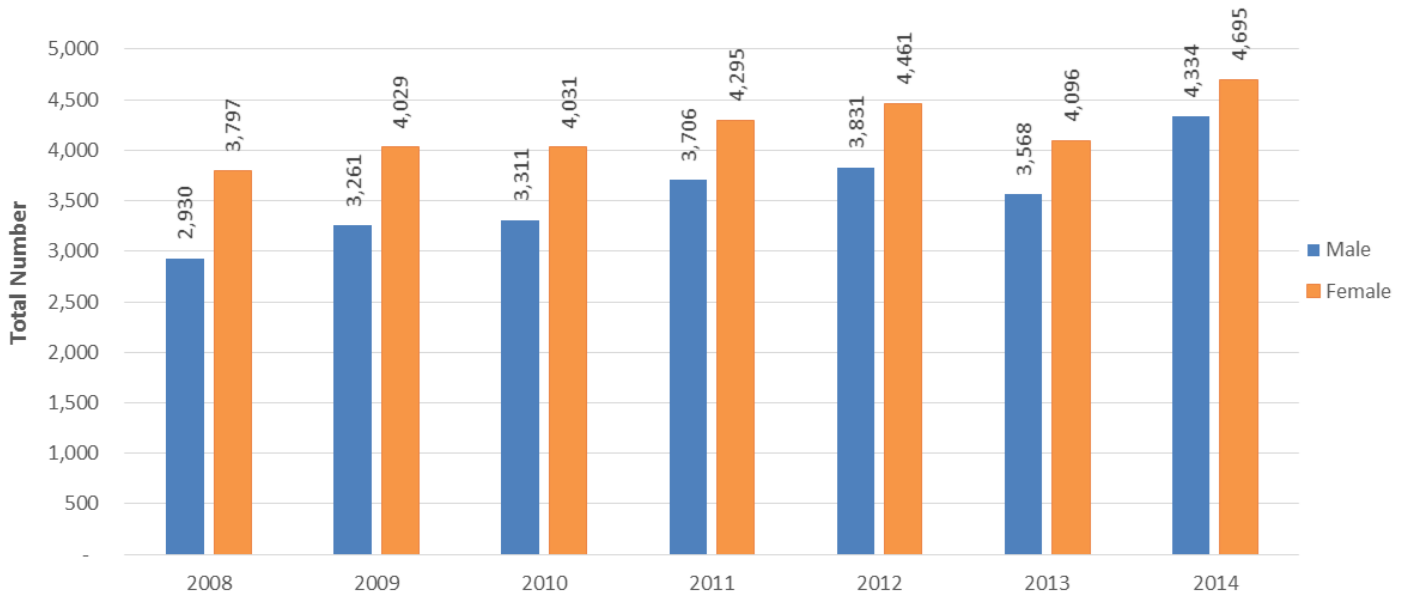
Produced by the Kentucky Injury Prevention and Research Center January 2016. Data source: Kentucky Outpatient Services Database, Office of Health Policy. Data for 2011-2014 are provisional and subject to change.

Kentucky Resident Age-Adjusted Drug Overdose ED Rates, 2008-2014



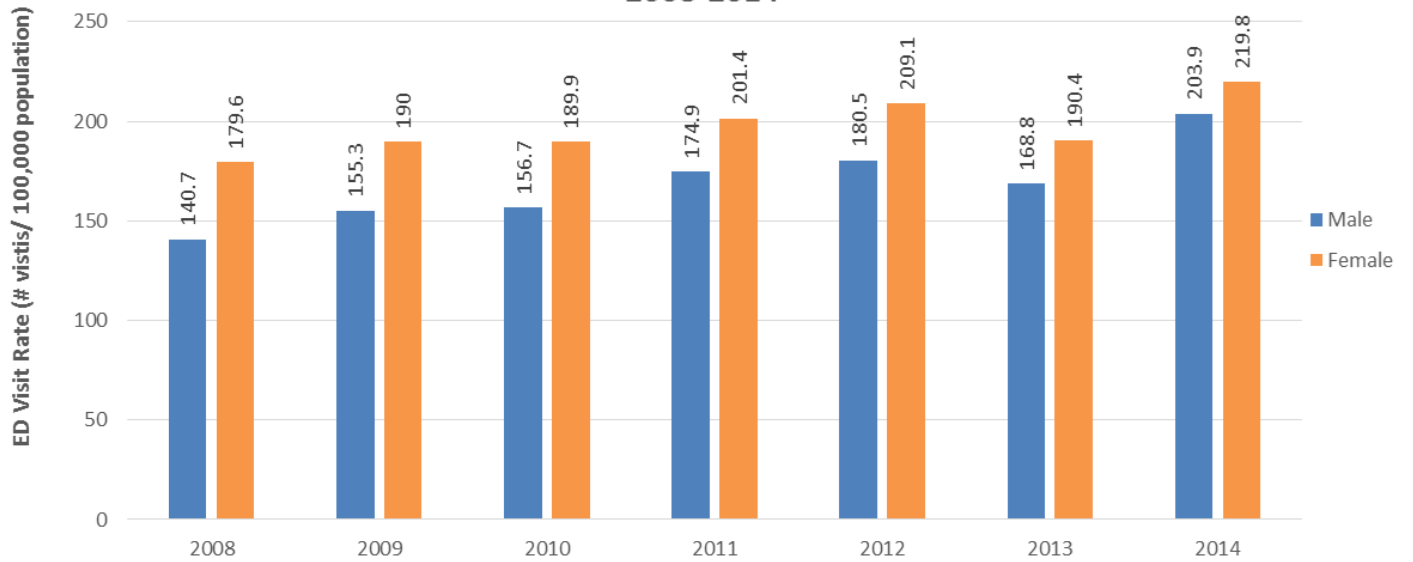
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Kentucky Resident Drug Overdose ED Visits by Gender, 2008-2014



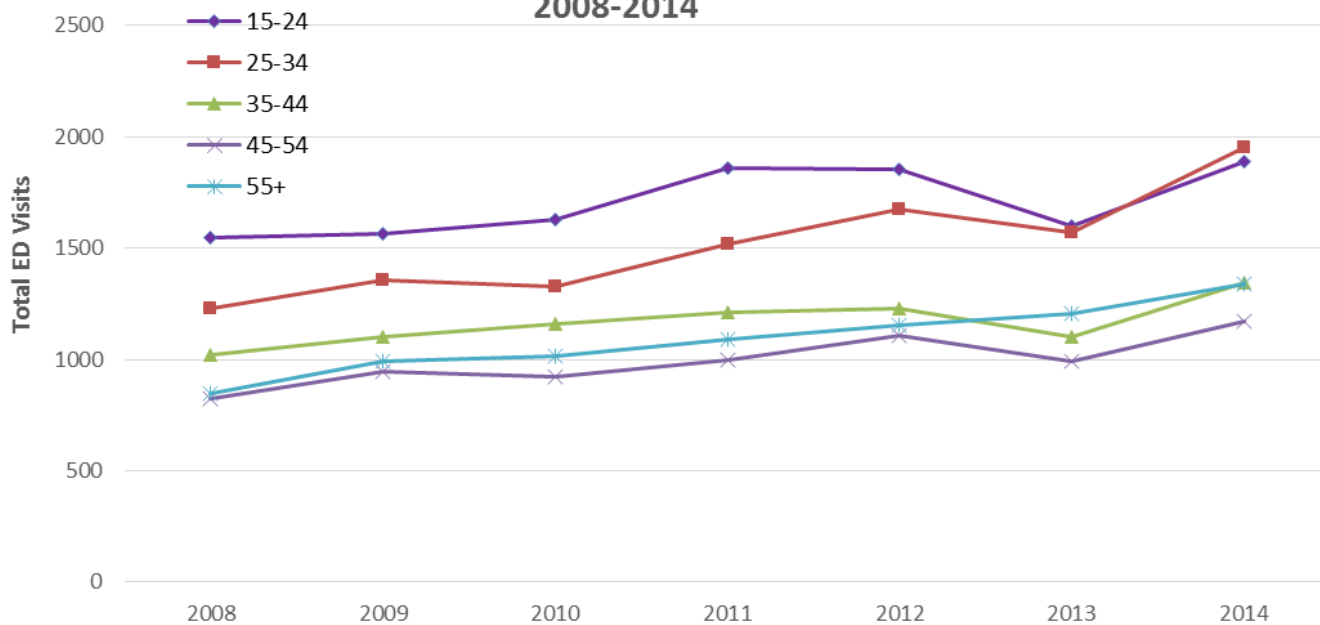
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Kentucky Resident Drug Overdose ED visit Rates by Gender, 2008-2014



