Smell Tests and Measurement Continuity: Converting NIBRS to SRS

Criminal Justice Coordinating Council
The Georgia Bureau of Investigations

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History of the GA UCR Program

1975
- GBI begins participating in Uniform Crime Reporting Program
- Agency reports accepted via paper

2007
- Implementation of web-based reporting system
- Additional File Transfer Protocol (FTP) capability for larger agencies

600+
- Number of agencies submitting UCR data monthly
- Number of agencies submitting arrest data
UCR To NIBRS Transition

2017-2018
• Map GA Statutes to NIBRS Codes
• Attend Vendor Trainings to alert Agencies to coming change
• User Acceptance Testing of GBI NIBRS Repository

2018
• April –
  • NIBRS Portal Deployed
  • Family Violence Reports Accepted
• June – GBI achieves NIBRS certification
• September – NIBRS Records Accepted

2019
• May – NIBRS Trainings statewide
• August – Presentation at GCIC Symposium alerting Agencies to full transition
• October 6 – UCR Website Shut down
• October – Complete NIBRS Transition

Innovating Criminal Justice - Empowering Victims
NIBRS Today

• 40% of Agencies Submitting data as of June 2021
• Monthly Meetings with CJCC SAC to discuss data analysis and data quality
• Continue technical assistance to vendors and agencies for quality and timely reporting
CJCC-GBI Partnership

2017-2018
- SAC receives SJS grant to partner with GBI on NIBRS transition
- Research Analyst assists GBI with mapping state statutes
- Analyst becomes part of GBI UAT team
- Analyst obtains historic UCR data for Smell test

2018
- SAC Analyst attends GBI training for Local Agencies
- SAC analyst maps agency locations to assist GBI training section with planning
- GA SAC Analyst attends GCIC Symposium, ASUCRP conferences, and local agency training sessions to prepare for transition

2019-2020
- GBI begins accept reports from agencies
- GA SAC attends GCIC symposium as a vendor and connects with local agencies
- GASAC Fellow meets with agencies contacted via the GCIC Symposium
- Develop paper report and guide for LEO’s about for how to talk about NIBRS based on agency outreach
## CJCC-GBI Partnership

<table>
<thead>
<tr>
<th>Benefits</th>
<th>GA SAC provides GBI with feedback on canned reports within repository and data quality</th>
</tr>
</thead>
<tbody>
<tr>
<td>GA SAC has real-time access to NIBRS Repository</td>
<td></td>
</tr>
<tr>
<td>GBI provides feedback to GA SAC on summary reporting conversion rules</td>
<td></td>
</tr>
<tr>
<td>GA SAC serves as a resource to GBI data analysis and responding to inquiries using NIBRS data</td>
<td></td>
</tr>
</tbody>
</table>
The Smell Test

• Goal:
  • Does transition to NIBRS “increase” crime rates?
  • Do these “increases” align with findings of BJS report – explained as artifacts of the way crime is counted?
• Necessary for ability to maintain continuity in crime rate calculation over time
• Mechanism for assessing completeness in reporting
Guidance for Agencies on How Transition affects Crime Counts

UCR/Summary

Incident #GA01234
- Rape 16-6-1
- Burglary 16-7-1

NIBRS

2 Rapes
- 2 victims

2 Rapes
- 1 offender

1 Burglary
- 1 victim
- 1 offender
Operationalizing the SRS Hierarchy

- Turn written rules of UCR Offense Categorization Hierarchy into Process
- Creates a visual aid for how to count incidents
- Provides tool for GBI to give the GA SAC feedback on methodology for conversion
# FBI Hierarchy Rules – How to Count Crime

<table>
<thead>
<tr>
<th>NIBRS TO SRS CONVERSION – Variables Used</th>
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<tbody>
<tr>
<td></td>
<td>Crime Against</td>
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<td>Victim Sex</td>
<td>Weapon/Force</td>
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<tr>
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<td>Larceny/vehicle theft</td>
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<tr>
<td>Money/Other Theft</td>
<td>Property*</td>
<td>Yes</td>
<td></td>
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</table>

*Use offense is counted for each vehicle.

