Abstract:

This report was produced by RTI International and the Police Executive Research Forum for the Bureau of Justice Statistics under award number 2017-BJ-CX-K054. It is a summary of proceedings from a one-day BJS sponsored workshop held in December 2019 in Washington, D.C. The goal of the workshop was to gather input from stakeholders, including police practitioners, researchers, and crime and data analysts on ways to leverage incident-based data for enhanced tactical and strategic analysis and to improve policing practice and build community trust as a result of the nationwide transition to NIBRS. The report provides a summary of the workshop's key themes, a compilation of innovative analytic approaches identified by the workshop participants, and activities that could promote and accelerate the use of NIBRS data and is intended to help law enforcement practitioners, police executives, and researchers.

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The Nation's Move to NIBRS:

Formulating the Future of Crime Data in Policing

NCS|X NATIONAL CRIME STATISTICS EXCHANGE
Powering the Transition to NIBRS

JUNE 2021

June 2021

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Workshop Proceedings

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INTRODUCTION

On January 1, 2021, the Federal Bureau of Investigation (FBI) officially retired the Uniform Crime Reporting (UCR) Program's Summary Reporting System (SRS) and moved exclusively to the National Incident-Based Reporting System (NIBRS) as the crime reporting standard for the United States. The SRS has been the primary indicator of the prevalence and nature of crime since the 1930s, relying on aggregated counts of crimes. In contrast, the incident-based data collected through NIBRS represent a fundamental change in the quantity and quality of data available on crime reported to the police across the United States, including large and midsized cities, small towns, and rural areas. NIBRS collects detailed information about crime at the incident level, including details on victims of crime, criminal offenders, the relationship between victims and offenders, characteristics of criminal incidents, and the law enforcement response.[1] The national transition to NIBRS presents the law enforcement and greater criminal justice communities with an opportunity to closely assess how crime incident data are collected and used and to identify opportunities for the increased application of these data to the field.

The Bureau of Justice Statistics (BJS) has a long history of supporting the collection and use of incident-based crime data by state and local law enforcement.[2] Most recently, BJS established the National Crime Statistics Exchange (NCS-X) Initiative, which supports expanding NIBRS reporting to additional law enforcement agencies, with the goal of developing a statistical system that can generate detailed national estimates of the volume and characteristics of crimes known to police.[3] Nationally representative incident-based data can provide information on nearly every major criminal justice issue facing law enforcement and be used to improve crime monitoring, response, and prevention locally and nationwide. The NCS-X initiative represents a partnership between BJS and the FBI to provide funding and technical assistance to select agencies transitioning to NIBRS compliance. To expand its reach, BJS supports the NCS-X Implementation and Technical Assistance Team, a consortium of organizations that facilitates its efforts.[4]

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[1] For more detail about key differences between SRS and NIBRS, please refer to *Will NIBRS Reporting Increase Crime Statistics? Tips for Responding to Questions about the Impact of NIBRS* at https://www.theiacp.org/sites/default/files/NCSX_NIBRS_Crime_Statistics.pdf.

[2] BJS has championed incident-based crime data since the early 1980s. It established a task force in the mid-1980s that advocated for their widespread adoption (see Poggio et al., 1985), provided multiple iterations of funding for states to report NIBRS data in the 1990s and 2000s, promoted its use in public policy discussions (Strom and Smith, 2017), and routinely produced reports highlighting NIBRS data in analysis. Recent examples include Martin et al. (2019) and Smith et al. (2018).

[3] For additional information about NCS-X, see https://www.bjs.gov/content/ncsx.cfm and https://www.theiacp.org/projects/ncsx.

[4] The NCS-X Implementation and Technical Assistance Team includes RTI International, the International Association of Chiefs of Police, the Police Executive Research Forum, IJIS Institute, SEARCH Group, and the Association of State UCR Programs.

Law enforcement agencies collect details of crimes in their crime incident reports, which they store in a Records Management System (RMS). Historically, agencies documented many of the details related to criminal incidents in a text narrative rather than in structured data fields. The NIBRS reporting standard has strict data quality rules and requires agencies to record detailed information about criminal incidents in structured data fields. The benefit of this approach is two-fold: first, it acknowledges that incident-based reporting (IBR) data at the agency level can serve a broader purpose when aggregated at the state and federal levels. Second, it allows for substantially more detailed and higher quality analytical products that can be standardized and scaled from the local to national level. For example, the SRS approach to crime reporting allows an agency to only report how many robberies occurred over time. The NIBRS approach with data captured in structured fields facilitates a much more comprehensive analysis and dissemination process. Agencies can readily analyze the nature, location, and location type in which the robberies occurred as well as distribute details about the victim-suspect relationship, weapons used, and other variables.

Electronic RMSs have become commonplace for most law enforcement agencies. The structure of these systems is largely the same: fields for some information, a section for a descriptive narrative, and modules to record items such as property and involved parties. The greatest amount of variation across the different systems is associated with how many structured data fields there are and how the information that is supplied is verified. These RMS solutions offer most of the data fields needed for NIBRS compliance. However, in the absence of meeting the NIBRS standard, officers may not be compelled to complete every field, or combination of fields, in an incident report. The NIBRS requirements enforce data quality standards at the front end of the crime reporting process through edit checks at the point of data entry. Multiple data quality reviews, many of which are automated, occur during the supervisory review process at the agency level and again when agencies submit crime data to the state UCR program. In totality, these requirements ensure that each agency provides accurate and complete information about every crime incident in a consistent format. The uniformity allows for appropriate comparability of data across agencies.

To support agencies' transitions to NIBRS and address the needs of crime data stakeholders, BJS hosted a one-day workshop, *The Nation's Move to NIBRS: Formulating the Future of Crime Data in Policing*, on December 3, 2019. BJS engaged members of the law enforcement community to review current incident-based data collection practices and to discuss methods for improving data quality, utility, and analysis. Attendees represented 28 states and the District of Columbia and included local law enforcement personnel or staff, representatives from state UCR programs, and members of the research and academic

communities, as well as staff from the Department of Justice and the NCS-X Implementation and Technical Assistance Team.[5]

Workshop Description

In collaboration with BJS, the Police Executive Research Forum and RTI International, which are both members of the NCS-X Implementation and Technical Assistance Team, coordinated the workshop. The workshop was organized into four 90-minute interactive sessions, with two or three short presentations that facilitated discussion with and among attendees. The workshop brought together leaders from the policing, research, and crime data analysis fields to discuss the role of NIBRS in advancing data-driven policing, develop crime reduction strategies, improve public safety, and promote community trust. Session topics and overviews are described below.[6]

- *Session 1—Benefits of Incident-Based Reporting: Deeper Context for Crime Data* provided an overview of organizational-level benefits as well as the challenges agencies have encountered and what they have learned as a result of transitioning to IBR generally or NIBRS specifically.

