Heroin and Methamphetamine Burden
by Kentucky State Police Post

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Summary

This report combines public safety and public health outcomes data concerning heroin and methamphetamine in Kentucky. Related data were mapped and analyzed at the Kentucky State Police (KSP) post level using ArcGIS/ArcMap (geospatial tool). Public safety outcomes data are based on the county of incidence, and public health outcomes data are based on the county of residence.

Heroin-related data analyzed included: heroin trafficking arrests, heroin possession arrests, heroin-related overdose deaths, heroin-related overdose emergency department events, heroin-related overdose inpatient hospitalization events. Emergency department and inpatient hospitalization counts represent encounters of care and could be greater than the number of individual patients treated.

Methamphetamine-related data analyzed included: methamphetamine trafficking arrests, methamphetamine possession arrests, methamphetamine precursor arrests, methamphetamine manufacturing arrests, methamphetamine lab responses, and methamphetamine-related overdose deaths. Methamphetamine-related overdose deaths all involved polysubstance use.

Heroin and methamphetamine use and distribution are prevalent across every state police post in Kentucky. Using the abovementioned data for each respective drug, data were ranked to create an index score and an index hot/cold spot analysis. KSP Posts 5, 6, 12, and 15 had statistically significant hot spots for heroin. KSP Post 3, 4, 15, and 16 were statistically significant hot spots for methamphetamine. These analyses may be used to inform and prioritize related public safety and public health intervention and prevention efforts.
Kentucky State Police Posts by County

Current Location of State Police Post

- Post 1 - Graves County
- Post 2 - Hopkins County
- Post 3 - Warren County
- Post 4 - Hardin County
- Post 5 - Henry County
- Post 6 - Grant County
- Post 7 - Madison County
- Post 8 - Rowan County
- Post 9 - Pike County
- Post 10 - Harlan County
- Post 11 - Laurel County
- Post 12 - Franklin County
- Post 13 - Perry County
- Post 14 - Boyd County
- Post 15 - Adair County
- Post 16 - Henderson County
Heroin
Public Safety Outcomes

Heroin Trafficking Arrests by KSP Post, 2016

No. of Arrests
- 1 - 3
- 4 - 13
- 14 - 49
- 50 - 343

Heroin Possession Arrests by KSP Post, 2016

No. of Arrests
- 2 - 6
- 7 - 17
- 18 - 71
- 72 - 902

Produced by the Kentucky Injury Prevention and Research Center, a bonafide agent for the Kentucky Department for Public Health. June 2017. Data Source: Kentucky State Police (KSP), Criminal ID and Records, Frankfort, KY. Data are provisional and subject to change.
Public Health Outcomes

Heroin-Related Overdose Health Outcomes, 2012-2016

<table>
<thead>
<tr>
<th>Year</th>
<th>Inpatient Events</th>
<th>ED Events</th>
<th>Deaths</th>
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</thead>
<tbody>
<tr>
<td>2012</td>
<td>175</td>
<td>865</td>
<td>129</td>
</tr>
<tr>
<td>2013</td>
<td>263</td>
<td>1114</td>
<td>201</td>
</tr>
<tr>
<td>2014</td>
<td>325</td>
<td>1638</td>
<td>228</td>
</tr>
<tr>
<td>2015</td>
<td>423</td>
<td>2758</td>
<td>300</td>
</tr>
<tr>
<td>2016</td>
<td>528</td>
<td>4600</td>
<td>295</td>
</tr>
</tbody>
</table>

Produced by the Kentucky Injury Prevention and Research Center, a bona fide agent for the Kentucky Department for Public Health. June 2017. Data Sources: Kentucky Inpatient Hospitalization Claims, Cabinet for Health and Family Services (CHFS); Kentucky Outpatient Services Database, Office of Health Policy; Kentucky Death Certificate Database, Kentucky Office of Vital Statistics, CHFS. Data are provisional and subject to change.