Note: When a hierarchy is attempted, it is handled as an aggravated assault.

This table displays the variables for each specific offense to complete the NIBRS to SRS Conversion. The first column is used to show whether the number of offenses counted in the incident are the number of victims or the number of offenses. Per the Summary Reporting System User Manual (Version 1.0), for crimes against persons, one offense is counted for each victim. For crimes against property, one offense is counted per distinct operation.
Feedback from the Experts

- Initial attempt at interpreting and converting SEARCH Java code in Github for SRS conversion to SPSS Syntax
- Work with SEARCH to ensure our understanding of hierarchy rules was consistent with theirs
- Provide GBI with Scenarios and incident examples for scoring feedback
Data – Converting Flat File Extracts

37 Text Files
- Obtain GBI’s FBI Flat File Extracts
- Read in Administrative and Victim Segments

Analyze Segments
- Identify Incident Reports, Additions, Deletions
- Identify Duplicates across submission months

Merge Segments
- Create ORI_IncNum Variable
- Merge Victim and Administrative Segment
- Data Structured at Victim-Offense
Scoring Incident

Victim-Offense Structure
- Generate SRS Offense Variable for each Part 1 offense

Impose Hierarchy Rule
- For incidents with multiple offenses – identify “most serious”

Restructure Data to Wide
- Create a single line per incident to impose hierarchy rule at incident level
### Long to Wide

#### Long

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#### Wide

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<tr>
<td>33</td>
<td>robberyx.002</td>
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</tr>
</tbody>
</table>
Creating SRS Offense Codes

* Homicide.

**COMPUTE** murderx = 0.
**IF** (vicoff1 = "09A" | vicoff1 = "09B") |
 (vicoff2 = "09A" | vicoff2 = "09B") |
 (vicoff3 = "09A" | vicoff3 = "09B") |
 (vicoff4 = "09A" | vicoff4 = "09B") |
 (vicoff5 = "09A" | vicoff5 = "09B") |
 (vicoff6 = "09A" | vicoff6 = "09B") |
 (vicoff7 = "09A" | vicoff7 = "09B") |
 (vicoff8 = "09A" | vicoff8 = "09B") |
 (vicoff9 = "09A" | vicoff9 = "09B") |
 (vicoff10 = "09A" | vicoff10 = "09B")

**murderx** = 7.

**VARIABLE LABELS**
murderx 'Homicide, victim level'.

**EXECUTE**

Generating the hierarchy variable.

**COMPUTE** srsoffx = MAX(murderx, rapex, robberyx, assaultrx, burglaryx, larcenyx, motortheftx).

**EXECUTE**

**VARIABLE LABELS**
srsoffx "SRS offenses ranked within victim".

**VALUE LABELS**
srsoffx

7 "Murder/neg mans" 6 "Rape" 5 "Robbery" 4 "Agg Asslt" 3 "Burglary" 2 "Larceny" 1 "Auto theft".

**EXECUTE**
SRS variable in wide dataset

- Only the highest ranking Part 1 offense is counted
- For incidents with victims of multiple offenses, the most serious offense will be counted for the victim
- Person offenses: One offense is counted for each victim
- Property offenses: One offense is counted for each distinct operation
- Crosstabs

```
*Computing a variable to give us total rapes in incident following hierarchy rule.
COMPUTE rapeinc = 0.
IF (murderinc=0 & RapeCount > 0) rapeinc=RapeCount.
VARIABLE LABELS rapeinc 'Total Rapes in Incident following Hierarchy'.
EXECUTE.

*Seeing if there are any murder rape incidents.
CROSSTABS
/TABLES=rapecount BY MurderCount
/FORMAT=AVALUE TABLES
/CELLS=COUNT
/COUNT ROUND CELL.

*Since there are not, rape counts should be the same.
CROSSTABS
/TABLES=rapecount BY rapeinc
/FORMAT=AVALUE TABLES
/CELLS=COUNT
/COUNT ROUND CELL.

*Computing a variable to give us total robberies in incident following hierarchy rule.
COMPUTE robberyinc = 0.
IF (murdercount = 0 & rapecount = 0 & robberycount > 0) robberyinc = 1.
VARIABLE LABELS robberyinc 'Total Robberies in Incident following Hierarchy'.
EXECUTE.
```
If an offense occurred in the incident, there will be a value of 1 for that offense for that row.