- *Session 2—Police Performance and Community Expectations: Enhancing Relationships With Communities Using Incident-Based Data* detailed how law enforcement agencies can effectively communicate crime information to their communities, in terms of what is shared (more detailed data), how it is shared (use of new technology), and how it is presented or described.

- *Session 3—Practical Uses for Incident-Based Data: Strategic and Tactical Planning.* The transition to NIBRS represents a fundamental shift in crime reporting practices in a law enforcement agency, as meaningful crime analysis is entirely reliant on the quality and integrity of the data. Department staff reviews the internal dissemination and communication of the resulting analytical products at executive-level meetings such as CompStat.

- *Session 4—Using Incident-Based Data to Assess and Evaluate Strategies and Policies.* Law enforcement agencies regularly engage in self-assessments to evaluate the effects of new and existing policies and practices on various performance indicators. New fields available from IBR will likely expand a law enforcement agency's ability to conduct self-assessments. However, the transition may make self-assessment more challenging as agencies find themselves awash in data with limited training or experience in analysis.

This report summarizes the workshop discussions and presentations and provides examples of how agencies are leveraging incident-based crime data for strategic and operational benefits, including improving public safety and information-sharing with the community. The report also provides a series of considerations for BJS and the greater law enforcement community that could help support the successful national transition to IBR and accelerate the application of NIBRS data within policing.

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[5] A list of workshop participants can be found in Appendix A.
[6] The workshop agenda can be found in Appendix B.

LEVERAGING INCIDENT-BASED CRIME DATA FOR DATA-DRIVEN POLICING

Traditionally, law enforcement agencies have managed their crime incident data at the incident level for practical reasons. This means that there is a one-to-one ratio of criminal occurrences to crime incident reports in local law enforcement agency RMSs. The NIBRS reporting standard leverages the typical law enforcement agency practice of organizing and storing information at the incident level. The key innovation of NIBRS is restructuring much of the information that was obscured in the narrative into analyzable and reportable structured data fields.

Workshop participants discussed some of the impacts they experienced or expected to experience as the result of transitioning to IBR. For example, one frequently mentioned benefit of IBR is that it enables agencies and the public to have a better understanding of crime, including specifics on the type of criminal activity and the characteristics of the victims and offenders. Participants agreed that incident-based crime data are more detailed and accurate than current SRS measures and that having data available in structured and standardized fields expands opportunities for data to drive agency decisions on operational, tactical, and strategic matters. Participating agencies also highlighted some of the areas that must be navigated for law enforcement agencies' transitioning to NIBRS, including addressing long-standing expectations and behaviors regarding crime reporting responsibilities and the staffing impacts related to IBR. In addition, the topic of data quality was raised by workshop attendees as an area that should be examined more closely at the agency, state, and national levels. All of these topics represent opportunities for awareness and preparation for other agencies currently transitioning or planning to transition to NIBRS.

Streamlining Data Collection and Improving Internal Access to Data

Before NIBRS, many agencies had elaborate systems in place to manually clean their data, usually involving hours of time from crime analysts or records staff. Several agencies reported that the transition to NIBRS now requires patrol officers or other agency staff to complete data entry using automated edit checks. This fundamental shift in responsibility—from analysts and records clerks to patrol officers—has impacted how law enforcement agencies are allocating staff. For many of these agencies, crime analysts and records clerks have decreased their data cleaning or recoding job functions, freeing them to perform more substantive work. The complete and accurate crime data have generally allowed staff in analytic roles to respond quickly to requests made by command staff, political leaders, or community residents. For instance, the Colorado Springs Police Department (CO) mentioned that working with IBR data allows its staff to answer almost any question that is asked of law enforcement.

Agencies participating in the workshop that have robust RMSs, such as the Raleigh Police Department (NC), have created their own data dashboards that allow commanders

and supervisors to independently query an agency's RMS without having to rely on an analyst. Another agency gave the example of trying to determine and track how many citizens were shot across a series of months. Before IBR, agencies collected this information by assigning someone to reread every incident report related to robberies, aggravated assaults, and other potentially firearm-related crimes for contextual factors that would appear in the narrative. IBR allows this information to be immediately available to command staff and officers.

Multiple agencies also commented that agency staffing needs to be closely considered for agencies transitioning to NIBRS. For example, participants reported that the shift in expectations of line officers to input complete and accurate IBR data at the point of entry had an impact on their agencies, specifically by increasing staff time. The Tucson Police Department (AZ) reported an initial increase of approximately 30 minutes for officers to file a new incident report, which was echoed by several other agencies. A long-time NIBRS contributing agency, the Grand Rapids Police Department (MI), reported that it still needs to educate and train officers as new state and local laws introduce new crimes, crime types, and crosswalk connections to NIBRS offense categories. Another recently transitioned large agency (Houston Police Department [TX]) reported that it managed an overall increase in staff time to transition to and maintain IBR, both for frontline sworn personnel and for its records division, by providing additional overtime at the onset of transition. However, this change was not considered sustainable over the long term because of its cost. Multiple participants were hopeful that dictation software (combined with increased familiarity) might speed the data entry process, though there was no consensus on widespread testing of this solution.

Expectations of and Impacts on Data Quality

Having quality data in the form of accurate and reliable reporting is paramount to effective IBR. As noted by workshop participants, many officers never hear about the importance of data quality until the agency is ready to finalize its rollout for NIBRS. The expectation of quality data is not unique to NIBRS and should be introduced much earlier to officers, such as during training at the police academy. The academy is an ideal place for candidates to be shown the bigger picture that explains *why* reported crime data are important and how they are used. Agencies can reinforce the messages about why data are being collected and what details they expect officers to capture with accuracy and completeness at its point of entry.

When data quality is made a priority, everyone within an organization understands that they are accountable for the data they enter. Officers are told that they are responsible for the data they move up the chain for review, as any errors will be returned to them to fix. To encourage this accountability, some law enforcement agencies have established reporting systems to alert supervisors when officers make errors. Such alerts about data

entry errors must be made in a timely fashion so that supervisors can address repeated problems. The more quickly those errors are addressed the better, to avoid ongoing issues. Continuous errors without quick remediation can lead to frustration among officers and result in inaccurate crime incident information.