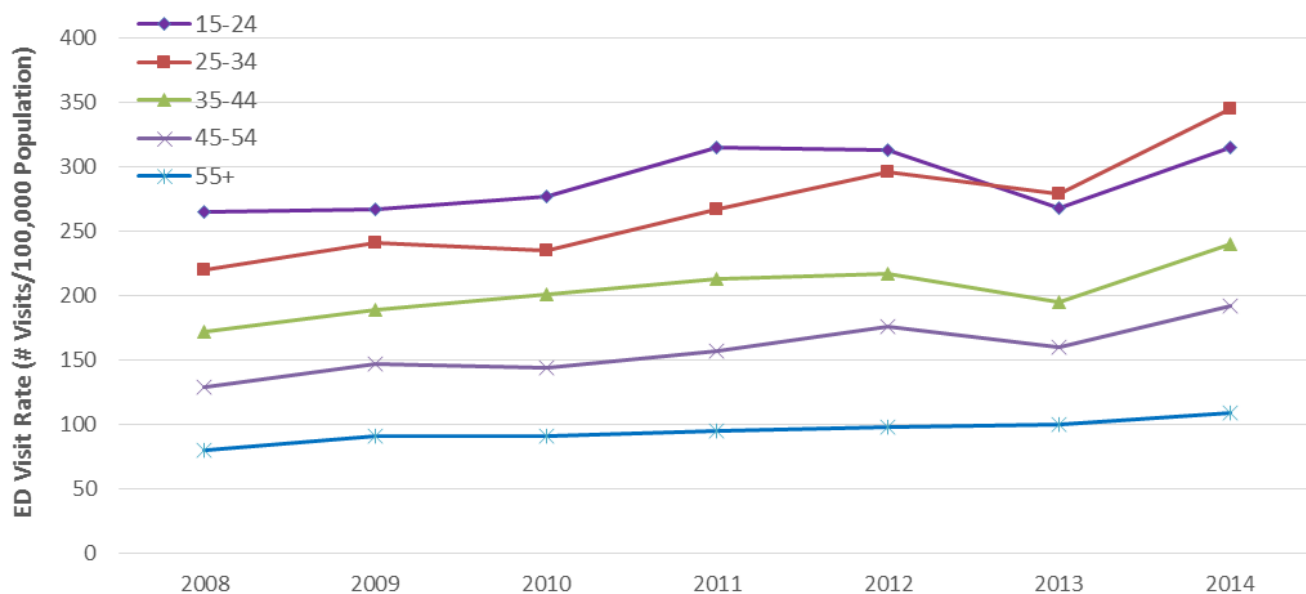
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Kentucky Resident Drug Overdose ED Visits by Age Group, 2008-2014



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Kentucky Resident Drug Overdose ED Rates by Age Group, 2008-2014



Produced by the Kentucky Injury Prevention and Research Center, January 2016. Data source: Kentucky Outpatient Services Database, Office of Health Policy. Data for 2011-2014 are provisional and subject to change.

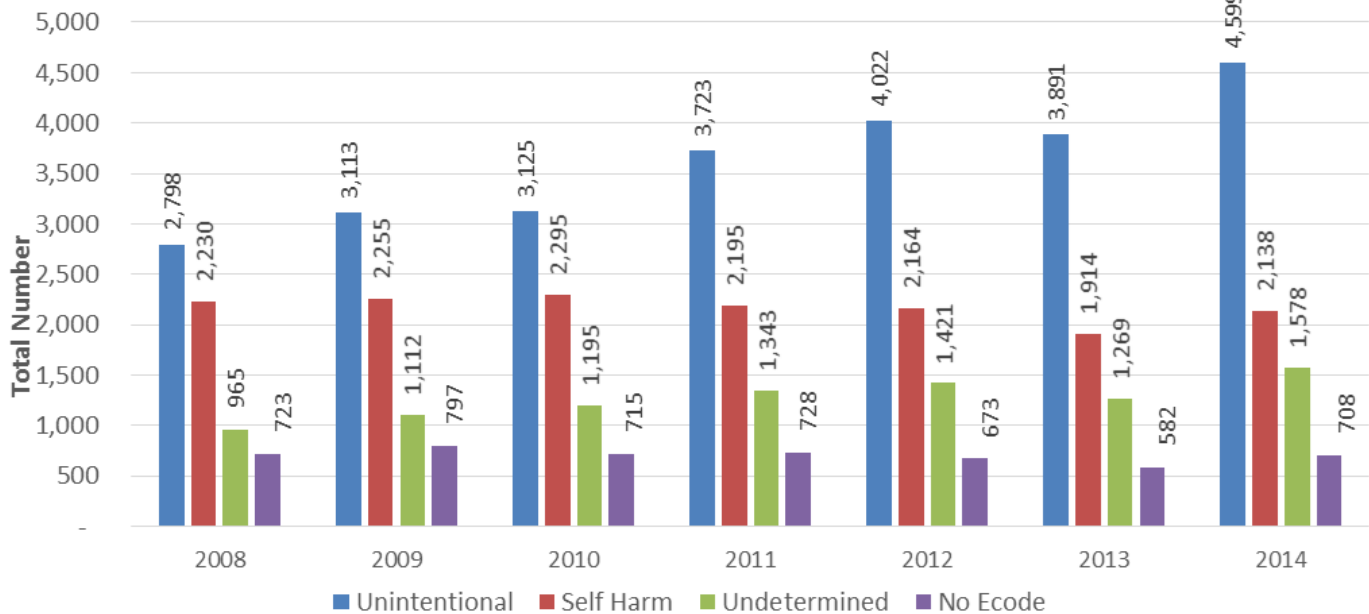
Kentucky Resident Drug Overdose ED Visits by Age Group, 2008-2014

| | Age Groups | | | | | | | |
|-------------|------------|-----|------|-------|-------|-------|-------|-------|
| Year | <1 | 1-4 | 5-14 | 15-24 | 25-34 | 35-44 | 45-54 | 55+ |
| 2008 | 72 | 819 | 364 | 1,549 | 1,230 | 1,021 | 823 | 849 |
| 2009 | 66 | 870 | 389 | 1,567 | 1,359 | 1,100 | 945 | 994 |
| 2010 | 70 | 880 | 334 | 1,628 | 1,329 | 1,160 | 925 | 1,017 |
| 2011 | 76 | 889 | 353 | 1,861 | 1,520 | 1,213 | 999 | 1,090 |
| 2012 | 60 | 782 | 429 | 1,855 | 1,677 | 1,229 | 1,105 | 1,155 |
| 2013 | 59 | 725 | 413 | 1,598 | 1,572 | 1,102 | 991 | 1,204 |
| 2014 | 52 | 797 | 475 | 1,891 | 1,953 | 1,347 | 1,174 | 1,341 |

Kentucky Resident Drug Overdose ED Rates by Age Group, 2008-2014 (Rate per 100,000 Kentucky Residents)

| | Age Groups | | | | | | | |
|-------------|------------|-----|------|-------|-------|-------|-------|-----|
| Year | <1 | 1-4 | 5-14 | 15-24 | 25-34 | 35-44 | 45-54 | 55+ |
| 2008 | 124 | 367 | 65 | 265 | 220 | 172 | 129 | 79 |
| 2009 | 118 | 385 | 69 | 267 | 241 | 189 | 147 | 91 |
| 2010 | 127 | 387 | 59 | 277 | 235 | 201 | 144 | 91 |
| 2011 | 136 | 395 | 62 | 315 | 267 | 213 | 157 | 95 |
| 2012 | 109 | 349 | 75 | 313 | 296 | 217 | 176 | 98 |
| 2013 | 108 | 329 | 72 | 268 | 279 | 195 | 160 | 100 |
| 2014 | 94 | 360 | 84 | 315 | 345 | 240 | 192 | 109 |

Kentucky Resident Drug Overdose ED Visits by Intent, 2008-2014



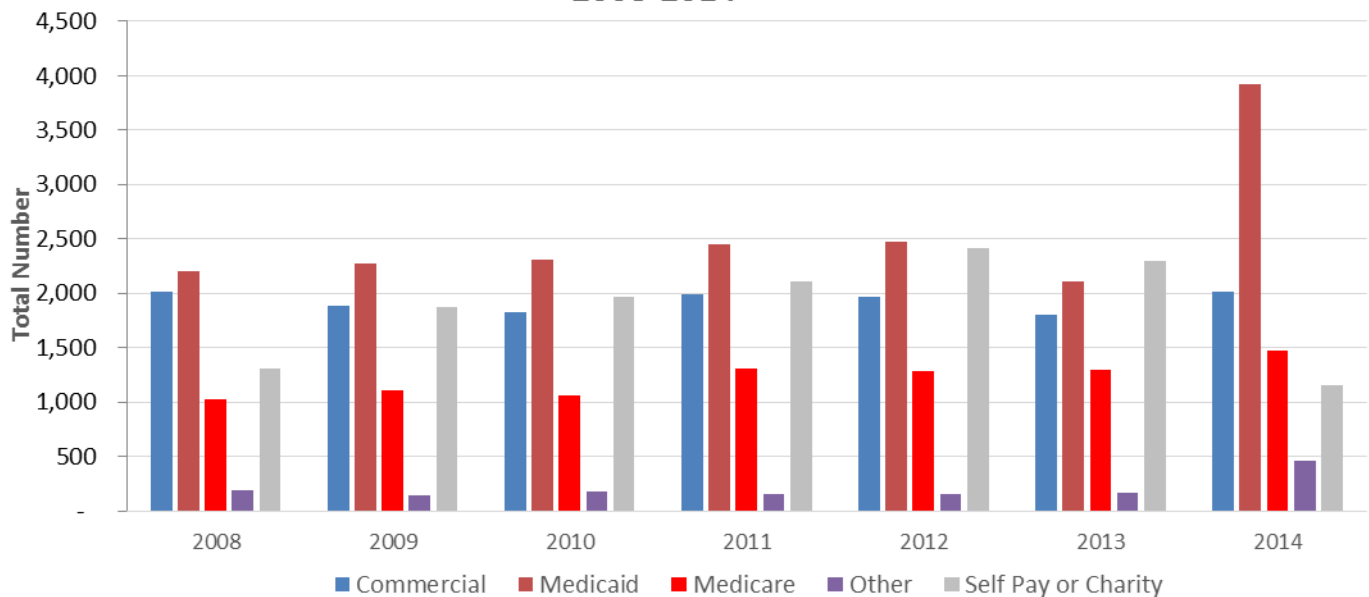
Produced by the Kentucky Injury Prevention and Research Center, January 2016. Data source: Kentucky Outpatient Services Database, Office of Health Policy. Data for 2011-2014 are provisional and subject to change.

