

NIBRS

Transition Case Study



Montgomery County
Police Department
Gaithersburg, Maryland



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Introduction

The Bureau of Justice Statistics and the Federal Bureau of Investigation (FBI) have partnered on the National Crime Statistics Exchange (NCS-X) Initiative, an effort to generate nationally representative statistics using data submitted to the FBI's National Incident-Based Reporting System (NIBRS). To reach that goal, NCS-X staff are working closely with a scientifically selected sample of 400 law enforcement agencies, including the nation's largest departments, to transition them to reporting detailed, incident-based crime data to NIBRS. These agencies will join the more than 6,835 agencies currently reporting NIBRS data.¹ The NCS-X initiative represents a major step toward the FBI's goal of transitioning all U.S. law enforcement agencies to NIBRS by January 2021.

NCS-X provides technical support to the sample of 400 state and local law enforcement agencies as they move to incident-based reporting. As part of that support, project staff are developing case studies of local and state agencies that describe their transition to NIBRS. These case studies are intended to highlight the experience of agencies in various stages of transition: showcase the factors that motivated those agencies to transition to NIBRS reporting, detail the obstacles those agencies faced and how they were addressed, and emphasize the benefits those agencies achieved from the NIBRS transition. As the NCS-X Team publishes new case studies, they will be posted to the main NCS-X Web site at www.iacp.org/ncsx.

Overview of the Montgomery County (Maryland) Police Department



Fast Facts: Montgomery County, MD

- 507 square miles
- >1 million population served
- 1,421 sworn officers
- Police departments: Rockville City, Gaithersburg City, Takoma Park, Montgomery County
- 576,000 emergency calls with 275,000 dispatched events (2015)

This case study highlights the experience of the Montgomery County (Maryland) Police Department (MCPD). Located north of Washington, DC, Montgomery County is the largest county in Maryland and has more than 1 million residents. MCPD and four municipal agencies are served by a single 911 emergency communications dispatch center and one Information Management and Technology Division (IMTD), both managed within MCPD. The IMTD operates with the assistance of the Montgomery County Department of Technology Services, which supplies a unified records management system (RMS) and computer-aided dispatch system for all officers regardless of their assignment. The IMTD also supports a secure mobile infrastructure for field entry from officers assigned mobile data terminals. MCPD is the custodian of all RMS reports and is responsible for filing a report each month on behalf of the other police agencies in the county (except for one county agency that reports its own Uniform Crime Reporting [UCR] data). In 2015, MCPD reported more than half

a million police emergency calls, resulting in more than a quarter million dispatched events and over 52,000 separate Part 1 and Part 2 investigative reports. Until 2012, MCPD manually created the agency's monthly submission to the Summary Reporting System of the FBI's UCR Program. Records personnel

¹ The number of NIBRS reporters as of May 12, 2017, according to the FBI's Criminal Justice Information Services Division.

reviewed and abstracted the relevant information from paper copies of crime incident reports. MCPD used that information to complete paper-based UCR summary reporting forms and mailed those hard copies to the Maryland state UCR program, housed at the Maryland State Police (MSP). At the MSP, UCR Program staff processed those files for submission to the FBI.

MCPD'S Desire to Transition to NIBRS

From an organizational perspective, MCPD's most significant reason for transitioning to NIBRS was to help address limitations affecting the agency's ability to more fully achieve its data-driven, information-led policing objectives. For example, MCPD was not able to produce timely and accurate data and reports for crime analysis, problem solving, and data-informed decision making. The limited data repository prevented the department from producing consistent and reliable crime data for internal use, crime reporting, and public consumption.

MCPD lacked a centralized database capable of capturing complete and standardized incident-based crime data and of generating reliable and consistent UCR data and crime statistics. The department's RMS and related operational systems and processes—including manual data management—were inefficient and outdated. The processes were so cumbersome that specialty units in the department had resorted to creating their own databases or spreadsheets, which required manually rekeying data. Not only did this result in a great deal of duplicated data entry, but it also created a situation in which different units in the same agency could report different crime statistics, because the units were not working from information stored in a central database.