Workshop participants described substantial variation in how agencies assess the quality of NIBRS entries. Most agencies reported transitioning data entry responsibilities from records unit personnel to patrol officers, but a number of agencies also indicated they had not yet established a satisfactory method of assessing their data quality. Just as the transition to NIBRS increased the time needed for line officers to enter crime reports, it also increased the time needed for supervisors to review line officers' work. Although NIBRS has automated data quality checks, workshop participants expressed concern that these checks were insufficient to produce accurate data from the point of initial entry.

Whereas many agencies report a decrease in their need to clean and recode data, the Arlington Police Department (TX) reported a dramatic increase in demand for crime data-related analyses from commanders and officers after its NIBRS transition. After the transition, crime analysts responded not only to typical internal requests but also to requests for additional analysis about incident details and crime types that, before IBR, would have been too resource-heavy to produce. The increased interest in understanding crime data is a positive outcome, but the sudden, unexpected impact on crime analysts' time was considerable. An effective solution would be to identify a way (e.g., a dashboard) to streamline the process so that some agency personnel can access the data directly to conduct their own queries.

Utilizing IBR for Better and More Reliable Analysis

Multiple workshop participants indicated that clean and timely incident-based data provide a foundation for advanced tactical and strategic crime analysis. Furthermore, the improved automation, report-building, and contextual detail that are part of IBR increase the amount of time that departments can devote to analysis. Even simple weekly reports are more efficient to produce with IBR than with conventional processes. For example, before transitioning to NIBRS, multiple agencies reported that their analysts maintained manually updated spreadsheets across UCR categories for weekly reports or spent considerable time cleaning and recoding data, activities that are labor-intensive. After the transition to NIBRS, crime analysts run automated reports using refined IBR categories, rendering the manual spreadsheets unnecessary and saving considerable time and resources for staff.

IBR can also provide improved linkages with an agency's data. Some agencies track calls, incidents, and arrests in different databases. The process of transitioning to NIBRS may mean agencies integrate multiple, disparate databases across their departments. If the required NIBRS data elements are collected across an agency's RMS, dispatch system, and

arrest records systems, then pulling from each of these separate systems to report NIBRS data can force cross-database communication. These links may not only improve access to data elements for a NIBRS data submission but also result in efficiencies for the agency. For example, the Durham Police Department (NC) added additional quality checks when it transitioned to NIBRS and created rules to allow for detailed tracking of multi-victim aggravated assaults, stolen guns, and gang activity in different locations. Before the transition to NIBRS, these connections had been challenging to track across the different databases.

However, multiple law enforcement agencies also acknowledged some uncertainty about how best to fully capitalize on the new opportunities and improved efficiency afforded by IBR. Agencies discussed how they seek guidance and idea-sharing from one another, but they struggle with general uncertainty regarding how the data could or should be used. Few agencies have templates or examples for how to capitalize on the more detailed and nuanced data. Lacking law enforcement leadership and influential stakeholders advocating for this information, law enforcement personnel have a difficult time envisioning how to use or present the data in new ways. In the absence of structured guidance or innovative ideas on data presentation, agencies tend to default to familiar practices. For example, the Houston Police Department noted that, although it publishes detailed NIBRS data on its public-facing website, command staff can revert to using familiar SRS categories to discuss its performance internally.

Informing Tactical and Strategic Decision-Making

NIBRS provides timely and detailed data, which increases capacity for tactical and strategic analysis. However, agencies expressed a need for guidance on how to fully benefit from data analysis. Some agencies have developed dashboards that use near real-time incident data, which provide access to current, accurate data that allow patrol officers to be more situationally aware in the field. The Coweta County Sheriff's Office (GA) recently transitioned to NIBRS and reported success in using the additional detail in its field operations. On the way to a call, officers look for various indicators about what to expect at a location. Address histories create linkages that provide crucial information, especially for repeat calls such as for domestic violence incidents, when knowledge of prior activity and police response can immediately inform decision-making. Some agencies (such as the Rock Hill Police Department [SC] and the Colorado Springs Police Department) allow patrol officers to access maps to view recent events, such as residential and commercial burglaries. Dashboards with greater immediate access to data continue to benefit tactical applications as new concerns emerge. Attendees also reported that the dashboards and findings are often shared with neighboring law enforcement agencies as part of broader violence reduction strategies.

Participants recognize that IBR data allow for more accurate trend and pattern analyses. These improvements can help with strategic analysis as well, including allocating resources and assessing agency performance. Specifically, the Tukwila Police Department (WA) among other agencies, mentioned using threshold analysis[7] as an analytic approach to help police executives and policymakers understand variability in crime data they were presenting, both internally and externally to city or county management. Threshold analysis, such as the example adapted from the Durham Police Department in Exhibit 1, can help law enforcement leadership determine how to respond to differences in crime numbers and avoid overreacting to minor or seasonal fluctuations in crime by focusing attention on specific crime types that correspond with unusual trends.

Exhibit 1. Presenting Results of Threshold Analysis (Example from Durham Police Department [NC] Weekly Crime Summary)

Crime by District	Current 7 days	Previous 7 days	% Change	Current 28 days	Previous 28 days	% Change	Mean Avg*
Violent Crime Subtotal	*5*	*15*	*-66.67%*	*38*	*27*	*40.74%*	*25*
Burglary-B&E	3	6	-50.00%	29	27	7.41%	28
Larceny-Theft (except MV)	48	39	23.08%	185	173	6.94%	158
Larceny-Shoplifting	19	14	35.71%	80	67	19.40%	
Larceny-All Other	14	13	7.69%	49	31	58.06%	
Larceny-Motor Vehicle	15	12	25.00%	56	75	-25.33%	50
Motor Vehicle Theft	2	2	0.0%	14	12	16.67%	10
Property Crime Subtotal	*53*	*47*	*12.77%*	*228*	*212*	*7.55%*	*196*
Crime Index (Total Part 1; no arson or simple assault)	*58*	*62*	*-6.45%*	*266*	*239*	*11.30%*	

*Blue highlighting indicates 28-day total is 2 or more standard deviations below the mean average; Green indicates the total is 1 standard deviation below; Yellow indicates the total is one standard deviation above; Red indicates total is 2 standard deviations above the mean average; Grey indicates the total is within normal ranges.