- Dichotomous variable
Victims variable in wide dataset

- Victims:
  - This is an unduplicated count of victims themselves because it only counts the victim based on their most serious offense.
Offenses variable in wide dataset

- Total number of offenses in the incident

*Creating a variable to determine the # of offenses that occurred in the incident.*

```
COUNT NIBRSMurderCount =
murderx.001 murderx.002 murderx.003 murderx.004 murderx.005 murderx.006 murderx.007 murderx.008 murderx.009 murderx.010
murderx.011 murderx.012 murderx.013 murderx.014 murderx.015 murderx.016 murderx.017 murderx.018 murderx.019 murderx.020
murderx.021 murderx.022 murderx.023 murderx.024 murderx.025 murderx.026 murderx.027 murderx.028 murderx.029 murderx.030
murderx.031 murderx.032 murderx.033 murderx.034 murderx.035 murderx.036 murderx.037 murderx.038 murderx.039 murderx.040
murderx.041 murderx.042 murderx.043 murderx.044 murderx.045 murderx.046 murderx.047 murderx.048 murderx.049 murderx.050
murderx.051 murderx.052 murderx.053 murderx.054 murderx.055 murderx.056 murderx.057 murderx.058 murderx.059 murderx.060
murderx.061 murderx.062 murderx.063 murderx.064 murderx.065 murderx.066 murderx.067 murderx.068 murderx.069 murderx.070
murderx.071 murderx.072 murderx.073 murderx.074 murderx.075 murderx.076 murderx.077 murderx.078 murderx.079 murderx.080
murderx.081 murderx.082 murderx.083 murderx.084 murderx.085 murderx.086 murderx.087 murderx.088 murderx.089 murderx.090
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murderx.141 murderx.142 murderx.143 murderx.144 murderx.145 murderx.146 murderx.147 murderx.148 murderx.149 murderx.150
murderx.151 murderx.152 murderx.153 murderx.154 (7).
EXECUTE.
```
### NIBRS vs. SRS

<table>
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<tr>
<th>Offense</th>
<th>SRS</th>
<th>Incidents</th>
<th>Victims (most serious)</th>
<th>Offenses</th>
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<tbody>
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<td>Murder*</td>
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<td>778</td>
<td>839</td>
<td>839</td>
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<tr>
<td>Rape &amp; Sexual Assault*</td>
<td>4,054</td>
<td>3,885</td>
<td>4,054</td>
<td>4,055</td>
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<tr>
<td>Robbery</td>
<td>5,923</td>
<td>5,967</td>
<td>7,598</td>
<td>7,637</td>
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<tr>
<td>Aggravated Assault*</td>
<td>28,979</td>
<td>22,046</td>
<td>29,349</td>
<td>29,349</td>
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<td>Burglary</td>
<td>30,216</td>
<td>30,473</td>
<td>35,035</td>
<td>35,274</td>
</tr>
</tbody>
</table>

**Murder:** Murder and Non-Negligent Manslaughter; Negligent Manslaughter  
**Rape and Sexual Assault:** Rape; Sodomy; Sexual Assault with an Object  
**Burglary:** Pocket-picking; Purse-snatching; Shoplifting; Theft From Building; Theft From Coin-Operated Machine or Device; Theft From Motor Vehicle; Theft of Motor Vehicle Parts or Accessories; All Other Larceny
Next Steps

Create “Smell Test” sample from NIBRS for agencies with complete reporting since launch (n=165 as of last extract received)

Conduct time series for agencies to assess trends in crime rate pre-/post-NIBRS implementation to assess impact of reporting change

Pair Agency Population Data to SRS converted data from NIBRS

Merge SRS Converted NIBRS with Historic UCR file for Sample
Questions and Feedback

• Questions?
• Feedback on methods?
Contact Information

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