Data quality was also a concern. MCPD relied heavily on its records analysts and specialty unit staff to review and clean the incident data. The manual process was time-consuming because it did not incorporate any automated elements of data review and validation. Discrepancies in the data, and the resultant delays to review and update the information, constantly impeded the agency's ability to use the data in a timely manner.

MCPD command staff viewed the transition to NIBRS as an opportunity to reset how the agency managed its crime data and to repair multiple inefficiencies in the process simultaneously. MCPD anticipated the following benefits from the NIBRS transition:

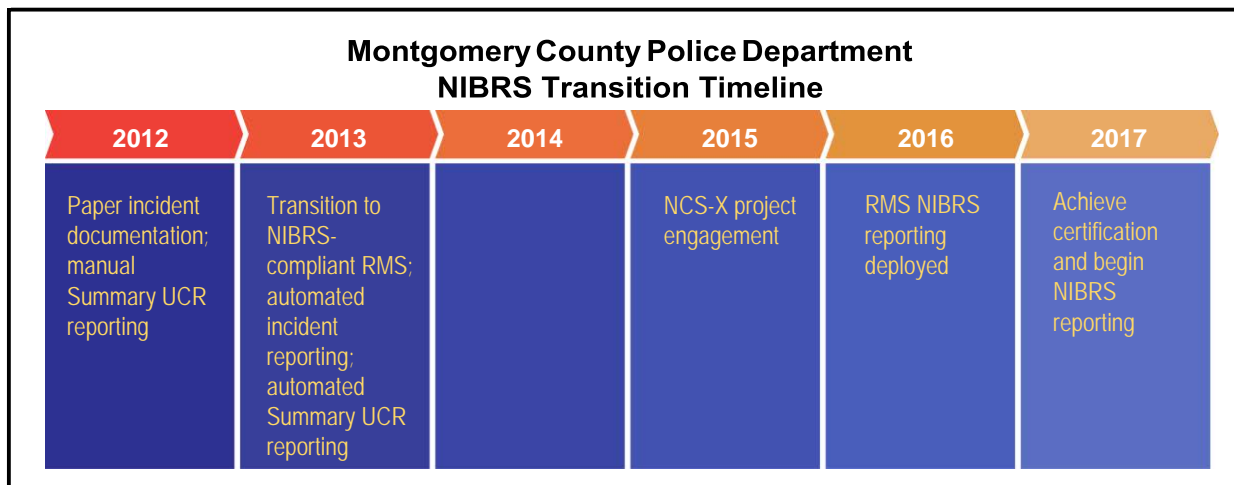
- Moving the agency to a NIBRS-compliant RMS would automatically enforce all of the mandatory edit checks and data requirements² at the point of entry, improving the overall accuracy and completeness of MCPD's data.
- Data that are more complete, more detailed, and more accurate would improve MCPD's data-driven crime management. The crime analysis unit could communicate critical information to command staff on demand without having to wait for data cleaning and checking.
- Command staff could hold periodic departmental meetings to review data (internally referred to as MCPSTAT) more frequently, as improved data quality and timeliness would allow for reviews of tactical-level crime statistics.

² Though MCPD acquired a NIBRS-compliant RMS in 2013, it was unable to enter the process for NIBRS reporting certification. At that time, the MSP UCR program did not have an FBI-certified NIBRS program and was not able to accept NIBRS submissions from Maryland law enforcement agencies. Because of this, MCPD deployed a NIBRS-compliant RMS that used UCR Summary edit checks and validations. MCPD continues to have the goal of migrating to NIBRS when the state UCR program is ready to do so.

