2019 SEARCH SYMPOSIUM
TARGETING INCIDENT-BASED CRIME DATA FOR RESEARCH, ★ ANALYSIS & DATA VISUALIZATION
PROVIDE DATA ANALYSIS TO LOCAL LAW ENFORCEMENT

- Select date range
- Choose to view state-wide or agency-specific data
- View visual summary of how major crime rates have changed over specified period
- View summary of top ten agencies with largest changes in crime rates
- Mouse over agency name for summary information or click any agency name to drill-down to agency-specific data
- Select offense type
- Select number of years for year-over-year comparison
- View month-by-month crime counts compared to the previous year in chart or numerical table format, or view multi-year comparisons
PROVIDE DATA ANALYSIS TOOLS TO LOCAL LAW ENFORCEMENT & THE PUBLIC
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CONSTRUCT DATA STORIES TO TELL EXPLAIN THE STATE OF CRIME

15 YEAR (2003-2017) REVIEW OF MISSOURI'S INDEX OFFENSES

• VIOLENT VS PROPERTY OFFENSE TRENDS OVER TIME?
• INDEX CRIME RATE TRENDS OVER TIME?
• INDEX CRIME RATES BY MO COUNTY?
• CRIME BY POPULATION THRESHOLD? BY CENSUS TRACT?
• ARE COUNTIES WITH HIGHEST POPULATION INCREASES PER US CENSUS SEEING A CORRELATED INCREASE IN OFFENSES + ARRESTS?
CONSTRUCT DATA STORIES TO TELL
EXPLAIN THE STATE OF CRIME

5 YEAR REVIEW OF MISSOURI BURGLARY DATA (2012-2017)

- TYPE OF BURGLARY TRENDS = FORCED VS NON-FORCED;
- TIME OF DAY DATA?
- TYPE OF PROPERTY STOLEN AND ASSOCIATED VALUE TRENDS?
- AVERAGE LOSS AMOUNT BY TYPE OF BURGLARY?
- ANY CORRELATIONS TO MO CENSUS DATA?
  (I.E. HOUSING UNIT OCCUPANCY % BY COUNTY;
   OWNER-OCUPIED VS RENTAL UNIT % BY COUNTY;
   % OF OCCUPANCY OF UNITS BY PERSONS 65+?)
CONSTRUCT DATA STORIES TO TELL EXPLAIN THE STATE OF CRIME

5 YEAR REVIEW OF MISSOURI DOMESTIC VIOLENCE (2012-2017)

- FREQUENCY OF RELATIONSHIP TYPE INVOLVED IN DV-IDENTIFIED INCIDENTS VS DV-IDENTIFIED HOMICIDES?
- TRENDS OR CORRELATIONS ON HOMICIDE WEAPON TYPE?
- TRENDS ON HOMICIDE VICTIM AND OFFENDER AGE/SEX/RACE/ETHNICITY DEMOGRAPHICS?
- ANY NEW REGIONAL/GEOPHASIC TRENDS RE: DV DATA UNCOVERED? DV SUICIDES?
- 10 COUNTIES ISSUED THE MOST/LEAST ORDERS OF PROTECTION?
CONSTRUCT DATA STORIES TO TELL EXPLAIN THE STATE OF CRIME
MISSOURI INCIDENT-BASED OFFENSE/ARREST CORRELATIONS

- Offenses/Arrests by day of week?
- By hour of day?
- By 1st or 2nd half of a month?
- By NIBRS location type?
- Does MO “crime” increase or decrease on federal/state holidays?
- Does MO “crime” increase due to average monthly Missouri temperature?
CONSTRUCT DATA STORIES TO TELL
EXPLAIN THE STATE OF CRIME

MISSOURI CCH STATS & TRENDS

- WHAT ARE THE 10 MOST FREQUENT VEHICLES REPORTED AS STOLEN?
- WHAT ARE THE 10 MOST FREQUENT CHARGES APPEARING AT ARREST?
  - MOST BY GENDER? MOST BY AGE RANGE?
- HOW MANY NICS CHECKS ARE BEING RUN IN MISSOURI EACH YEAR?
  - HOW MANY FIREARMS ARE ENTERED INTO NCIC IN AS STOLEN EACH YEAR?
- AVERAGE SENTENCE LENGTH BY FELONY OFFENSE?
- AVERAGE TIME BETWEEN MISSING PERSON RECORDS BEING ENTERED
  AND CLEARED (WHEN PERSON FOUND) BY COUNTY?
- SEX OFFENDER DEMOGRAPHIC TRENDS? VICTIMIZATION TRENDS?
WHEN FRAUD OFFENSES IN OHIO WERE DISAGGREGATED:

- **IMPERSONATION** accounted for nearly half of all economic crimes (48.7%).
- Majority of economic crimes happen **between 8AM and 5PM on weekdays**.
- Location where they occurred the most was **residential structures** (50.5%).
- Largest victim group was persons **over the age of 49** (47.8%).