Kentucky Resident Drug Overdose ED Visit Rate by Intent, 2008-2014



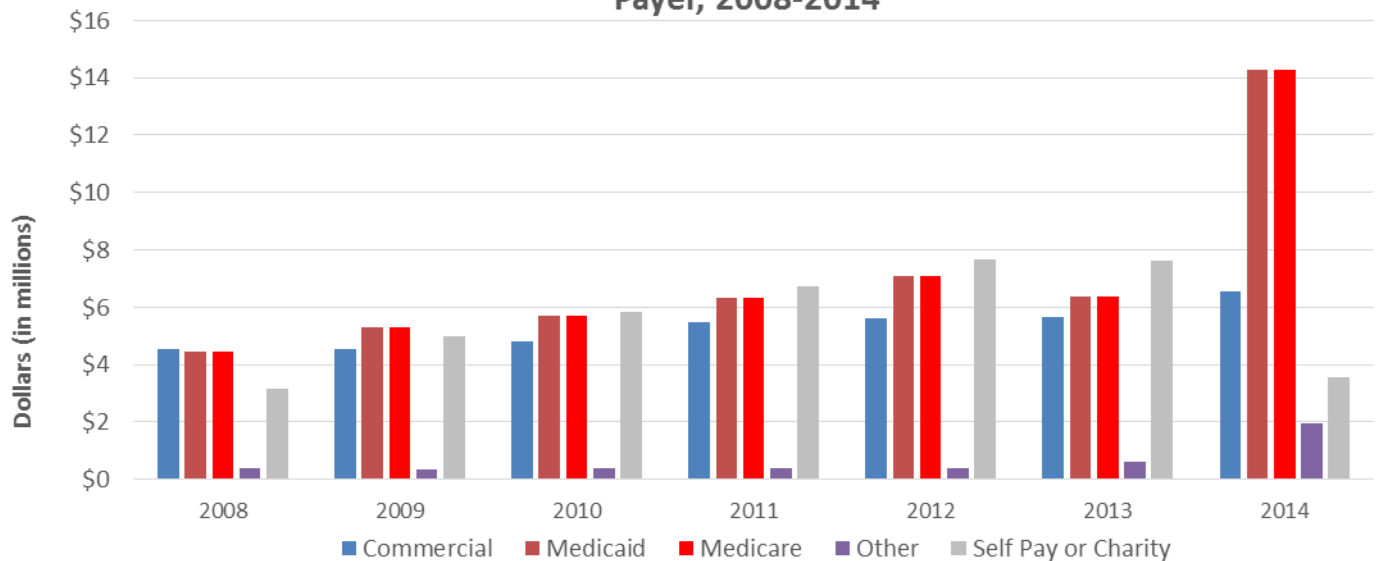
Produced by the Kentucky Injury Prevention and Research Center, January 2016. Data source: Kentucky Outpatient Services Database, Office of Health Policy. Data for 2011-2014 are provisional and subject to change.

Kentucky Resident Drug Overdose ED Visits by Expected Payer, 2008-2014



Produced by the Kentucky Injury Prevention and Research Center, January 2016. Data source: Kentucky Outpatient Services Database, Office of Health Policy. Data for 2011-2014 are provisional and subject to change.

Kentucky Resident Total Drug Overdose ED Visit Charges by Expected Payer, 2008-2014



Produced by the Kentucky Injury Prevention and Research Center, January 2016. Data source: Kentucky Outpatient Services Database, Office of Health Policy. Data for 2011-2014 are provisional and subject to change.

Kentucky Resident Drug Overdose ED visits by Expected Payer, 2008-2014

| | Expected Payer | | | | |
|-------------|----------------|----------|----------|-------|---------------------|
| Year | Commercial | Medicaid | Medicare | Other | Self Pay or Charity |
| 2008 | 2,010 | 2,204 | 1,022 | 185 | 1,306 |
| 2009 | 1,884 | 2,271 | 1,110 | 146 | 1,879 |
| 2010 | 1,829 | 2,305 | 1,064 | 180 | 1,965 |
| 2011 | 1,990 | 2,447 | 1,303 | 157 | 2,104 |
| 2012 | 1,962 | 2,476 | 1,284 | 155 | 2,415 |
| 2013 | 1,800 | 2,105 | 1,299 | 167 | 2,293 |
| 2014 | 2,016 | 3,928 | 1,468 | 459 | 1,159 |

Kentucky Resident Drug Overdose ED Visits Charges (in Millions) by Expected Payer, 2008

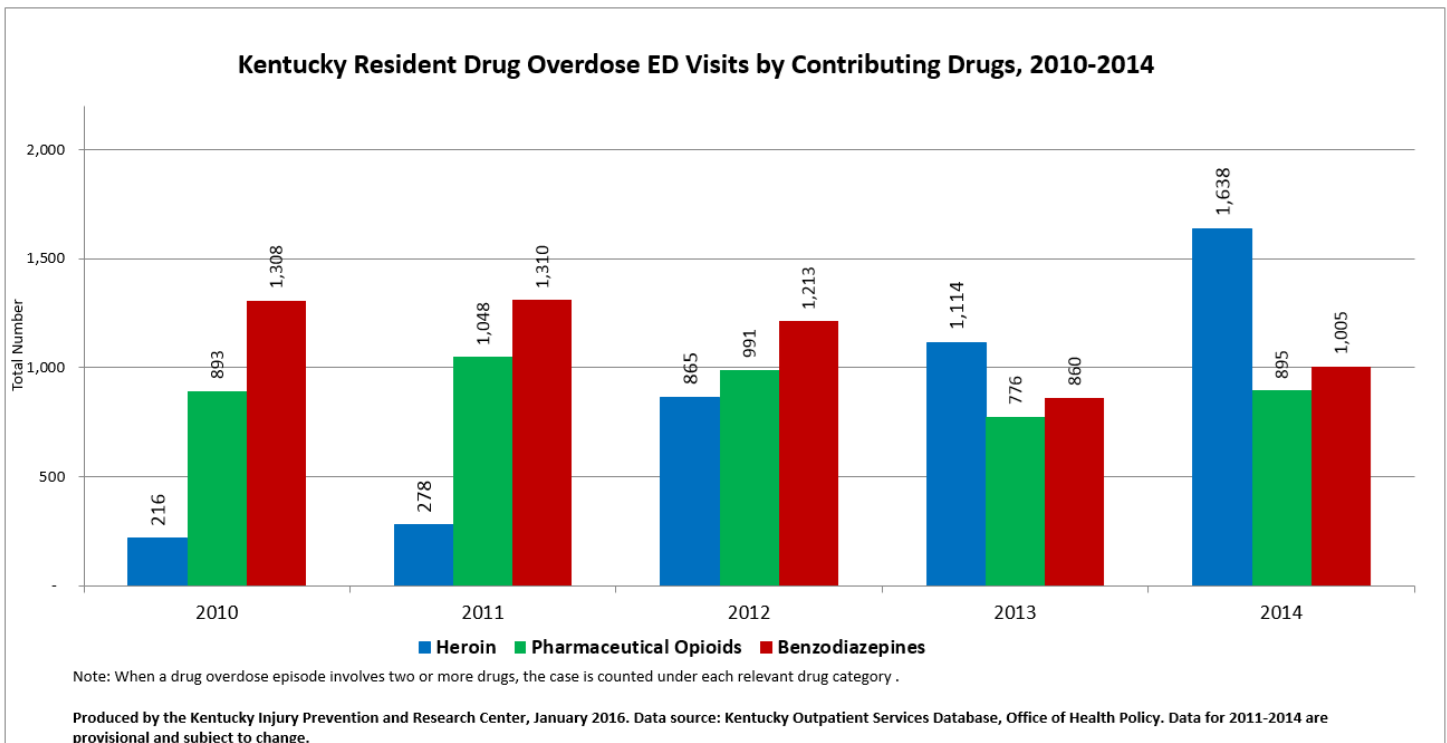
| | Expected Payer | | | | | |
|-------------|----------------|----------|----------|--------|---------------------|---------|
| Year | Commercial | Medicaid | Medicare | Other | Self Pay or Charity | Total |
| 2008 | \$4.55 | \$4.46 | \$2.61 | \$0.37 | \$3.16 | \$15.16 |
| 2009 | \$4.54 | \$5.31 | \$3.00 | \$0.33 | \$5.00 | \$18.17 |
| 2010 | \$4.80 | \$5.72 | \$3.26 | \$0.41 | \$5.85 | \$20.04 |
| 2011 | \$5.47 | \$6.31 | \$4.42 | \$0.41 | \$6.74 | \$23.36 |
| 2012 | \$5.61 | \$7.10 | \$4.53 | \$0.39 | \$7.68 | \$25.31 |
| 2013 | \$5.64 | \$6.38 | \$4.98 | \$0.60 | \$7.63 | \$25.23 |
| 2014 | \$6.56 | \$14.26 | \$6.42 | \$1.97 | \$3.57 | \$32.78 |