- Patrol officers would be less likely to submit incomplete or incorrect reports than in the past because of the edit rule requirements, which would improve quality and completeness in the initial report entry process.
- Records personnel would be relieved of the manual process of reviewing reports and ensuring that incidents were properly classified, necessary data elements were present, and appropriate offenses were included. In turn, they would have time to focus on the investigative content or on other departmental data and report needs.
- Crime analysts would become more efficient and aligned with the department’s broader statistical message by directly interfacing their analytic tools with the NIBRS-compliant RMS.
- Local elected and appointed officials and the public could have better access to more-detailed, higher-quality crime data.
- More frequent interactions with the media to highlight the department’s improved data could bolster confidence and public trust in the agency. (Media interactions could occur daily through the County Open Data portal.³)

MCPD’S Timeline and RMS Transition

Because of the inefficiencies noted above, in 2012 MCPD leadership concluded that the agency should move to an automated, incident-based RMS. This top-down direction provided clarity across the agency and facilitated MCPD’s transition to a NIBRS-compliant system.



As outlined in the timeline, in mid-2012 MCPD obtained a new RMS, and by the fall of that year, the agency began testing the new system. At that time, MCPD was still required to submit summary crime data to the Maryland state UCR program; therefore, the agency deployed its new RMS, which had been configured to be *NIBRS* compliant, with *UCR Summary* edit checks in place instead.

By July 2013, MCPD had fully implemented the new RMS and trained all users across the county in the new reporting process. This implementation included significant user testing and validation, as well as the creation of new data management policies and fully automated UCR Summary data submission processes.

³ <https://data.montgomerycountymd.gov/browse?category=Public+Safety>

Although MCPD collected incident-level data in the new RMS, the system enforced only the edit checks required for Summary data; the agency did not impose the full set of NIBRS edit checks at the time of deployment because the state was not prepared to accept it.

In October 2015, with the support of the NCS-X Initiative, the Maryland state UCR program began planning the state-level transition to NIBRS. In anticipation of the state's move to NIBRS, MCPD began the process of transitioning its RMS to full NIBRS compliance. By July 2016, staff had tested and deployed the initial modifications to the RMS to upgrade to the full set of NIBRS edit checks, and MCPD initiated the FBI certification process. With the FBI UCR program engaged, MCPD worked with its RMS vendor to make minor adjustments (as "hot fixes"); additional technical tweaks continued as Records staff further refined the NIBRS submission files. MCPD achieved FBI NIBRS certification in April 2017.

To date, MCPD has focused on training its records staff to further their understanding of the NIBRS conditional edit rules and the rules' impact on data processing and quality. Because MCPD has collected incident-level data since 2013, standard RMS users have needed very little additional training. Post-NIBRS implementation, MCPD has engaged in an ongoing effort to teach officers and supervisors about the NIBRS-compliant edit and reporting requirements as issues arise in individual reports. MCPD plans to work through its Public Information Office to present its incident crime data to the community and to elected and appointed officials. Although MCPD noted in its 2016 end-of-year statistical release that the transition to a NIBRS structure had minimal impacts, it elected to release its yearly statistics in the UCR Summary format and transition to the NIBRS-formatted release beginning in March 2017. Any unusual changes in crime numbers, unrelated to actual crime trend shifts, will be addressed with a footnote identifying the transition to a NIBRS format as the source.

Challenges and Solutions

Transitioning to a new RMS and then to NIBRS reporting gave MCPD the opportunity to rethink its systems and processes. Summarized below are several of the challenges that MCPD encountered, along with how the agency overcame those challenges.

Lack of a NIBRS component in the state UCR program. MCPD's ultimate goal was to deploy a NIBRS-compliant RMS. However, because the state UCR program did not yet support NIBRS reporting, MCPD instead deployed an RMS that collected detailed incident-based data but imposed only the UCR Summary edit checks and validation rules. The agency maintains the goal of migrating to NIBRS once the state UCR program is ready to accept NIBRS data from its local agencies.

Reassigning staff to meet new workflow needs. MCPD worked through issues associated with staffing by reclassifying records clerks (whose daily incident report review was no longer required) into technical positions focused on data programming to meet the multiple needs for incident-level data. This change also required pushing responsibility for report quality away from the records division and back to the officer/supervisor level, a task that became much easier with the enforcement of NIBRS edit checks.