Evaluating Resource Allocation

One police department (Rock Hill Police Department) said that it is using its incident data to explore how internal resources are allocated for domestic violence cases. Before NIBRS, a supervisor would manually review case files for all assaults to identify which cases were domestic and collect key information about resources expended on each one. Not only was this process time-intensive, but it also relied on a detailed report narrative. The entire process was streamlined under NIBRS, as the desired incident data were already immediately available in distinct fields in the Rock Hill Police Department's RMS. NIBRS requires that for every police-recorded assault, the agency must complete fields on the relationship between the victim and the offender, the location of the incident (e.g., residence, commercial establishment), the time of day of the incident, whether the victim was injured as a result of the incident (and injury type), whether a weapon was present (and weapon type), and whether the incident resulted in an arrest or clearance (and arrest

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[7] Threshold analysis is based on a statistical technique leveraging expected variation around a mean score. The result is translated into a statistics-free report to help law enforcement agencies identify and prioritize decision-making on the basis of statistically significant changes rather than variation within expected ranges.

or clearance type). In sum, the structured incident data were much easier to reference and analyze for the agency's assessment of domestic violence cases.

The gains in efficiency from IBR are considerable. The Arlington Police Department discussed an internal evaluation of the department's transition to NIBRS that showed that the detailed larceny-theft categories available in NIBRS resulted in improved problem-oriented policing practices. The department now allocates resources such as surveillance equipment and officer patrols based on geographical changes in larceny-theft subcategory offenses instead of in the broader offense category. In general, most agency representatives agreed that the detailed offense information collected in NIBRS provides for effective and efficient crime responses.

ASSESSING AND EVALUATING AGENCY STRATEGY AND POLICIES

Assessing Agency Performance

Agency participants generally agreed that the use and availability of NIBRS data represented an opportunity to improve the way data are used to measure agency outcomes and performance. Agencies continue to use informal crime comparisons based on traditional SRS crime measures to evaluate relative agency performance, despite their limitations. Agencies noted violent crime (especially homicide and rape, as in Exhibit 2) and clearance rates (both clearance by arrest and clearance by exceptional means) as common evaluation metrics for comparing jurisdictions, despite being poor proxies for overall crime, quality of life, and police performance. However, none of the participating agencies had created a revised assessment method. Agencies are looking for more meaningful ways to compare themselves against other agencies.

Exhibit 2. Example Cross-Agency Comparisons Using Traditional Summary Reporting System Measures (from Fort Worth [TX] Police Department 2019 3rd Quarter Crime Report)

Major Cities Comparison

July - September data was not available at the time this report was published. Data through September will be included in the Fourth Quarter Report. The following graphs are a comparison (January - June) of Fort Worth (895,008) to bench-mark cities with either a similar population or proximity. Comparable cities with their population noted in parentheses include: Dallas, TX (1,345,047), Austin, TX (964,254), El Paso, TX (682,669), Charlotte-Mecklenburg, NC (872,498), Columbus, OH (892,533), Indianapolis, IN (867,125), Jacksonville, FL (903,889), and San Francisco, CA (883,305). The population data source is the U.S. Census Bureau. Crime offense comparable data source is the Major Cities Chiefs Association. The offenses compared include homicide, rape (NIBRS offenses 11A and 11B), robbery, and aggravated assault.
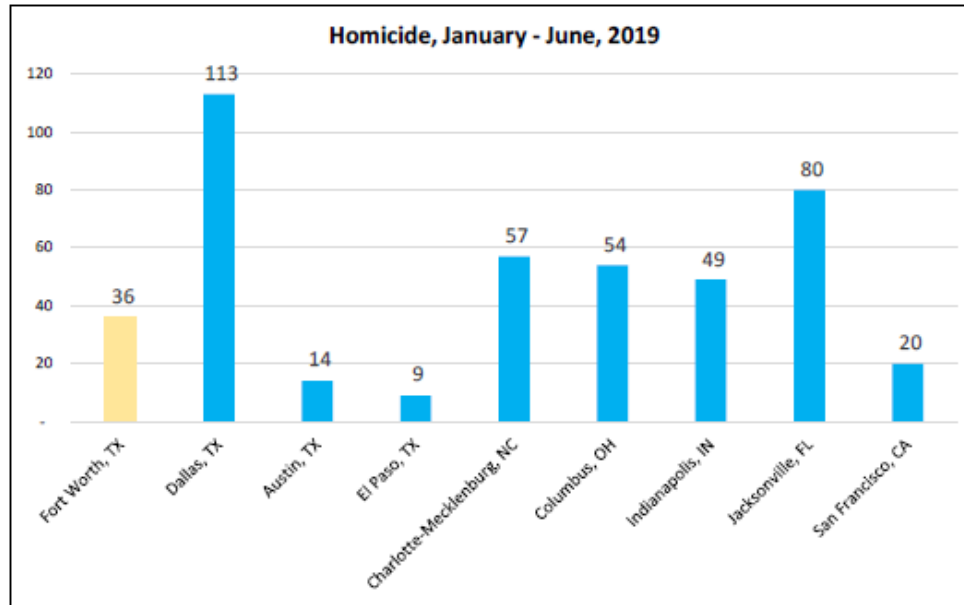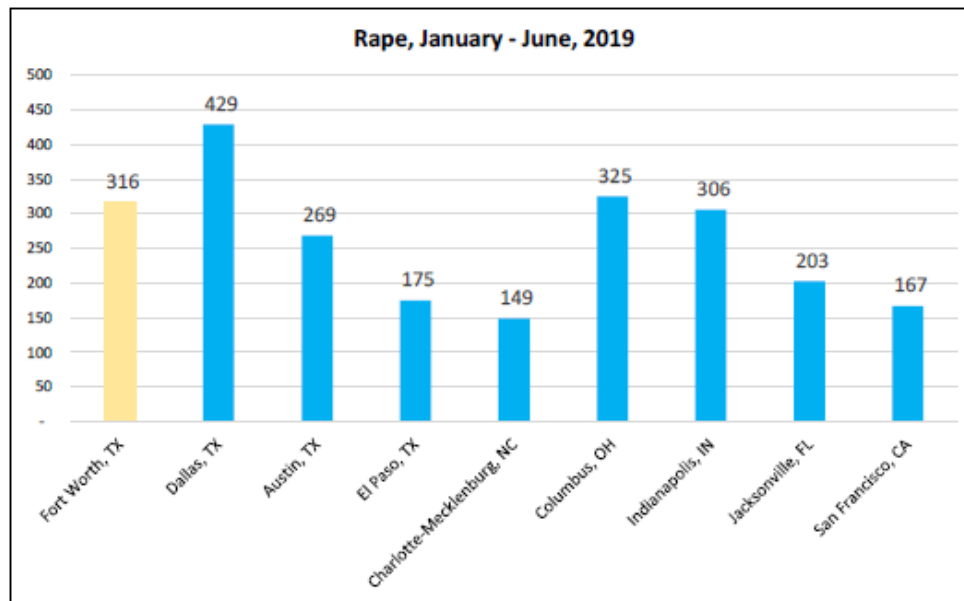
Figure 26 - Homicide, Major Cities Comparison

Figure 27 - Rape, Major Cities Comparison

Workshop participants discussed the need for online tools that would help agencies analyze NIBRS data and make meaningful and relevant comparisons across agencies, counties, and states. One proposed solution to assist with detailed comparative analysis across jurisdictions is the NIBRS Data Dashboard. BJS and the NCS-X Implementation and Technical Assistance Team are developing this dashboard to provide a user-friendly, dynamic portal for NIBRS data that displays findings in clear and understandable charts and graphs. When this dashboard becomes available, it may make it easier for agencies to compare themselves with one another.