Kentucky Resident Drug Overdose ED Visits

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

| Drug Type (not mutually exclusive, see below) | Male | | | | | Female | | | | |
|---|------|------|------|------|-------|--------|------|------|------|------|
| | 2010 | 2011 | 2012 | 2013 | 2014 | 2010 | 2011 | 2012 | 2013 | 2014 |
| Heroin | 139 | 185 | 566 | 691 | 1,046 | 77 | 93 | 299 | 423 | 592 |
| Pharmaceutical Opioids | 455 | 532 | 508 | 374 | 443 | 438 | 516 | 483 | 402 | 452 |
| Benzodiazepines | 563 | 584 | 527 | 348 | 415 | 745 | 726 | 686 | 512 | 590 |
| Cocaine | 36 | 53 | 63 | 77 | 81 | 24 | 43 | 53 | 43 | 59 |
| Heroin & Pharmaceutical Opioids | 5 | * | 12 | 9 | 17 | * | 5 | 13 | 7 | 6 |
| Heroin & Benzodiazepines | 5 | 7 | 20 | 18 | 39 | 6 | * | 9 | 12 | 25 |
| Heroin & Cocaine | * | * | 6 | 11 | 10 | * | * | * | 8 | 6 |
| Pharmaceutical Opioids & Benzodiazepines | 142 | 173 | 132 | 54 | 83 | 131 | 139 | 125 | 98 | 104 |
| Pharmaceutical Opioids & Cocaine | 6 | 5 | 13 | 6 | 10 | * | 14 | 8 | 6 | 12 |
| Benzodiazepines & Cocaine | 6 | 11 | 5 | 15 | 14 | * | 10 | 10 | 8 | 11 |

*Numbers are suppressed, per state's data management policy, when the counts represent zero to four (0-4) ED visits. 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 ED Visits
by Drug Type and Age Group, 2012-2014 Combined

| Drug Type (not mutually exclusive, see below) | Age Group | | | | |
|---|-----------|-------|-------|-------|-----|
| | 15-24 | 25-34 | 35-44 | 45-54 | 55+ |
| Heroin | 985 | 1,561 | 603 | 360 | 106 |
| Pharmaceutical Opioids | 416 | 617 | 490 | 493 | 530 |
| Benzodiazepines | 506 | 746 | 648 | 594 | 431 |
| Cocaine | 64 | 106 | 79 | 60 | 27 |
| Heroin & Pharmaceutical Opioids | 15 | 31 | 8 | 7 | * |
| Heroin & Benzodiazepines | 27 | 59 | 24 | 11 | * |
| Heroin & Cocaine | 10 | 12 | 8 | 7 | 6 |
| Pharmaceutical Opioids & Benzodiazepines | 79 | 171 | 132 | 123 | 84 |
| Pharmaceutical Opioids & Cocaine | 7 | 22 | 16 | 8 | * |
| Benzodiazepines & Cocaine | 6 | 28 | 17 | 10 | * |

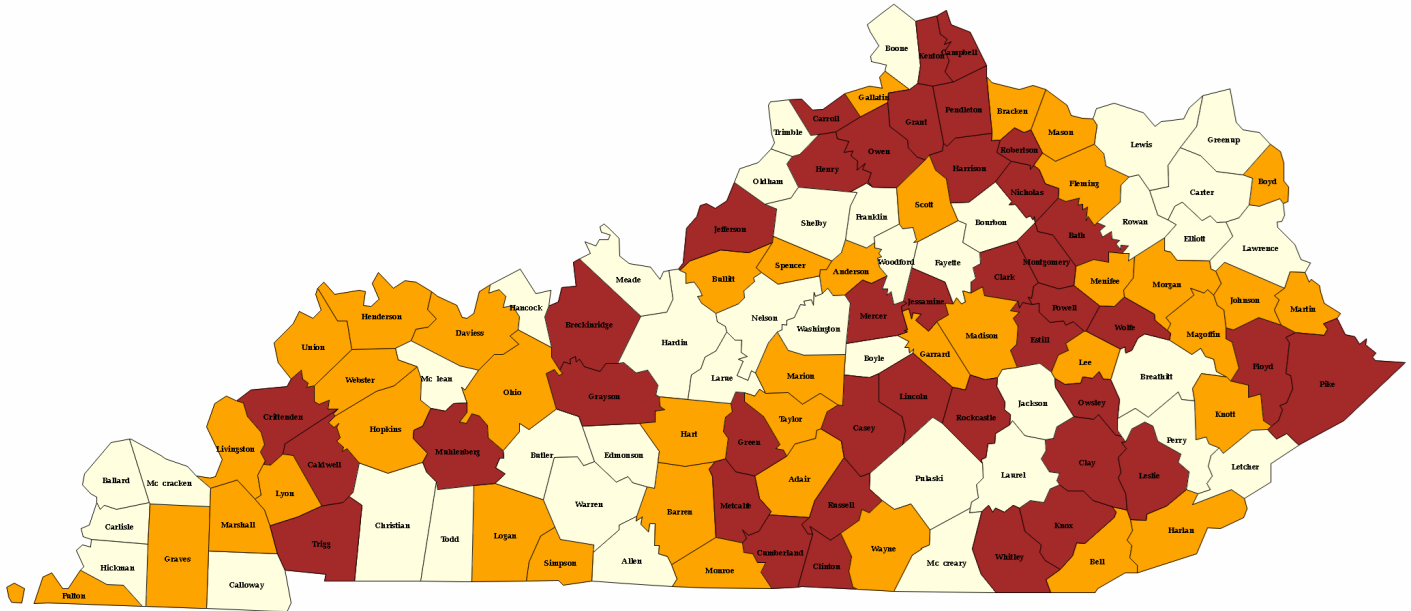
*Numbers are suppressed, per state's data management policy, when the counts represent zero to four (0-4) ED visits.

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 ED Visits
by Age Group, Payer Source and Intent, 2012-2014 Combined

| Age Group | Intent | Number of Drug Overdose ED Visits | | | | | Total |
|-----------|---------------|-----------------------------------|----------|----------|------------------------|-------|-------|
| | | by Payer Source | | | | | |
| | | Commercial | Medicaid | Medicare | Self-Pay or Charity | Other | |
| 15-24 | Self-Harm | 737 | 755 | 18 | 400 | 73 | 1,983 |
| | Unintentional | 656 | 636 | 16 | 705 | 67 | 2,080 |
| 25-34 | Self-Harm | 259 | 460 | 94 | 483 | 48 | 1,344 |
| | Unintentional | 374 | 676 | 120 | 1,050 | 67 | 2,287 |
| 35-44 | Self-Harm | 258 | 355 | 120 | 326 | 28 | 1,087 |
| | Unintentional | 320 | 467 | 242 | 431 | 72 | 1,532 |
| 45-54 | Self-Harm | 229 | 246 | 184 | 179 | 32 | 870 |
| | Unintentional | 321 | 435 | 421 | 242 | 49 | 1,468 |
| 55+ | Self-Harm | 109 | 75 | 188 | 50 | 16 | 438 |
| | Unintentional | 386 | 240 | 1,524 | 84 | 43 | 2,277 |

Annual Rate of Drug Overdose ED Visits, 2010–2014



Rate (number of visits /100,000 population)

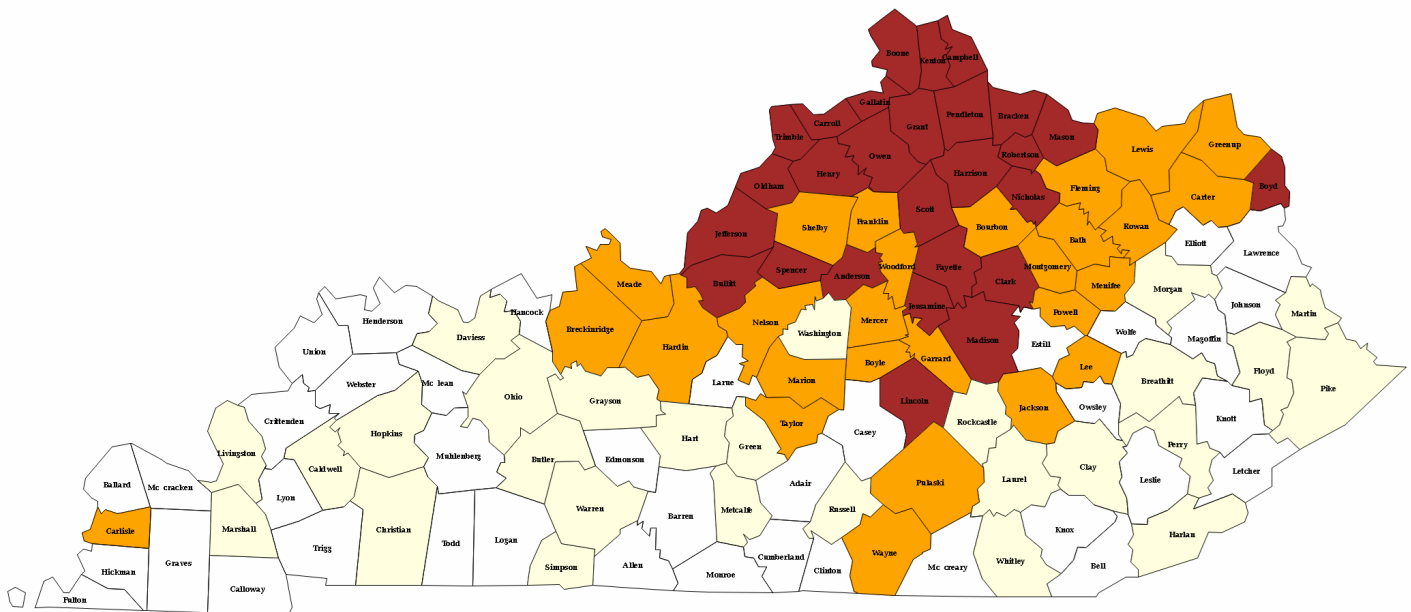
58.9 – 157.1

157.6 – 209.9

211.2 – 458.1

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Annual Rate of Drug Overdose ED Visits Involving Heroin, 2010–2014