Heroin-Related Overdose Deaths by KSP Post, 2016

No. of Deaths
- 0
- 1 - 4
- 5 - 26
- 27 - 87

Count is the number of heroin-related overdose deaths. Produced by the Kentucky Injury Prevention and Research Center, a bona fide agent for the Kentucky Department for Public Health. May 2017. Data source: Kentucky Death Certificate Database, Kentucky Office of Vital Statistics, Cabinet for Health and Family Services. Data are provisional and subject to change.
Heroin-Related Overdose Emergency Department Events by KSP Post, 2016

Count is based on the number of heroin-related overdose events resulting in emergency department visits. Produced by the Kentucky Injury Prevention and Research Center, a bona fide agent for the Kentucky Department for Public Health. June 2017. Data source: Kentucky Outpatient Services Database, Office of Health Policy. Data are provisional and subject to change.

Heroin-Related Overdose Inpatient Hospitalization Events by KSP Post, 2016

Count is based on the number of heroin-related overdose events resulting in inpatient hospitalizations to acute care facilities. Produced by the Kentucky Injury Prevention and Research Center, a bona fide agent for the Kentucky Department for Public Health. June 2017. Data source: Kentucky Inpatient Hospitalization Claims Files, Frankfort, KY. Cabinet for Health and Family Services, Office of Health Policy. Data are provisional and subject to change.
Risk Index

Heroin Risk Index Score by KSP Post, 2016

Legend
- 1st Quantile
- 2nd Quantile
- 3rd Quantile
- 4th Quantile

Heroin Risk Index Hot/Cold Spots by KSP Post, 2016

Legend
- Interstate
- Parkway
- US Roadway
- Cold Spot - 99% Confidence
- Cold Spot - 95% Confidence
- Cold Spot - 90% Confidence
- Not Significant
- Hot Spot - 90% Confidence
- Hot Spot - 95% Confidence
- Hot Spot - 99% Confidence

Index Score is calculated by averaging the 2016 ranks for Kentucky State Police posts in 1) heroin-related overdose deaths; 2) heroin-related overdose emergency department events; 3) heroin-related overdose inpatient hospitalization events; 4) heroin trafficking arrests; and, 5) heroin possession arrests. The Index Score was then analyzed by a geospatial tool to identify higher-risk heroin priority areas (hot spots). Produced by the Kentucky Injury Prevention and Research Center, a bonafide agent for the Kentucky Department for Public Health. June 2017. Data Sources: Kentucky Death Certificate Database, Kentucky Office of Vital Statistics, Cabinet for Health and Family Services (CHFS); Kentucky Outpatient Services Database, Office of Health Policy; Kentucky Inpatient Hospitalization Claims, CHFS; Kentucky State Police (KSP) Records: Criminal ID & Records Heroin Arrest Data 2016. Data are provisional and subject to change.
Methamphetamine
Public Safety Outcomes

Methamphetamine Arrest Totals, 2012-2016

<table>
<thead>
<tr>
<th>Year</th>
<th>Trafficking</th>
<th>Possession</th>
<th>Manufacturing</th>
<th>Precursor</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012</td>
<td>609</td>
<td>1534</td>
<td>1838</td>
<td>685</td>
</tr>
<tr>
<td>2013</td>
<td>834</td>
<td>2018</td>
<td>1465</td>
<td>649</td>
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<tr>
<td>2014</td>
<td>1257</td>
<td>2541</td>
<td>1313</td>
<td>654</td>
</tr>
<tr>
<td>2015</td>
<td>1782</td>
<td>4095</td>
<td>1034</td>
<td>414</td>
</tr>
<tr>
<td>2016</td>
<td>2946</td>
<td>6751</td>
<td>659</td>
<td>330</td>
</tr>
</tbody>
</table>

Produced by the Kentucky Injury Prevention and Research Center, a bona fide agent for the Kentucky Department for Public Health. June 2017. Data Source: Kentucky State Police, Criminal ID and Records, Frankfort, KY. Data are provisional and subject to change.