Workshop participants expressed interest in using IBR crime data as one aspect of *community outcomes* rather than simply crime outputs (e.g., counts of violent crime). Many law enforcement agencies conveyed a desire to assess community safety and wellness.[8] Other indicators that they would like to incorporate into community outcomes include how incidents are perceived by the community (which may be more important than the actual number of incidents that occur) and what degree of collaboration exists between community resources. The Denver Police Department (CO) combined its incident crime data along with road usage, traffic accident, and population data to design safer road intersections. In other agencies, multiple civil and social service agencies have been convened to brainstorm strategies to reduce violence and improve community safety. Crime reduction and prevention efforts in St. Louis (MO) included physical changes to the environment, such as removing or trimming trees in high-crime areas, in addition to a typical police response of increased patrols.

Evaluating Department Initiatives

Law enforcement executives want to know which processes or policies that they implement or participate in are successful, which ones have pieces that are promising, and which ones should be abandoned. Agencies should quickly identify and correct programs that hamper departmental goals (e.g., create unintended consequences, waste scarce resources, reduce officer morale, erode community trust). Many agencies reported that they had been involved in such evaluations. For example, the Durham Police Department collaborated with local researchers to evaluate a diversion program for juveniles, for which it said its IBR data were critical to the evaluation. The Burlington Police Department (VT) participated in a study of traffic accidents that found that enforcement was not making a significant difference in preventing automobile crashes. As a result of the research findings, the department changed its enforcement efforts, even though those changes were not popular. Although IBR data were not specifically cited as being key in the Burlington Police

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[8] Complementary initiatives—such as CompStat 360, sponsored by the National Police Foundation and the Vera Institute of Justice—seek to develop a more comprehensive snapshot of community health and welfare than simple homicide or violent crime counts. The CompStat 360 model augments crime data with other measures of organizational effectiveness (e.g., response times, use of force), and it also empowers communities to brainstorm ideas to help solve community problems. For example, the Fayetteville Police Department (NC) suggested that a good measure would be the willingness of residents to move into or continue to reside in a jurisdiction.

Department's example, these are the types of internal policies that agencies foresee being able to assess more readily with NIBRS data.

Participants predominantly shared experiences in which IBR data would have benefited evaluations of agency initiatives, had they been available. However, gathering such data at the time was resource-prohibitive. Examples included assessing the value of a gun crime intelligence center and evaluating the benefits and costs of body-worn cameras (Los Angeles Police Department [CA]), as well as assessing response in domestic violence incidents (Philadelphia Police Department [PA]). One promising area for IBR use would be assessing the effect of marijuana legalization in early-adopter states (e.g., Washington and Colorado). However, none of the agencies present from those states conducted policy analysis on this topic aside from its effect on local crime. Regardless, agencies expect the availability of accurate, detailed IBR data through NIBRS will make the process of evaluating internal initiatives easier and more efficient than it is currently.

IMPROVING TRANSPARENCY WITH THE PUBLIC THROUGH COMPREHENSIVE CRIME DATA

In many jurisdictions, improved detail from NIBRS has led to a wide range of crime data available to the public. The challenge has been to effectively present the crime data in a way that is meaningful: balancing transparency and accuracy without being overwhelming and without potentially jeopardizing case investigations. Indeed, IBR data have become the basis on which many agencies hold weekly public meetings about crime or release regular reports on crime data. Law enforcement agencies use the structured fields within the IBR format to create reports summarizing overall crime as well as targeted reports on particular crimes of interest. For example, the Rock Hill Police Department created a report on commercial burglaries that provided details on location type and stolen property in addition to typical crime numbers. These additions gave the public a better understanding of when and where crimes were occurring and what items were being targeted.

Communicating With the Media About NIBRS

Members of the media can have a limited understanding of crime data and crime trends, including how they should be presented and discussed. Generalist reporters who do not have experience working on crime-specific topics may innocently draw inaccurate conclusions. To assist the media in understanding crime data, agencies have benefited from educating the media about the transition to NIBRS from SRS and explaining differences in crime numbers between the two systems. Agencies reported that the greatest benefit was associated with "getting out in front of the issue" so that the agency controls the narrative. The Fairfax County Police Department (VA) described having its chief show members of the local media its NIBRS and SRS crime data in a side-by-side comparison. The presentation kicked off questions and answers about why the crime statistics were changing and led to a productive, instructional interaction. Another positive (though not necessarily intended)

effect of taking the time to educate the local media is that the interaction alone can build relationships and trust.

Connecting Directly With the Public

Law enforcement agencies are making efforts to share data with the public in meaningful ways, both in terms of what information is shared and how it is conveyed. For several years after its NIBRS transition, one agency reported not only publishing its IBR data on its website but also providing comparisons to its previous SRS data with explanations. Law enforcement agencies have received positive feedback when they have broken down crime data by city council district or neighborhood, compared crime in their jurisdiction with that in neighboring jurisdictions (as the Fort Worth Police Department [TX] reported doing), and used modern infographics so that the results are easily digestible. The Fairfax County Police Department has used infographics to communicate that only a small number of its officers' encounters with the public involved use of force (see Exhibit 3). Workshop participants suggested external communications should use simple explanations and include tips for how to interpret NIBRS data, as well as a disclaimer indicating data may be updated after the publication date.