Rate (number of visits /100,000 population)

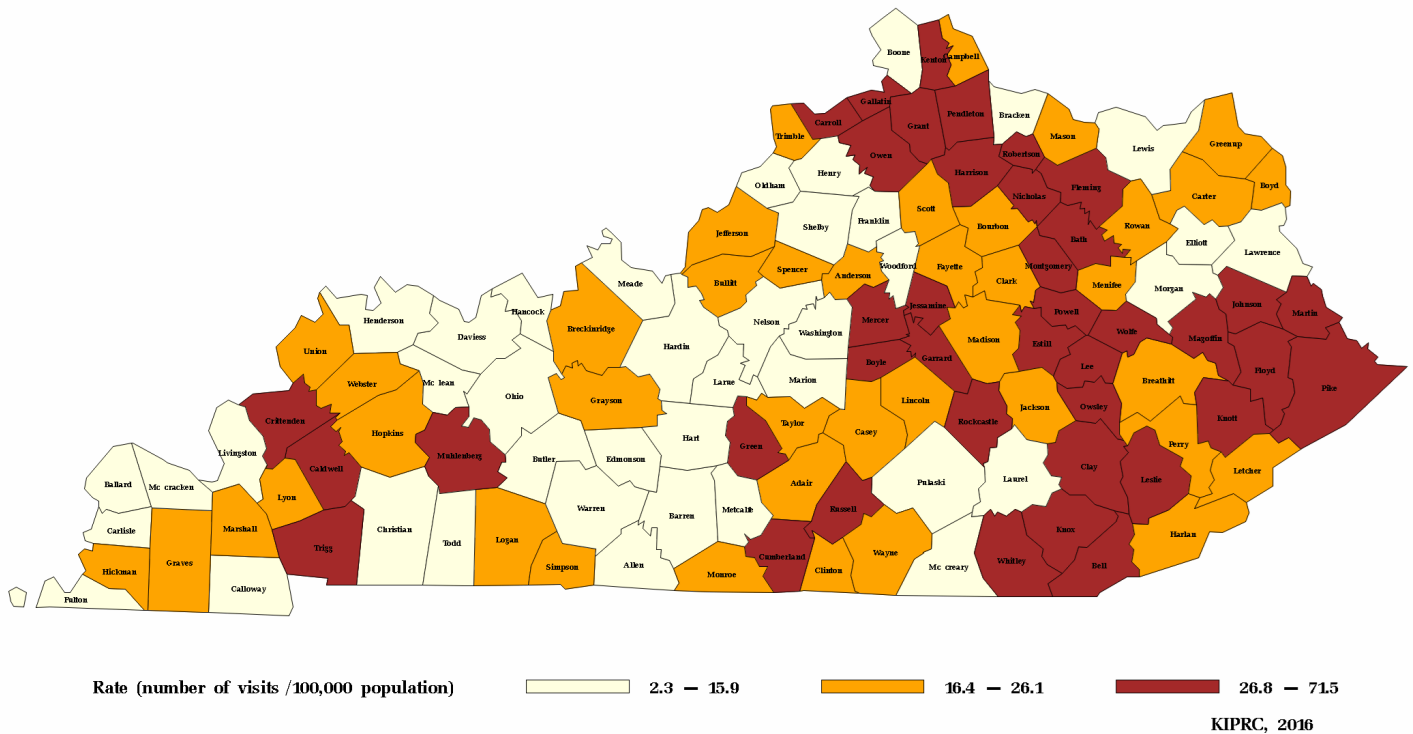
0.3 – 2.3

2.4 – 9.5

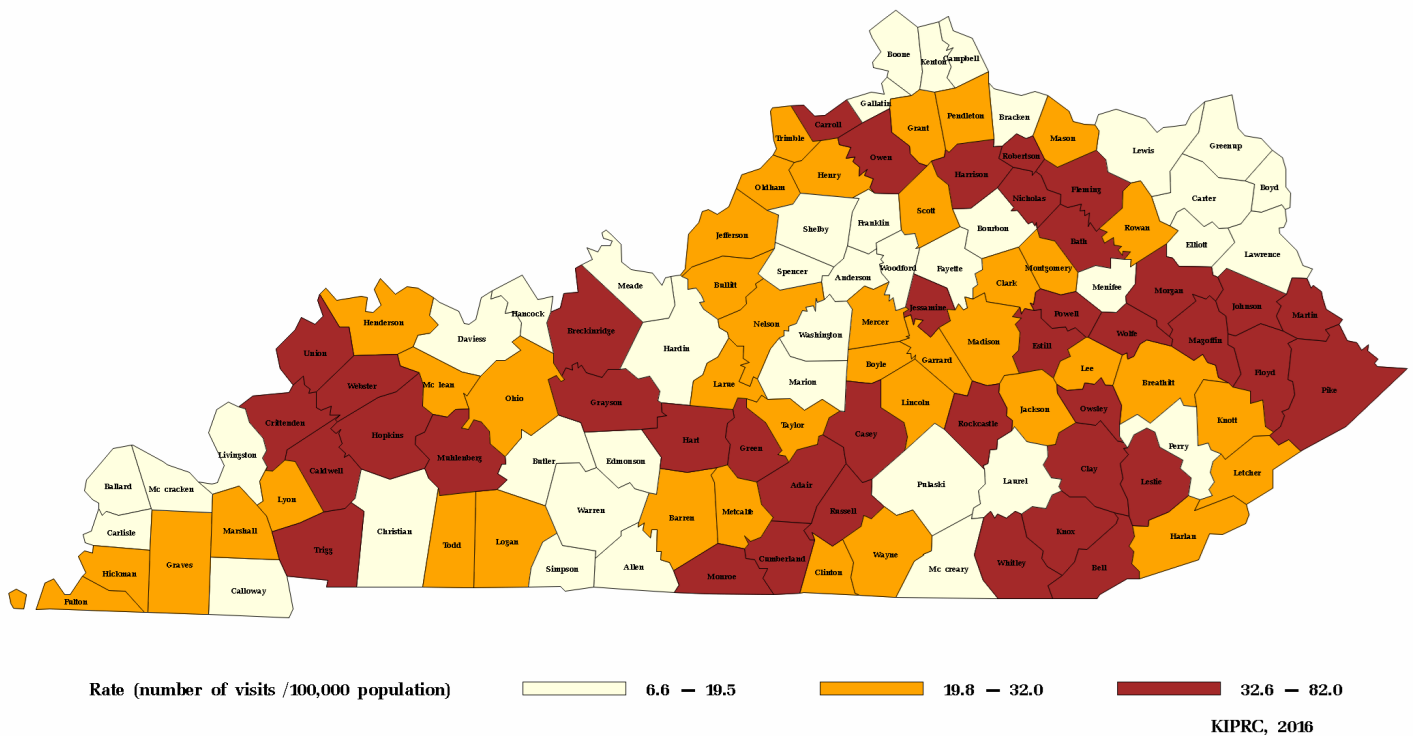
9.8 – 118.2

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Annual Rate of Drug Overdose ED Visits Involving Pharmaceutical Opioids, 2010–2014