Key NIBRS Data Elements: Incident Date/Time, Offense Code, Location Type
(2013) BY NORTH DAKOTA BUREAU OF CRIMINAL INVESTIGATION

- Aggravated assaults are nearly 5 times more likely to occur in a residence than a bar (55.7% vs 11.8%).
- Alcohol use by the offender occurred in almost 50% of all incidents.
- In 2011, 17.6% of aggravated assaults were related to incidents of domestic violence between unmarried partners (boyfriend/girlfriend).

Key NIBRS Data Elements:
- Location Type
- Offender Suspected of Using
- Relationship of Victim to Offender
41.4% of Assault Offenses against the Elderly were committed by family members, with Children being the highest category of Offenders.

Credit Card/ATM Fraud was the most frequent offense.

Key NIBRS Data Elements:
- Offense Code
- Location Type
- Relationship of Victim to Offender
### Key NIBRS Data Elements:
- Offense Code
- Location Type
- Relationship of Victim to Offender
- Arrest Date

### Factors

<table>
<thead>
<tr>
<th>Factors</th>
<th>Sex Crimes</th>
<th>Other Violent Crimes</th>
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</thead>
<tbody>
<tr>
<td>Arrest Rate</td>
<td>24%</td>
<td>49%</td>
</tr>
<tr>
<td>Urban Arrest Rate</td>
<td>22%</td>
<td>47%</td>
</tr>
<tr>
<td>Rural Arrest Rate</td>
<td>29%</td>
<td>53%</td>
</tr>
<tr>
<td>Avg. Time Between Incident &amp; Arrest</td>
<td>85.75 Days</td>
<td>8.75 Days</td>
</tr>
<tr>
<td>Prosecution Declined</td>
<td>15%</td>
<td>11%</td>
</tr>
<tr>
<td>Victim Refused To Cooperate</td>
<td>6%</td>
<td>5%</td>
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</table>
NIBRS data in Idaho shows:

- 80.4% of violent crimes are committed by someone known to the victim.
- 76.6% of Intimate Partner Violence was reported as Simple Assault.
- 40.3% of all reported abductions involved an offender classified as an Intimate Partner of the victim.

Key NIBRS Data Elements:  
- Offense Code 
- Relationship of Victim to Offender
### “ASSAULT ON POLICE” (2015) BY U.S. MARSHALS SERVICE

<table>
<thead>
<tr>
<th>Factors</th>
<th>Typical Police Encounters</th>
<th>Assaults on Police</th>
</tr>
</thead>
<tbody>
<tr>
<td>Involved Substance Abuse</td>
<td>23%</td>
<td>3x Greater Chance</td>
</tr>
<tr>
<td>Other Underlying Assault</td>
<td>33%</td>
<td>59%</td>
</tr>
<tr>
<td>Spans 2 or More Locations</td>
<td>1%</td>
<td>10x Greater Chance</td>
</tr>
<tr>
<td>Involved Weapon Offense</td>
<td>4%</td>
<td>9%</td>
</tr>
<tr>
<td>Involved Prop. Destruction</td>
<td>8%</td>
<td>18%</td>
</tr>
</tbody>
</table>

When controlling for the occurrence with each crime type during an incident, a greater diversity of offenses in the incident corresponded to substantially more risk to officers.

Key NIBRS Data Elements:
- Location Type
- Offender Suspected of Using
- Relationship of Victim to Offender
Found that Juvenile Sex Offenders who victimize Minors follow similar Time of Day trends to Adult Sex Offenders who victimize Minors.

Also found that Juvenile Sex Offenders are also less likely to engage in Sex Offenses at night (6pm-12am, 25.2% vs. 28.3%), and more likely to engage in Sex Offenses during the afternoon (12pm-6pm, 42.0% vs. 37.3%).

Key NIBRS Data Element: Incident Date/Time
By analyzing drug amounts and identifying potential dealers via the NIBRS data reported by law enforcement agencies, the study found that the regions with the highest oxycodone abuse densities appear in New England, the Appalachian regions of Tennessee, Virginia, West Virginia, and Ohio (all of which are known to be high heroin abuse areas).

Low-density counties (bottom 90% of study) were only half as likely to involve heroin or diverted opioids than their high-density counterparts (top 10% of study). [Avg. 10-50mg, split at 63.15mg]
OTHER ONGOING NIBRS RESEARCH

• **MISSOURI**: Work with AWI & HS to analyze Animal Cruelty offense/arrest data against County Prosecution charge totals

• **COLORADO**: Motor Vehicle Theft Analysis to include Location Type; Offense vs Arrest Rates; Carjacking trends; Property Stolen from within MV; MVT Recovery Trends; Drug/Alch. Involvement

• **CONNECTICUT**: Fentanyl and Opioid tracking using Drug Type, Drug Quantity, Drug Measurement Type, and Jurisdiction

• **RHODE ISLAND**: Providing Law Enforcement with state-created interactive NIBRS dashboards via Microsoft Power BI
QUESTIONS?

KYLE COMER, J.D.

MISSOURI STATE HIGHWAY PATROL

KYLE.COMER@MSHP.DPS.MO.GOV