Exhibit 3. Use of an Infographic to Convey Information about Use of Force Incidents (from Fairfax County Police Department [VA] Internal Affairs Bureau 2018 Annual Statistical Report)

Use of Force Incidents
per 1,000
Community Member Contacts: *1*
(0.10%)
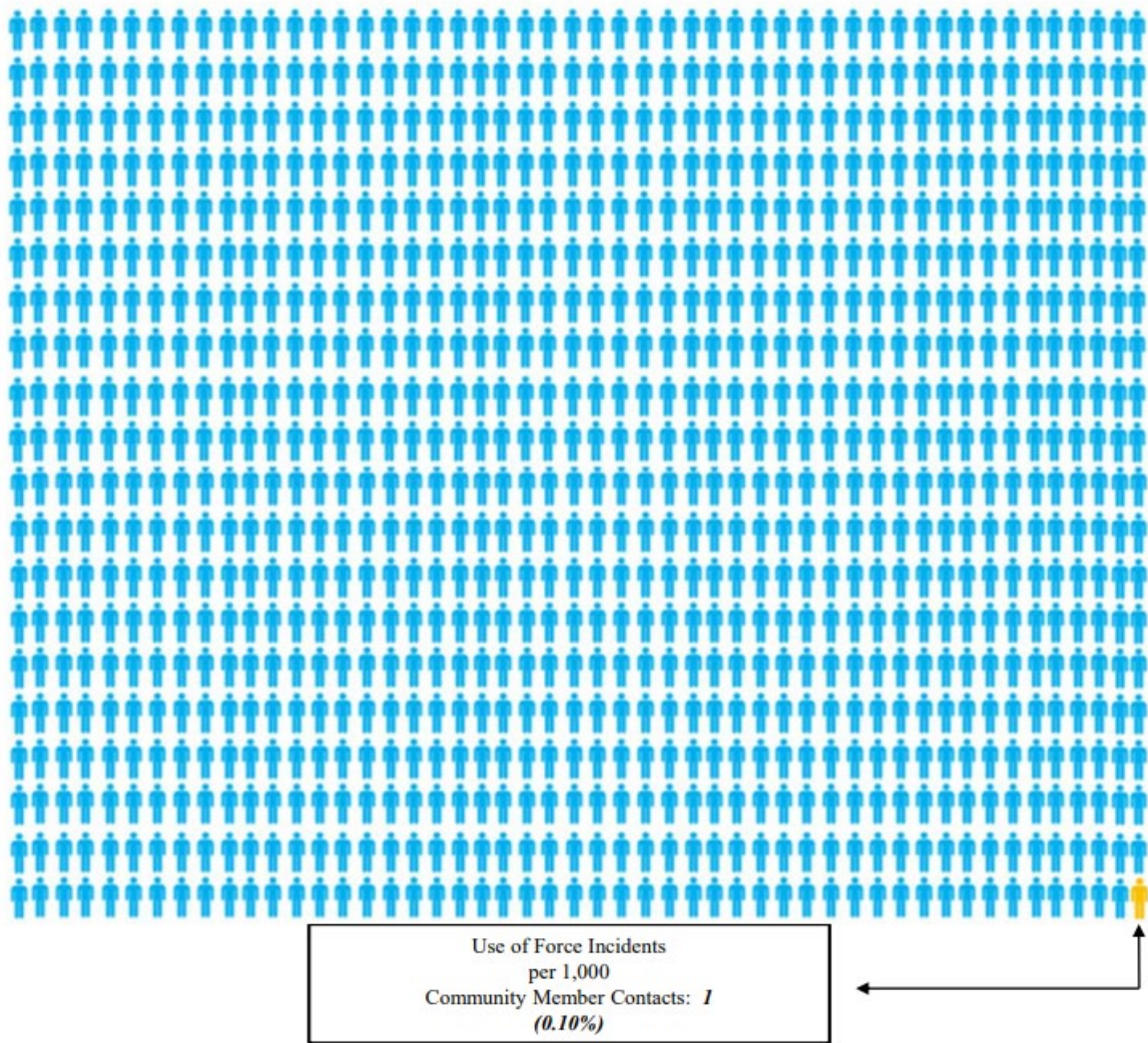
Community members include individuals that live, work, shop, and travel in Fairfax County and is not based solely on residency.

Dissemination Channels

Social media has become commonplace for sharing information with the public. Agencies often use Facebook (in English and Spanish), Instagram, and Twitter to post information (e.g., reports or events) and specific updates on critical incidents. The Denver Police Department mentioned that they apply each platform based on its suitability to particular uses: Facebook works well for announcing events or posting reports, Twitter for real-time updates and alerts, and Instagram for reporting an event after the fact. In addition to dissemination, some agencies (e.g., Hillsborough County Sheriff's Office [FL]) are exploring the use of social media to aid in suspect identification and direct citizen reporting of incidents.

Connecting With Other Jurisdictions and the Research Community

Law enforcement agencies want to maintain strong communication and share information with other agencies, with their state programs, and with the research and academic community. Agencies see the value of IBR-driven evaluations, and many see a benefit to being able to compare and benchmark across jurisdictions. If geographic location is added to IBR, law enforcement agencies are interested in comparing specific neighborhoods to those in different jurisdictions. Participants hypothesized that individual neighborhoods may be better comparisons for one another than the entirety of some jurisdictions.

Some agencies stressed the importance of getting their states to fully embrace IBR and collaboratively brainstorm ideas of how best to present IBR data. Some states collect both NIBRS and SRS data, but only SRS data are reported publicly. Meanwhile, some local jurisdictions in those states have switched to NIBRS reporting and report it publicly, which can confuse the public. Better collaboration with the state programs could also determine better ways to show IBR data. In addition, current standards in NIBRS will need adaptation in the future, such as including better information on computer-related crimes and possibly adding geographic locations. States and agencies that work together on these adaptations can create buy-in and drive progress.

Law enforcement agencies recognize the benefit of collaborating with researchers, as effective policy or program evaluations require skills that may not be common among officers in most agencies. Encouraging partnerships would improve the quality of work while also producing strong evaluations for the field. Some law enforcement agencies invite many partnerships: the Philadelphia Police Department reported hosting nearly a dozen randomized controlled trials being conducted concurrently in the department. Law enforcement agencies have tried to ensure that the findings from research studies are disseminated to officers and the public in an easily digestible format, such as one- or two-page summaries. Participants also expressed the need for research that applies to agencies of varying sizes, not just the largest law enforcement agencies. Small agencies (which make

up most of the law enforcement agencies in the United States) find it difficult to apply findings from evaluation research conducted in very large, resource-heavy agencies, as law enforcement agencies often face different challenges depending partly on the size of the agency.

PROMOTING THE EXPANSION OF INCIDENT-BASED DATA COLLECTION AND SUBMISSION AMONG STATE AND LOCAL AGENCIES

NIBRS Workshop participants identified the following as items that could promote and accelerate the widespread use of NIBRS data and help guide the law enforcement community in the national transition.