Methamphetamine Trafficking Arrests by KSP Post, 2016

Produced by the Kentucky Injury Prevention and Research Center, a bona fide agent for the Kentucky Department for Public Health. June 2017. Data Source: Kentucky State Police (KSP), Criminal ID and Records, Frankfort, KY. Data are provisional and subject to change.
Methamphetamine Possession Arrests by KSP Post, 2016

No. of Arrests
- 9 - 62
- 63 - 148
- 149 - 226
- 226 - 628

Produced by the Kentucky Injury Prevention and Research Center, a bonafide agent for the Kentucky Department for Public Health, June 2017. Data Source: Kentucky State Police (KSP), Criminal ID and Records, Frankfort, KY. Data are provisional and subject to change.

Methamphetamine Precursor Arrests by KSP Post, 2016

No. of Arrests
- 3 - 11
- 12 - 19
- 20 - 26
- 27 - 52

A methamphetamine precursor is the possession of a drug product or combination of drug products containing ephedrine, pseudoephedrine, or phenylpropanolamine, or their salts, isomers, or salts of isomers, with the intent to use the drug product or combination of drug products as a precursor to manufacturing methamphetamine or other controlled substances. Produced by the Kentucky Injury Prevention and Research Center, a bonafide agent for the Kentucky Department for Public Health, June 2017. Data Source: Kentucky State Police (KSP), Criminal ID and Records, Frankfort, KY. Data are provisional and subject to change.
Methamphetamine Manufacturing Arrests by KSP Post, 2016

No. of Arrests
- 17 - 22
- 23 - 32
- 33 - 50
- 51 - 81

Produced by the Kentucky Injury Prevention and Research Center, a bonafide agent for the Kentucky Department for Public Health. June 2017. Data Source: Kentucky State Police (KSP), Criminal ID and Records, Frankfort, KY. Data are provisional and subject to change.

Methamphetamine Lab Responses by KSP Post, 2016

No. of Responses
- 2 - 5
- 6 - 8
- 9 - 15
- 16 - 39

Count is the number of methamphetamine clandestine lab response for waste removal by state and local agencies. The count for Kentucky State Police (KSP) Post 4 is underestimated as above mentioned count does not include lab waste removals for Louisville Metro Police, who independently manage their lab waste removals. Produced by the Kentucky Injury Prevention and Research Center, a bonafide agent for the Kentucky Department for Public Health. June 2017. Data Source: Methamphetamine Clandestine Lab Response for Waste Removal Database, KSP, Frankfort, KY. Data are provisional and subject to change.
Public Health Outcomes

Methamphetamine-Related Overdose Deaths, 2012-2016

Produced by the Kentucky Injury Prevention and Research Center, a bona fide agent for the Kentucky Department for Public Health, June 2017. Data Source: Kentucky Death Certificate Database, Kentucky Office of Vital Statistics, Cabinet for Health and Family Services. Data are provisional and subject to change.

Methamphetamine-Related Overdose Deaths by KSP Post, 2016

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Methamphetamine Risk Index Score by KSP Post, 2016

Methamphetamine Risk Index
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- Hot Spot - 95% Confidence
- Hot Spot - 90% Confidence

Methamphetamine Risk Index Hot/Cold Spots by KSP Post, 2016

Index Score is calculated by averaging the 2016 ranks for Kentucky State Police posts in 1) methamphetamine-related overdose deaths; 2) methamphetamine manufacturing arrests; 3) methamphetamine precursor arrests; 4) methamphetamine trafficking arrests; 5) methamphetamine possession arrests; and, 6) methamphetamine lab responses for waste removal by state and local agencies. The Index Score was then analyzed by a geospatial tool to identify higher-risk methamphetamine priority areas (hot spots). Produced by the Kentucky Injury Prevention and Research Center, a bonafide agent for the Kentucky Department for Public Health, June 2017. Data Sources: Kentucky Death Certificate Database, Kentucky Office of Vital Statistics, Cabinet for Health and Family Services; Kentucky State Police (KSP) Records: Criminal ID & Records Methamphetamine Arrest Data 2016. Data are provisional and subject to change.