Annual Rate of Drug Overdose ED Visits Involving Benzodiazepines, 2010–2014



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

| | County (FIPS Code) | All Drugs | | Heroin | | Pharmaceutical Opioids | | Benzodiazepines | |
|----|--------------------------|-----------|------|--------|------|------------------------|------|-----------------|------|
| | | Number | Rate | Number | Rate | Number | Rate | Number | Rate |
| 1 | Adair, KY (21001) | 199 | 209 | * | * | 21 | 22 | 35 | 37 |
| 2 | Allen, KY (21003) | 150 | 148 | * | * | 14 | * | 14 | * |
| 3 | Anderson, KY (21005) | 182 | 168 | 23 | 21 | 20 | 18 | 20 | 18 |
| 4 | Ballard, KY (21007) | 34 | 82 | * | * | * | * | * | * |
| 5 | Barren, KY (21009) | 448 | 210 | * | * | 34 | 16 | 67 | 31 |
| 6 | Bath, KY (21011) | 139 | 234 | * | * | 23 | 39 | 29 | 49 |
| 7 | Bell, KY (21013) | 283 | 200 | * | * | 45 | 32 | 56 | 40 |
| 8 | Boone, KY (21015) | 948 | 154 | 309 | 50 | 86 | 14 | 85 | 14 |
| 9 | Bourbon, KY (21017) | 145 | 145 | 8 | * | 21 | 21 | 16 | * |
| 10 | Boyd, KY (21019) | 419 | 170 | 27 | 11 | 56 | 23 | 43 | 17 |
| 11 | Boyle, KY (21021) | 207 | 142 | 9 | * | 40 | 27 | 34 | 23 |
| 12 | Bracken, KY (21023) | 75 | 177 | 15 | * | 5 | * | 8 | * |
| 13 | Breathitt, KY (21025) | 91 | 133 | * | * | 13 | * | 20 | 29 |
| 14 | Breckinridge, KY (21027) | 249 | 248 | * | * | 25 | 25 | 39 | 39 |
| 15 | Bullitt, KY (21029) | 622 | 163 | 92 | 24 | 84 | 22 | 86 | 23 |
| 16 | Butler, KY (21031) | 66 | 103 | * | * | 9 | * | 9 | * |
| 17 | Caldwell, KY (21033) | 208 | 323 | * | * | 28 | 43 | 31 | 48 |
| 18 | Calloway, KY (21035) | 296 | 156 | * | * | 6 | * | 29 | 15 |
| 19 | Campbell, KY (21037) | 1,012 | 222 | 432 | 95 | 101 | 22 | 88 | 19 |
| 20 | Carlisle, KY (21039) | 31 | 123 | * | * | * | * | * | * |
| 21 | Carroll, KY (21041) | 249 | 458 | 43 | 79 | 29 | 53 | 23 | 42 |
| 22 | Carter, KY (21043) | 165 | 120 | 9 | * | 25 | 18 | 23 | 17 |
| 23 | Casey, KY (21045) | 345 | 431 | * | * | 17 | * | 30 | 37 |
| 24 | Christian, KY (21047) | 502 | 135 | * | * | 48 | 13 | 64 | 17 |
| 25 | Clark, KY (21049) | 384 | 216 | 31 | 17 | 32 | 18 | 49 | 28 |
| 26 | Clay, KY (21051) | 269 | 251 | * | * | 34 | 32 | 47 | 44 |
| 27 | Clinton, KY (21053) | 117 | 230 | * | * | 13 | * | 16 | * |
| 28 | Crittenden, KY (21055) | 102 | 220 | * | * | 17 | * | 21 | 45 |
| 29 | Cumberland, KY (21057) | 138 | 404 | * | * | 20 | 59 | 28 | 82 |
| 30 | Daviess, KY (21059) | 783 | 160 | * | * | 49 | 10 | 78 | 16 |
| 31 | Edmonson, KY (21061) | 41 | 68 | * | * | 6 | * | * | * |
| 32 | Elliott, KY (21063) | 49 | 126 | * | * | 5 | * | 7 | * |
| 33 | Estill, KY (21065) | 217 | 298 | * | * | 36 | 49 | 40 | 55 |
| 34 | Fayette, KY (21067) | 2,078 | 136 | 273 | 18 | 257 | 17 | 248 | 16 |
| 35 | Fleming, KY (21069) | 123 | 170 | * | * | 22 | 30 | 26 | 36 |
| 36 | Floyd, KY (21071) | 715 | 366 | * | * | 126 | 64 | 129 | 66 |
| 37 | Franklin, KY (21073) | 389 | 157 | 16 | * | 36 | 15 | 39 | 16 |
| 38 | Fulton, KY (21075) | 55 | 168 | * | * | 5 | * | 10 | * |
| 39 | Gallatin, KY (21077) | 72 | 168 | 11 | * | 18 | * | 6 | * |
| 40 | Garrard, KY (21079) | 136 | 161 | 5 | * | 29 | 34 | 21 | 25 |

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

| | County (FIPS Code) | All Drugs | | Heroin | | Pharmaceutical Opioids | | Benzodiazepines | |
|----|------------------------|-----------|------|--------|------|------------------------|------|-----------------|------|
| | | Number | Rate | Number | Rate | Number | Rate | Number | Rate |
| 41 | Grant, KY (21081) | 397 | 322 | 112 | 91 | 42 | 34 | 35 | 28 |
| 42 | Graves, KY (21083) | 334 | 178 | * | * | 33 | 18 | 51 | 27 |
| 43 | Grayson, KY (21085) | 296 | 228 | * | * | 31 | 24 | 53 | 41 |
| 44 | Green, KY (21087) | 136 | 243 | * | * | 15 | * | 34 | 61 |
| 45 | Greenup, KY (21089) | 184 | 100 | 6 | * | 31 | 17 | 19 | * |
| 46 | Hancock, KY (21091) | 31 | 72 | * | * | * | * | * | * |
| 47 | Hardin, KY (21093) | 708 | 132 | 15 | * | 60 | 11 | 97 | 18 |
| 48 | Harlan, KY (21095) | 231 | 161 | * | * | 27 | 19 | 43 | 30 |
| 49 | Harrison, KY (21097) | 237 | 254 | 15 | * | 32 | 34 | 64 | 69 |
| 50 | Hart, KY (21099) | 177 | 192 | * | * | 14 | * | 30 | 33 |
| 51 | Henderson, KY (21101) | 397 | 171 | * | * | 18 | * | 60 | 26 |
| 52 | Henry, KY (21103) | 183 | 237 | 16 | * | 12 | * | 24 | 31 |
| 53 | Hickman, KY (21105) | 33 | 138 | * | * | * | * | 7 | * |
| 54 | Hopkins, KY (21107) | 422 | 181 | * | * | 44 | 19 | 79 | 34 |
| 55 | Jackson, KY (21109) | 101 | 151 | 5 | * | 17 | * | 18 | * |
| 56 | Jefferson, KY (21111) | 8,173 | 218 | 1,193 | 32 | 859 | 23 | 1,187 | 32 |
| 57 | Jessamine, KY (21113) | 555 | 224 | 50 | 20 | 73 | 29 | 84 | 34 |
| 58 | Johnson, KY (21115) | 242 | 207 | * | * | 37 | 32 | 73 | 62 |
| 59 | Kenton, KY (21117) | 2,094 | 259 | 957 | 118 | 221 | 27 | 158 | 20 |
| 60 | Knott, KY (21119) | 156 | 193 | * | * | 22 | 27 | 20 | 25 |
| 61 | Knox, KY (21121) | 422 | 265 | * | * | 55 | 35 | 67 | 42 |
| 62 | Larue, KY (21123) | 71 | 100 | * | * | 8 | * | 16 | * |
| 63 | Laurel, KY (21125) | 376 | 126 | * | * | 43 | 14 | 33 | 11 |
| 64 | Lawrence, KY (21127) | 79 | 100 | * | * | 6 | * | 8 | * |
| 65 | Lee, KY (21129) | 68 | 177 | * | * | 13 | * | 12 | * |
| 66 | Leslie, KY (21131) | 143 | 257 | * | * | 24 | 43 | 24 | 43 |
| 67 | Letcher, KY (21133) | 184 | 154 | * | * | 26 | 22 | 26 | 22 |
| 68 | Lewis, KY (21135) | 62 | 90 | * | * | * | * | 5 | * |
| 69 | Lincoln, KY (21137) | 299 | 244 | 12 | * | 32 | 26 | 32 | 26 |
| 70 | Livingston, KY (21139) | 77 | 163 | * | * | 6 | * | 8 | * |
| 71 | Logan, KY (21141) | 236 | 176 | * | * | 34 | 25 | 41 | 31 |
| 72 | Lyon, KY (21143) | 72 | 171 | * | * | 7 | * | 9 | * |
| 73 | Madison, KY (21151) | 425 | 130 | * | * | 40 | 12 | 54 | 16 |
| 74 | Magoffin, KY (21153) | 67 | 74 | * | * | 7 | * | 7 | * |
| 75 | Marion, KY (21155) | 62 | 130 | * | * | 7 | * | 15 | * |
| 76 | Marshall, KY (21157) | 794 | 186 | 48 | 11 | 110 | 26 | 109 | 26 |
| 77 | Martin, KY (21159) | 126 | 193 | * | * | 29 | 44 | 45 | 69 |
| 78 | Mason, KY (21161) | 159 | 159 | 7 | * | 9 | * | 15 | * |
| 79 | McCracken, KY (21145) | 285 | 183 | * | * | 26 | 17 | 50 | 32 |
| 80 | McCreary, KY (21147) | 109 | 171 | * | * | 18 | * | 24 | 38 |