Technical challenges to merge with existing software. MCPD had to develop and update associated technical systems, including an Information Builders Webfocus dashboard, to deliver the incident-level data that were needed across the department. These systems originally lacked incident-level edits, and including incident-level edits within these presentation tools required additional effort and validation. These challenges inevitably led to breakdowns in the incident-level data presentations as issues were discovered and resolved. The data were used at County Council presentations, budget hearings, and community meetings. The IMTD deployed a targeted communications plan to address the ongoing

tension between command staff and department personnel, who required the incident-level data but had difficulty relying on its accuracy.

A complex case-routing and notification system further complicated these issues. Under this system, patrol sergeants sent cases to different units for follow-up investigation on the basis of vague person- or MCPD-specific criteria. The RMS deployment required the creation of a standardized work flow within the RMS that would support the new data collection requirements while still allowing supervisors to electronically direct cases to the appropriate investigative units (even across differing departments and specialized units).

Becoming familiar with unfamiliar processes. The department had to contend with users who had grown comfortable working with the previous reporting system, which did not enforce *any* data quality edit checks. Department trainers had to train users how to complete a report and ensure its quality. MCPD also had to overcome internal resistance and keep command staff focused on having a reliable data system rather than on reacting to complaints from users who did not like the new edit check requirements.

MCPD's RMS system, when structured to report UCR Summary data, employed only the trimmed-down and diminished edit and validation rules necessary to support the Summary reporting process. Although the NIBRS data elements were present, their completion could be enforced only at the agency policy level. This required police records, investigative, and crime analysis staff to add manual quality control and data augmentation processes to build out, display, and use the incident-level data set.

With the new NIBRS-capable RMS, MCPD streamlined the incident report approval process to be more efficient and minimize human error. The software's workflow from the point of data entry now drives the entire process. The department has delegated the responsibility for accurate and complete entry to the officers completing the reports. Upon clearing the edit check validation process, a report submission flows automatically to the officer's supervisor. Once the supervisor has approved the report, it is considered complete and made available in the RMS database.

The MCPSTAT development process, in turn, highlighted the data quality limitations that remain in an RMS when a NIBRS-compliant data set is managed by UCR Summary-level edit checks. For example, under the UCR edit rules, officers often miscoded the classification of a crime, without including the proper underlying offense, during the initial data entry process; had the NIBRS edit check that audits incident class against offenses listed been in place, it would have flagged the error.

These challenges were overcome in large part because the transition to a NIBRS reporting system had the full support of the department's senior staff and the county managers, who wanted access to high-quality incident-level data for planning and operational decisions. During staff meetings, formal and informal training, and roll calls, IMTD members routinely presented this goal as one of the principal reasons for an upgrade to a NIBRS-compliant RMS.

Impact of Change on Department Staff

Although it is too early to know the full impact of these changes on the department's staff, early results within MCPD indicate that the new streamlined reporting will save time and improve efficiency. MCPD expects the following changes:

Records personnel. The IMTD director expects the automated validation checks to relieve records staff from spending time on manual validation and error-checking, as well as to remove uncertainty surrounding incident classification. One person from records will be charged with periodic quality control audits, but the software should incorporate this process. The automation will significantly decrease the likelihood of officers' submitting incomplete or incorrect reports, which will allow records staff to focus on other department needs.

Given the exceptional drain on time and resources related to manual data entry and data quality processes, MCPD believes that supporting a NIBRS-compliant RMS is the most efficient and direct way to provide accurate and timely data.

Officers. Because the system and entry screens for the NIBRS-compliant RMS are very similar to those of its UCR Summary-based predecessor, the effect of these changes on officers entering the data will be minimal. As mentioned earlier, changes in the validation process will require officers to enter more complete information initially. Officers will have to correct all errors found before they can proceed to the next data entry screen or submit the form for approval; the software will generate NIBRS incident codes based on charge code/offense entries. Until the process becomes familiar, officers may spend a few more minutes entering records than they did previously. Additional training may be necessary for users to fully understand how the enhanced validation process works and what reporting requirements they are responsible for. MCPD anticipates that the changes will promote greater accountability for officers in the incident documentation process.