NIBRS Transition

- **Best practices in transitioning.** Highlighting the successes of transitioned agencies will illustrate how agencies have managed this data effort and provide documentation of the process from which other agencies can learn. Transition success stories that describe methods for optimizing savings in time and effort during the transition—less time to do the same work, increased efficiency from automation—and include lessons learned will likely result in agencies producing higher quality information. Moving to IBR has been a net win for law enforcement agencies looking to plan strategically and tactically, allowing for better analyses in less time and with superior quality data relative to SRS reporting. BJS has previously showcased the benefits to agencies through several case studies.[9]

- **Cost-benefit analyses of the NIBRS transition.** Cost-benefit analyses can underscore both the agency-level and societal benefits relative to the cost of making the NIBRS transition. These analyses should acknowledge the initial short-term challenges associated with the transition but also demonstrate long-term values realized. The challenges to transitioning are real and can be substantial, yet agencies have been able to overcome them with effective planning to ensure they have adequate resources in place. Cost-benefit analyses could also supplement existing BJS NCS-X products, such as the *Law Enforcement Agency IBR Playbook* and the NCS-X video series, to emphasize how to maximize efficiencies and minimize costs.[10]

- **Small, rural, and tribal agency data needs and challenges.** Exploring ways to address the data needs and challenges among small, rural, and/or tribal agencies remains a necessity. These agencies contend with a much different volume of crime, distribution of crime types, and resource availability. Differences in organization composition and workload dictate that templates for agencies with fewer officers and less crime will look different from those created by or for larger law enforcement agencies. Representatives from smaller agencies expressed keen interest in gaining access to statistical tools and product examples to assist

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[9] BJS has developed documents and other products describing the NIBRS transition experience of local agencies: Seattle Police Department (WA), Montgomery County Police Department (MD), Fort Worth Police Department (TX), and Rockford Police Department (IL).
[10] The *Law Enforcement Agency IBR Playbook* is available at: https://www.theiacp.org/sites/default/files/all/k-m/Local%20Agency%20Playbook_FINAL.pdf, and the NCS-X NIBRS video playlist can be found at: https://www.youtube.com/playlist?list=PLx69PAkw8NuKXmXwHvuI1tWcC7YC5-7Ge.

smaller law enforcement jurisdictions in data collection, analysis, interpretation, and reporting.

Data Analysis

- **Analysis examples and templates.** Agencies are actively seeking guidance on new ways to analyze, interpret, and maximize the use of their detailed incident data. Law enforcement agencies expressed a desire for templates that serve as examples of how IBR data can be organized and used to inform crime topics. Templates may focus on single issues—providing a deep dive into a specific topic—or they may be more general in their interpretation of data. As part of the NCS-X initiative, BJS has produced a number of examples of how NIBRS data can be analyzed.[11] Agencies expressed the need for NIBRS analysis templates that would provide a consistent approach for analyzing data across states and jurisdictions.

- **Effective analysis tools.** NIBRS data can be difficult to download and analyze, especially for laypersons without access to or expertise in database management tools or statistical software. The availability of easy-to-use tools for analysis and dissemination is essential for promoting the use of the data. When officers create and use an analytical product from data that they collected, a reinforcing feedback loop is established. A number of RMS solution providers and NIBRS data repository vendors have tools available through their systems to support data analysis. This may include a data dashboard that a local agency can use to understand internal crime data or that a crime analyst can leverage to develop meaningful analyses and products for agency command staff. Promoting the use of these tools would support the efforts of local agencies to leverage their incident-based data for tactical and operational purposes.

Key Indicators and Data Use

- **Agency performance measures.** Understanding how to leverage NIBRS data to measure and communicate agency performance promotes greater stakeholder engagement and the ability to more comprehensively assess officer workload. Most agencies recognize that no single measure or single crime statistic can accurately represent agency performance. Consensus is growing about the need for better measures that combine community statistics and resources, but agencies have not identified many bona fide solutions. Law enforcement workshop participants suggested the need to identify a wide potential range of additional measures that could be combined to illuminate a more accurate snapshot of community safety and well-being.

- **Data quality considerations and benefits.** Agencies should be encouraged to train their officers early in the NIBRS transition process. Early training about the NIBRS data collection and coding requirements can afford agencies the opportunity to emphasize the importance of recording complete and accurate data. In particular, agencies should underscore why data quality is important for tactical and operational decision-making, and why the officers' role in collecting the incident information is so critical to ensuring high-quality crime information. BJS has conducted agency-level evaluations of NIBRS data quality, identifying patterns in the data that highlight where crime incident data collection efforts can be improved, such as through modifications to the data collection interface used by officers or through officer training. Law enforcement agencies should examine

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[11] A recent example is BJS's support of the Joint Statistical Analysis Program for analysis of NIBRS data conducted by state statistical analysis centers and state UCR programs.

NIBRS data quality resources from the BJS and other sources in order to implement effective internal practices that support collecting complete and accurate information for every crime incident, to the extent practicable.

Partnerships

- **Police-researcher partnerships.** These relationships can be mutually beneficial, though often challenging at first. Agencies voiced interest in having tools that facilitate effective partnerships, such as checklists for what is needed to study specific problems or answer specific questions, templates for practitioner-friendly outputs (e.g., short briefs on research findings), and guidance on standardizing input data to foster comparisons within and between jurisdictions.

- **State-local partnerships.** Agencies were encouraged to coordinate and work with state-level organizations, including state UCR programs, statistical analysis centers, and other organizations that promote analysis of crime data. Those types of state-local partnerships have the potential to advance NIBRS adoption and showcase how incident-based data can be leveraged at the local and state levels to improve the collective understanding of crime and public safety.

- **IBR community of practice.** Creating a community of practice, consisting of NIBRS users from across the U.S., would be a valuable information-sharing opportunity. Such a group, consisting of both practitioners and researchers, would be capable of developing ideas to better leverage and present results from incident-based data, generating ideas for analytic templates, and suggesting synergies between NIBRS and other complementary datasets.

Sharing and Dissemination

- **Open communication with media.** Showcasing examples of effective media communication about the NIBRS transition can promote greater transparency about crime data. Knowing the benefits of NIBRS, anticipating questions from the public, and proactively communicating information about the NIBRS transition will help agencies successfully describe changes in crime reporting practices. Proactive and open dialogue by agencies may be a catalyst to improve agencies' interaction with the media and may have the serendipitous effect of promoting public trust in policing.

BJS has directed a number of efforts to support state and local law enforcement in their transition to NIBRS, including the development and dissemination of a variety of technical, didactic, and analytic resources.[12] Those resources are available to law enforcement, the media, and the general public in support of the NIBRS transition and to showcase the use of NIBRS data for better understanding crime and public safety in the community.