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

| | County (FIPS Code) | All Drugs | | Heroin | | Pharmaceutical Opioids | | Benzodiazepines | |
|-----|------------------------|-----------|------|--------|------|------------------------|------|-----------------|------|
| | | Number | Rate | Number | Rate | Number | Rate | Number | Rate |
| 81 | McLean, KY (21149) | 160 | 184 | 16 | * | 15 | * | 21 | 24 |
| 82 | Meade, KY (21163) | 86 | 59 | 5 | * | 12 | * | 14 | * |
| 83 | Menifee, KY (21165) | 58 | 183 | * | * | 7 | * | * | * |
| 84 | Mercer, KY (21167) | 225 | 211 | * | * | 33 | 31 | 23 | 22 |
| 85 | Metcalfe, KY (21169) | 108 | 215 | * | * | 7 | * | 14 | * |
| 86 | Monroe, KY (21171) | 105 | 194 | * | * | 11 | * | 27 | 50 |
| 87 | Montgomery, KY (21173) | 285 | 211 | 9 | * | 40 | 30 | 42 | 31 |
| 88 | Morgan, KY (21175) | 108 | 160 | * | * | 10 | * | 26 | 38 |
| 89 | Muhlenberg, KY (21177) | 358 | 228 | * | * | 62 | 40 | 67 | 43 |
| 90 | Nelson, KY (21179) | 322 | 146 | 21 | 9 | 35 | 16 | 58 | 26 |
| 91 | Nicholas, KY (21181) | 118 | 334 | 8 | * | 12 | * | 18 | * |
| 92 | Ohio, KY (21183) | 213 | 178 | * | * | 17 | * | 34 | 28 |
| 93 | Oldham, KY (21185) | 389 | 126 | 33 | 11 | 36 | 12 | 61 | 20 |
| 94 | Owen, KY (21187) | 122 | 227 | 32 | 60 | 17 | * | 19 | * |
| 95 | Owsley, KY (21189) | 51 | 218 | * | * | 11 | * | 11 | * |
| 96 | Pendleton, KY (21191) | 185 | 253 | 71 | 97 | 23 | 31 | 23 | 31 |
| 97 | Perry, KY (21193) | 216 | 153 | * | * | 30 | 21 | 24 | 17 |
| 98 | Pike, KY (21195) | 731 | 227 | * | * | 140 | 43 | 161 | 50 |
| 99 | Powell, KY (21197) | 184 | 293 | * | * | 29 | 46 | 29 | 46 |
| 100 | Pulaski, KY (21199) | 331 | 104 | 13 | * | 29 | 9 | 40 | 13 |
| 101 | Robertson, KY (21201) | 30 | 268 | 6 | * | 8 | * | 7 | * |
| 102 | Rockcastle, KY (21203) | 186 | 219 | * | * | 41 | 48 | 35 | 41 |
| 103 | Rowan, KY (21205) | 175 | 149 | 8 | * | 21 | 18 | 24 | 20 |
| 104 | Russell, KY (21207) | 253 | 287 | * | * | 38 | 43 | 68 | 77 |
| 105 | Scott, KY (21209) | 438 | 178 | 36 | 15 | 60 | 24 | 75 | 31 |
| 106 | Shelby, KY (21211) | 330 | 151 | 17 | * | 17 | * | 31 | 14 |
| 107 | Simpson, KY (21213) | 162 | 185 | * | * | 16 | * | 15 | * |
| 108 | Spencer, KY (21215) | 142 | 163 | 12 | * | 17 | * | 17 | * |
| 109 | Taylor, KY (21217) | 212 | 169 | * | * | 25 | 20 | 32 | 26 |
| 110 | Todd, KY (21219) | 89 | 142 | * | * | 9 | * | 13 | * |
| 111 | Trigg, KY (21221) | 171 | 240 | * | * | 24 | 34 | 32 | 45 |
| 112 | Trimble, KY (21223) | 69 | 157 | 5 | * | 8 | * | 9 | * |
| 113 | Union, KY (21225) | 157 | 207 | * | * | 18 | * | 40 | 53 |
| 114 | Warren, KY (21227) | 640 | 109 | * | * | 47 | 8 | 67 | 11 |
| 115 | Washington, KY (21229) | 60 | 101 | * | * | * | * | * | * |
| 116 | Wayne, KY (21231) | 200 | 193 | * | * | 21 | 20 | 26 | 25 |
| 117 | Webster, KY (21233) | 106 | 158 | * | * | 11 | * | 22 | 33 |
| 118 | Whitley, KY (21235) | 388 | 218 | * | * | 57 | 32 | 72 | 40 |
| 119 | Wolfe, KY (21237) | 84 | 231 | * | * | 11 | * | 14 | * |
| 120 | Woodford, KY (21239) | 147 | 117 | 10 | * | 17 | * | 14 | * |

*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 ED Visits | Year | | | | | |
|--|-------|-------|-------|-------|-------|--------|
| | 2010 | 2011 | 2012 | 2013 | 2014 | Total |
| Routine discharge (home/self care) | 5,430 | 6,026 | 6,370 | 5,876 | 6,817 | 30,519 |
| Inpatient-other short-term hospital | 636 | 682 | 594 | 581 | 765 | 3,258 |
| Skilled nursing facility (SNF) | 16 | 25 | 22 | 25 | 34 | 122 |
| Intermediate care facility (ICF) | 12 | 5 | 7 | 14 | 13 | 51 |
| Designated cancer center or children's hospital | 203 | 175 | 154 | 134 | 180 | 846 |
| Home health | 14 | 8 | 12 | 15 | 20 | 69 |
| Left/discontinued care against medical advice | 185 | 225 | 230 | 243 | 315 | 1,198 |
| Expired/did not recover | 13 | 20 | 22 | 15 | 25 | 95 |
| Discharge/transfer to court/law enforcement | 93 | 138 | 128 | 133 | 173 | 665 |
| Still Patient | 20 | 15 | 23 | 15 | 13 | 86 |
| Discharge/transfer to a rehab facility or a hospital unit | 6 | 11 | 11 | 14 | 12 | 54 |
| Discharge/transfer to a psychiatric hospital or a psychiatric unit of a hospital | 564 | 516 | 558 | 457 | 467 | 2,562 |
| Discharge/transfer to critical access hospital (CAH) | 18 | 33 | 7 | 11 | 18 | 87 |
| Discharge/transfer to another type of healthcare insti- | 60 | 59 | 78 | 73 | 76 | 346 |
| Other | 73 | 63 | 76 | 58 | 102 | 372 |
| Total | 7,343 | 8,001 | 8,292 | 7,664 | 9,030 | 40,330 |

| Kentucky Hospitals | Kentucky Resident Drug Overdose ED Visits | | | | |
|--|--|------|------|------|------|
| | Year | | | | |
| | 2010 | 2011 | 2012 | 2013 | 2014 |
| | N | N | N | N | N |
| Baptist Hospital East | 239 | 239 | 253 | 303 | 312 |
| Baptist Hospital Northeast | 45 | 40 | 60 | 50 | 46 |
| Baptist Regional Medical Center | 68 | 98 | 101 | 90 | 97 |
| Bluegrass Community Hospital | 17 | 13 | 20 | * | 20 |
| Bourbon Community Hospital | 27 | 20 | 20 | 28 | 41 |
| Breckinridge Memorial Hospital | 49 | 58 | 37 | 31 | 54 |
| Caldwell Medical Center | 48 | 65 | 59 | 46 | 49 |
| Carroll County Memorial Hospital | 66 | 56 | 55 | 37 | 65 |
| Casey County Hospital | 76 | 63 | 70 | 74 | 68 |
| Caverna Memorial Hospital Inc | 29 | 36 | 19 | 40 | 26 |
| Central Baptist Hospital | 64 | 54 | 65 | 79 | 83 |
| Clark Regional Medical Center | 85 | 79 | 88 | 59 | 123 |
| Clinton County Hospital | 19 | 17 | 45 | 19 | 25 |
| Crittenden Health System | 17 | 19 | 17 | 13 | 23 |
| Cumberland County Hospital | 33 | 30 | 27 | 14 | 42 |
| Ephraim McDowell Fort Logan Hospital | 60 | 55 | 43 | 34 | 40 |
| Ephraim McDowell Reg Medical Center | 59 | 87 | 64 | 72 | 88 |
| Flaget Memorial Hospital | 56 | 48 | 50 | 37 | 81 |
| Fleming County Hospital | 24 | 27 | 24 | 15 | 19 |
| Frankfort Regional Medical Center | 115 | 106 | 104 | 73 | 108 |
| Georgetown Community Hospital | 84 | 77 | 64 | 91 | 105 |
| Greenview Regional Hospital | 26 | 40 | 40 | 37 | 62 |
| Hardin Memorial Hospital | 177 | 162 | 179 | 139 | 144 |
| Harlan ARH Hospital | 45 | 48 | 39 | 40 | 43 |
| Harrison Memorial Hospital | 52 | 42 | 55 | 58 | 89 |
| Hazard ARH Regional Medical Center | 52 | 54 | 67 | 60 | 60 |
| Highlands Regional Medical Center | 88 | 116 | 83 | 48 | 77 |
| Jackson Purchase Medical Center | 48 | 51 | 65 | 85 | 64 |
| Jane Todd Crawford Memorial Hospital | 26 | 32 | 26 | 30 | 19 |
| Jennie Stuart Medical Center Inc | 140 | 158 | 118 | 87 | 91 |
| Jewish Hospital & St Marys Healthcare | 37 | 26 | 71 | 73 | 77 |
| Jewish Hospital Medical Center East | 34 | 29 | 32 | 31 | 35 |
| Jewish Hospital Medical Center Northeast | 8 | 11 | 14 | 9 | * |