First-line supervisors. Many of the review and audit tasks that are the responsibility of first-line supervisors will be automated. Rather than reviewing hardcopy reports and returning these copies to officers for correction, supervisors will work electronically. Even with a streamlined review process, though, department executives will expect supervisors to ensure the accuracy and completeness of each incident report. Enforcing the NIBRS edit rules at the point of entry will aid this process dramatically, as enforcing the rules should reduce mistakes and omissions. As with records unit personnel, supervisors will now have the time to concentrate on officers' actions and on investigative content rather than on data cleaning.

Although policy typically drives technical solutions, the reverse is happening in this case. The increased functionality of the RMS, including enhanced edit checks (coupled with a parallel report audit process within the records function), has created the standard for supervisory responsibilities. MCPD has begun the process of updating its report policy to include these new technology-driven requirements.

Crime analysts. As with records unit staff, crime analysts had been spending a large portion of their time cleaning and transposing the original report data so the information could be used in analysis. Now that NIBRS certification has been achieved, the department expects all consumers of MCPD data to have access to and take advantage of the richer, more accurate data source. Perhaps most importantly, the transition will allow MCPD's crime analysts to perform more-focused analytical work to assist in solving crime rather than handling basic data management and data review activities.

How NIBRS Information Will Be Submitted and Used

In MCPD, NIBRS-compliant data will continue to feed the department's internal dashboard, which technical staff will alter to display the richer, more detailed data available to department staff. The dashboard will provide a variety of information for department managers, and users can combine the information with that from other internal and external data sources.

Outside the department, county leaders, elected/appointed officials, and the general public will have access to more-timely, more-accurate data. Enhancing the system to a NIBRS-compliant RMS is providing more meaningful data for tactical and strategic work to prevent crime and promote public safety in the community.

MCPD is working in a state that is still in the earliest stages of NIBRS transition. As a result, MCPD currently submits Summary crime statistics to the Maryland state UCR program and reports NIBRS data directly to the FBI. This atypical arrangement is because MSP (which operates the Maryland UCR program) does not yet have a NIBRS data structure capable of accepting NIBRS data from local agencies. As soon as the Maryland state UCR program is able to accept and process NIBRS submissions, MCPD will report NIBRS data to the state program, rather than to the FBI.

How the Transition to NIBRS Benefited MCPD

MCPD leaders and information technology professionals undertook the NIBRS transition and RMS enhancement efforts to fulfill the department's need for accurate, consistent, and timely data. Moving from a manual system to an automated NIBRS-compliant system has allowed the agency's staff to make better informed strategic decisions. The change to automated NIBRS edit checks also benefits officers, supervisors, crime analysts, and records staff in reducing the amount of time spent cleaning and correcting data, as well as simply making data more accessible.

Perhaps most importantly, NIBRS implementation represents an opportunity for MCPD to capture high-quality information about crime that capitalizes on the incident-based reporting capabilities in the agency's new RMS. Enhancements to the RMS system that directly resulted from the move to become compliant with the federal NIBRS program are improving the quality, accuracy, and completeness of the crime data used by the agency to track, diagnose, and treat crime problems in the county. MCPD leadership sees not only the operational benefits to the NIBRS transition but also the payoff in enhanced public trust.

Moving to NIBRS reporting has allowed an agency that was already seen as a national leader among its peers to move closer to realizing its goals of becoming a leader in information-led policing. The time was right for MCPD, and is right for the broader law enforcement community, to transition to NIBRS. The availability of funding through the NCS-X Initiative to support the NIBRS transition, coupled with the benefits of reducing workload and improving data quality, made the switch to NIBRS an easy decision—and transition—for the department.

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