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[12] For examples of resources produced under BJS direction and funding, see NCS-X website (www.theiacp.org/ncsx) and BJS website (https://www.bjs.gov/content/ncsx.cfm).

PROACTIVE WAYS THAT LAW ENFORCEMENT AGENCIES CAN SUPPORT THE TRANSITION TO NIBRS AND PROMOTE INCIDENT-BASED CRIME DATA COLLECTION

- **Emphasize data quality.** Emphasize the multiple uses of crime incident data and the value of accurate and complete data to patrol officers and supervisory staff. Make sure they understand their responsibility—that having high-quality data, not only for investigations and prosecutions, but also for the analysis and reporting, begins with their meticulous initial data entry.

- **Use dashboards to create efficiency.** Consider developing an intuitive, user-friendly data dashboard once the transition to NIBRS is complete. Data dashboards, which can be customized, allow supervisory or command staff to query the data independently without sustained reliance on another staff member.

- **Communicate.** Consider your agency's communication of crime data to the public. Visual data displays (especially infographics) have greater meaning than percentages or traditional charts and graphs in conveying messages.

- **Optimize use of social media.** Consider improving social media engagement by targeting different platforms for particular purposes. Consider announcements in languages other than English (especially Spanish), depending on the needs and expectations of citizens.

- **Value collaboration.** Be open to opportunities to partner with policing researchers and academics. Their goals are to better understand what practices are effective and how to make these more effective for practitioners, which helps to make policing more streamlined, efficient, and effective for everyone.

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Appendix A. List of NIBRS Workshop Participants

Name	Affiliation
Brian Aagaard	RTI International
Brian Acken	RTI International
Rachael Arietti	Police Executive Research Forum
Cynthia Barnett-Ryan	Federal Bureau of Investigation
Jeremy Barnum	Police Executive Research Forum
Mitch Beemer	Association of State UCR Programs
Jason Bruder	Charleston Police Department (SC)
Maria Cardiellos	IJIS Institute
Trina Cook	Tukwila Police Department (WA)
Alexia Cooper	Bureau of Justice Statistics
Eli Cory	Fairfax County Police Department (VA)
Jacob Cramer	Tucson Police Department (AZ)
Ryan Daugirda	International Association of Chiefs of Police
Brandon Del Pozo	Burlington Police Department (VT)
Eric Dlugolenski	West Haven Police Department (CT)
Melony Ebel	Fort Worth Police Department (TX)
Jordan Fankhauser	San Diego Police Department (CA)
Erin Freidline	Riley County Police Department (KS)
Andrea Gardner	Bureau of Justice Statistics
Sean Goodison	Police Executive Research Forum
Liz Groff	Temple University
Chris Haley	San Diego Police Department (CA)
Shelley Hyland	Bureau of Justice Statistics (former)
Jeremiah Johnson	Darien Police Department (CT)
Nola Joyce	Philadelphia Police Department (PA) (retired)
Jan Kavanaugh	New Hanover Sheriff's Office (NC)
Karen Lissy	RTI International (former)
Matthew Lunn	Denver Police Department (CO)
Ron MacKay	Austin Police Department (TX)
Edward Maguire	Arizona State University
Dave McClure	Police Executive Research Forum
Maureen McGough	National Police Foundation
Molly Miles	Colorado Springs Police Department (CO)

Name	Affiliation
Renee Mitchell	Sacramento Police Department (CA)
David Naoroz	Richmond Police Department (VA)
Rebecca Neusteter	Vera Institute of Justice
Justin Nix	University of Nebraska - Omaha
James Nolette	Fayetteville Police Department (NC)
Julie Parker	International Association of Chiefs of Police
Tanea Parmenter	Association of State UCR Programs
Chuck Penny	Raleigh Police Department (NC)
Mike Planty	RTI International
Diana Poor	Houston Police Department (TX)
Jason Potts	Vallejo Police Department (CA)
Carol Riddle	Arlington Police Department (TX)
Dave Roberts	SEARCH
Joe Ryan	Auburn Police Department (WA)
Sherri Schaefer	St Louis Metropolitan Police Department (MO)
Jason Schiess	Durham Police Department (NC)
David Schnurstein	Grand Rapids Police Department (MI)
Kevin Scott	Bureau of Justice Statistics
Tom Scott	RTI International
Erica Smith	Bureau of Justice Statistics
Kim Smith	Coweta Sheriff's Office (GA)
Caroline Stevens	Automated Regional Justice Information System
Daniel Stewart	Oklahoma City Police Department (OK)
Kevin Strom	RTI International
Melanie Swartz	Coweta Sheriff's Office (GA)
Edward Tjaden	York Police Department (NE)
Rachel Tolber	Redlands Police Department (CA)
Craig Uchida	Justice & Security Strategies, Inc.
Charles Wellford	University of Maryland College Park
Chase Wetherington	Hillsborough Sheriff's Office (FL)
Chuck Wexler	Police Executive Research Forum
Damien Williams	Rock Hill Police Department (SC)
James Williams	Metropolitan Nashville Police Department (TN)

Appendix B. NIBRS Workshop Agenda

The Nation's Move to NIBRS: Formulating the Future of Crime Data in Policing
December 3, 2019 | 8:00 AM – 4:30 PM

Office of Justice Programs – Grand Ballroom
810 Seventh Street, NW
Washington, DC 20531

AGENDA

7:30am   Participant arrival (allows for time to clear OJP security)

8:00–8:30   *Welcome & Introductions*
              Speakers: Chuck Wexler, PERF
              Erica Smith, BJS
              Kevin Strom, RTI

8:30–10:00   *Session 1. Benefits of Incident-Based Reporting: Deeper Context for Crime Data*
              Facilitators: Carol Riddle, Deputy Chief, Arlington (TX) PD
              Kevin Strom, RTI

10:00–10:15   BREAK

10:15–11:30   *Session 2. Police Performance and Community Expectations: Enhancing Relationships with Communities Using Incident-Based Data*
              Facilitators: Julie Parker, Senior Media Advisor, IACP
              Karen Lissy, RTI

11:30–1pm   LUNCH *(on your own)*

1:00–2:30   *Session 3. Practical Uses for Incident-Based Data: Strategic and Tactical Planning*
              Facilitator: Brian Aagaard, RTI

2:30–2:45   BREAK

2:45–4:00   *Session 4. Using Incident-Based Data to Assess and Evaluate Strategies and Policies*
              Facilitators: Nola Joyce, Deputy Commissioner (Ret), Philadelphia PD
              Tom Scott, RTI

4:00–4:30   *Closing and Next Steps*
              Speaker: Kevin Strom, RTI

4:30   ADJOURN