| Kentucky Hospitals | Kentucky Resident Drug Overdose ED Visits | | | | |
|---|--|------|------|------|------|
| | Year | | | | |
| | 2010 | 2011 | 2012 | 2013 | 2014 |
| | N | N | N | N | N |
| Jewish Hospital Medical Center South | 76 | 100 | 101 | 76 | 100 |
| Jewish Hospital Medical Center Southwest | 48 | 50 | 77 | 23 | 14 |
| Jewish Hospital Shelbyville | 67 | 53 | 76 | 58 | 79 |
| Kentucky River Medical Center | 33 | 40 | 30 | 34 | 56 |
| King's Daughters Medical Center | 105 | 141 | 108 | 91 | 105 |
| Knox County Hospital | 64 | 86 | 77 | 40 | 101 |
| Kosair Children's Hospital | 239 | 222 | 213 | 205 | 220 |
| Kosair Children's Medical Center | 23 | 60 | 82 | 68 | 58 |
| Lake Cumberland Regional Hospital | 80 | 66 | 74 | 59 | 82 |
| Livingston Hospital & Healthcare Services Inc | 10 | 10 | 11 | 19 | 10 |
| Logan Memorial Hospital | 36 | 50 | 51 | 34 | 46 |
| Lourdes Hospital | 45 | 63 | 61 | 57 | 56 |
| Marcum and Wallace Memorial Hospital | 57 | 59 | 48 | 46 | 39 |
| Marshall County Hospital | 51 | 40 | 44 | 47 | 50 |
| Mary Breckinridge Hospital | 28 | 40 | 26 | 16 | 22 |
| McDowell ARH Hospital | 63 | 67 | 39 | 44 | 38 |
| Meadowview Regional Medical Center | 49 | 68 | 47 | 49 | 63 |
| Memorial Hospital Inc | 43 | 63 | 62 | 45 | 50 |
| Methodist Hospital | 125 | 90 | 77 | 74 | 72 |
| Methodist Hospital Union County | 23 | 41 | 37 | 16 | 24 |
| Middlesboro ARH Hospital | 32 | 19 | 24 | 27 | 31 |
| Monroe County Medical Center | 16 | 21 | 20 | 23 | 18 |
| Morgan County ARH Hospital | 25 | 29 | 26 | 26 | 20 |
| Muhlenberg Community Hospital | 83 | 85 | 80 | 52 | 49 |
| Murray Calloway County Hospital | 33 | 47 | 69 | 70 | 115 |
| New Horizons Medical Center | 17 | 10 | 20 | 17 | 19 |
| Nicholas County Hospital | 27 | 18 | 27 | 31 | * |
| Norton Audubon Hospital | 98 | 129 | 194 | 239 | 208 |
| Norton Brownsboro Hospital | 51 | 54 | 80 | 81 | 70 |
| Norton Hospital | 66 | 60 | 62 | 63 | 83 |
| Norton Suburban Hospital | 78 | 108 | 140 | 120 | 139 |
| Ohio County Hospital | 39 | 32 | 28 | 27 | 35 |
| Our Lady of Bellefonte Hospital | 36 | 21 | 37 | 44 | 42 |

| Kentucky Hospitals | Kentucky Resident Drug Overdose | | | | |
|--|---------------------------------|------|------|------|------|
| | ED Visits | | | | |
| | Year | | | | |
| | 2010 | 2011 | 2012 | 2013 | 2014 |
| | N | N | N | N | N |
| Owensboro Medical Health System | 173 | 171 | 157 | 184 | 232 |
| Parkway Regional Hospital | 21 | 21 | 10 | 7 | 16 |
| Pattie A Clay Regional Medical Center | 84 | 103 | 105 | 101 | 130 |
| Paul B Hall Regional Medical Center | 103 | 73 | 47 | 35 | 29 |
| Pikeville Medical Center | 118 | 198 | 126 | 113 | 123 |
| Pineville Community Hospital | 37 | 28 | 31 | 25 | 39 |
| Regional Medical Center of Hopkins County | 132 | 132 | 81 | 57 | 94 |
| Rockcastle Regional Hospital & Respiratory Care Center | 32 | 38 | 26 | 31 | 45 |
| Russell County Hospital | 47 | 34 | 59 | 67 | 51 |
| Saint Joseph Berea | 63 | 84 | 59 | 62 | 52 |
| Saint Joseph East | 48 | 86 | 52 | 77 | 82 |
| Saint Joseph Hospital | 48 | 83 | 72 | 83 | 69 |
| Saint Joseph Hospital London | 71 | 80 | 76 | 70 | 81 |
| Saint Joseph Hospital Martin | 67 | 44 | 26 | 28 | 43 |
| Saint Joseph Jessamine | 75 | 95 | 48 | 63 | 51 |
| Saint Joseph Mount Sterling | 83 | 94 | 78 | 78 | 101 |
| Saints Mary & Elizabeth Hospital | 162 | 171 | 246 | 121 | 84 |
| Springview Hospital | 32 | 54 | 40 | 46 | 37 |
| St Claire Regional Medical Center | 96 | 90 | 71 | 61 | 68 |
| St Elizabeth Edgewood | 222 | 288 | 283 | 209 | 285 |
| St Elizabeth Florence | 154 | 171 | 220 | 208 | 303 |
| St Elizabeth Fort Thomas | 158 | 149 | 219 | 195 | 324 |
| St Elizabeth Grant | 45 | 54 | 65 | 56 | 76 |
| St Elizabeth Medical Center North | 117 | 75 | 192 | 283 | 341 |
| T J Samson Community Hospital | 116 | 116 | 116 | 127 | 103 |
| Taylor Regional Hospital | 22 | 30 | 43 | 55 | 60 |
| The James B Haggin Memorial Hospital | 41 | 41 | 31 | 30 | 44 |
| The Medical Center at Bowling Green | 97 | 111 | 110 | 115 | 168 |
| The Medical Center at Franklin | 27 | 41 | 18 | 23 | 38 |
| The Medical Center at Scottsville | 27 | 26 | 34 | 13 | 17 |
| Three Rivers Medical Center | 15 | 16 | 10 | 12 | 18 |
| Trigg County Hospital Inc | 23 | 40 | 28 | 22 | 40 |
| Twin Lakes Regional Medical Center | 42 | 44 | 70 | 49 | 83 |

| Kentucky Hospitals | Kentucky Resident Drug Overdose | | | | |
|---------------------------------------|---------------------------------|------|------|------|------|
| | ED Visits | | | | |
| | Year | | | | |
| | 2010 | 2011 | 2012 | 2013 | 2014 |
| | N | N | N | N | N |
| UK HealthCare Good Samaritan Hospital | 129 | 131 | 145 | 134 | 179 |
| University of Kentucky Hospital | 160 | 194 | 208 | 223 | 324 |
| University of Louisville Hospital | 392 | 478 | 672 | 588 | 595 |
| Wayne County Hospital Inc | 25 | 54 | 39 | 31 | 42 |
| Western Baptist Hospital | 61 | 63 | 66 | 64 | 50 |
| Westlake Regional Hospital | 37 | 36 | 41 | 41 | 38 |
| Whitesburg ARH Hospital | 42 | 35 | 32 | 22 | 54 |
| Williamson ARH Hospital | 20 | 31 | 18 | 28 | 26 |

About This Report

This report presents drug overdose ED visits data for Kentucky residents treated in Kentucky facilities. The data source is the Kentucky Outpatient Hospitalization (OH) Discharge Files, Cabinet for Health and Family Services, Office of Health Policy, 2008-2014 (data for 2011-2014 are provisional and subject to change). 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 using diagnosis codes and E-codes. The Kentucky data system includes up to 25 diagnosis code fields for each hospitalization. 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). 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-of-injury codes describing the intent of the overdose.

Definition: An ED visit was considered a drug overdose ED visit if:

- 1) any of the ICD-9-CM codes in the range 960-979 were listed in any diagnosis; 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 emergency departments 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 ED visits or encounters of care for drug overdoses, rather than number of distinct patients. The ED discharge data received by the Kentucky Injury Prevention & Research Center 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 treated for an overdose in a given year: a patient who had two overdose episodes requiring ED treatment during a given year would have two distinct ED 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(.0-.5), E962.0, E980(.0-.5), 960-979 |
| -Nonopioid analgesics, Antipyretics, and Antirheumatics | E850(.3-.8), 965(.1-.8) |
| --4-Aminophenol derivatives | E850.4, 965.4 |
| -Opiates/opioids | E850(.0-.2), 965.0 |
| --Heroin | E850.0, 965.01 |
| --Pharmaceutical Opioids | E850(.1-.2), 965(.00,.02-.09) |
| ---Methadone | E850.1, 965.02 |
| -Cocaine | E854.3*, E855.2*, 968.5*, 970.81 |
| -Antidepressants, barbiturates and other antiepileptics, sedative-hypnotics, and psychotropic drugs not elsewhere classified | E851-E853, E854(.0-.2,.8), E855.0, E950(.1-.3), E980(.1-.3), 966, 967, 969, 970(.0,.1,.89) |
| --Benzodiazepines | E853.2, 969.4 |
| --Psychostimulants with abuse potential including methamphetamine, MDMA (Ecstasy) | E854.2, 969.7 |
| -Anticoagulants | 964.2 |
| -Other specified and unspecified drugs | E850(.9), E855(.1,.3-.9), E856-E858, E950(.0,.4,.5), E962.0, E980(.0,.4,.5), 960-963, 964(.0,.1,.3-.9), 965.9, 968(.0-.4,.6-.9), 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.](#)