SELECT LANGUAGE ▼

SUBSCRIBE JOIN

The PoliceChief

Technology

Importance of Quality, Timely, and Detailed Incident Data: Lessons from the Seattle Police Department

Dick Reed, Captain, Seattle, Washington, Police Department

Karen Lissy, Research Social Scientist, RTI International

Kevin Strom, Senior Research Criminologist, RTI International

The use of timely and accurate localized data to drive law enforcement operations toward more efficient and effective resource deployment is the benchmark for 21st-century policing.[1]

For today's law enforcement and public safety chief executives, high-quality, detailed data is paramount for effective decision making. In addition to open source data, law enforcement agencies have records management systems (RMS), incident-based reporting systems, and information sharing tools that provide data on crime incidents, suspects, victims, and arrests. Together, these resources can be assessed to identify local and regional trends, to effectively deploy resources, and to support data-driven policing initiatives. In today's environment when agencies are confronting budgetary and staffing challenges, it is especially important that law enforcement executives continually leverage data to improve and expand decision making and to maximize available resources.

What Are Incident Data and How Can They Help an Agency?

High-quality incident data in law enforcement require accuracy, completeness, timely completion, adequate levels of detail, the ability to be catalogued and recalled, and ease of analysis. This generally consists of the details regarding the crimes committed, victims, offenders, suspects, locations, the nature of any injuries, and property taken or destroyed. Incident data can also include supplemental reports and statements made by victims and bystanders, investigative notes, and inventories of evidence. Since all of these items tend to be gathered at the scene, law enforcement data are most likely to be accurate, complete, and timely at the moment they are initially recorded by the responding officer or dispatcher. First responders will likely have the best information regarding a particular incident or investigation. While records division staff are able to implement quality assurance to the particulars of the data entry requirements, they may unintentionally create inaccurate changes. It is therefore imperative that those performing the initial data entry be as accurate and detailed as possible.

Law enforcement agencies in the Seattle, Washington, metropolitan area were able to utilize standardized incident-based reporting and regional information sharing tools to identify "Apple picking" as a regional crime trend. Apple picking—strong-armed robberies to acquire expensive Apple products such as iPhones and iPods—was responsible for an overall increase in thefts throughout the area.[2] Law enforcement identified the trend because the incident data from many of the robberies specified the types of devices taken. Using these data, agencies in the Seattle area highlighted crime prevention tips specifically related to Apple picking neighborhoods and notified block watch captains about steps they could take to help reduce or prevent these robberies.[3] After sharing the data regionally, and even nationally, law enforcement officials and

prosecutors were able to jointly promote the creation of a "kill switch" that renders mobile devices inoperable after they are reported stolen.[4]

In addition to reducing time spent following up and editing reports by personnel in other divisions within an agency, high-quality incident data provides law enforcement executives with critical information that can be used to identify trends and better understand the nature of crime and criminal behavior in their jurisdictions. In New York City, officers were able to use incident data to recognize that approximately 70 percent of the cars reported stolen over a span of four weeks were more than eight years old. Detectives were further able to determine that a specific type of van—the Ford Econoline—was reported stolen 51 times so far, up from 19 at the same point in the previous year. Using these results as a starting point, detectives identified a state law that permitted anyone with two state DMV forms to serve as proxy for a title on a vehicle that was at least eight years old and was worth less than $1,250.[5] Detectives determined that these vehicles were being targeted by individual criminals and groups for their value at scrap yards.

Besides identifying crime trends and aiding in resource and personnel deployment decisions, having access to high-quality incident data can help answer one of the most common and most important questions community members ask of law enforcement: "How safe is my community?" Generally when asked this question, officers use historic incident-level data to compare the current crime levels in the jurisdiction to the same date in previous years. Another alternative possible only with high-quality, standardized, incident-based reporting is to compare the jurisdiction against other jurisdictions in close proximity or with similar overall characteristics such as population size and demographic composition. For the Seattle, Washington, Police Department (SPD), comparisons with similar cities provide interesting insights and help answer important public policy questions for elected or appointed officials. Providing unbiased, detailed, and comparable trend information to communities can both increase transparency and allow law enforcement the opportunity to explain important differences between certain crimes (e.g., an unoccupied residential burglary versus the armed robbery of a citizen on the street) to citizens.

Seattle Police Department's Experience with Quality, Detailed Incident Data Reporting through NIBRS

The SPD recently became National Incident-Based Reporting System (NIBRS) compliant and began submitting its data to the Washington State NIBRS program in 2012. As part of this process, the agency has gained valuable experience, which has stimulated the following advice for other agencies.

Be patient, be flexible, and think creatively. Becoming NIBRS compliant is a process that does not happen instantaneously. The SPD's original plan was to adopt new software to make the transition of data from its RMS to NIBRS-compliant data "seamlessly compatible," beginning the process in 2008. Meanwhile, the department was also changing from paper reporting to electronic reporting. The challenges the department faced included an employee learning curve, issues with the completeness and quality of the data being entered, and technical issues. The implementation of the new RMS, coupled with the implementation of a new CAD system months later placed a strain on officers, detectives, dispatchers, records staff, and technical support. Initial plans to begin the NIBRS certification process were then delayed to ensure a smooth implementation. Challenges included changing business practices to leverage the features of the "off- the-shelf" software applications; user training in an agency of nearly 1,900 employees; and managing a backlog of report transcriptions following the NIBRS data quality procedures.

Understand the technology and have the necessary support personnel in place ahead of time. With a mature understanding of the systems and the improvements in data quality at all parts of the organization, the SPD began working diligently in 2011 to become certified by the Washington Association of Sheriffs and Police Chiefs (WASPC). The WASPC is the state entity charged with the responsibility of reporting crime in Washington State, and the SPD worked collaboratively with its technology support personnel, WASPC staff, and the software vendor to implement the data transfer and achieve the low error rate required for NIBRS submissions.

Make data entry as easy and as thorough as possible. Ease of data entry is essential to obtaining department-wide buy in and cooperation. Online edits or prompts that require certain fields—such as geo-location, time, date, and incident type—be completed can help ensure the quality and completeness of incident data and will minimize the amount of follow-up required later. Working with the vendor to auto-fill repeating items where practical, such as incident number or offense number, can also ease the data entry process and reduce discrepancies, as will the inclusion of a descriptor code "cheat sheet" as a pop-up for patrol to consult. Even if an agency does

not intend on immediately using some of the data collected, having access to it later may be critical for prosecution and reporting. For this reason, SPD's Records Division does not allow officers to submit reports until the reports are complete and correct.

Create a data dictionary for the agency's RMS. This dictionary should include all of the elements that the agency will likely need to examine and answer key policy questions, such as the optimal size of the agency, deployment strategy, and available resources. These answers can be used to ensure that data collection, staff training, and quality assessment efforts are in place to deliver accurate reports and that all information that could be necessary to inform the outcome measures is collected.

Build a system that has the ability to accommodate change. After the SPD initially developed the data collection tools with its vendor, Washington State law changed to mandate inclusion of "bias crime reporting." Vendor flexibility was paramount to completing the work that resulted from these changes. The SPD has amended the RMS software a handful of times since the original implementation in order to increase its usefulness and remain NIBRS compliant.

Train officers throughout the process and on an ongoing basis. Familiarity with the data required to properly complete the forms, the process of completing the forms, and the forms themselves are important to successful implementation. Therefore, department leaders should invest in ongoing training and automation. For example, even after the initial series of trainings before the updated RMS was implemented, SPD recognized that there was an error rate of approximately 4 percent, demonstrating the need for ongoing or continued training. Also, as laws and reporting requirements change, additional training for patrol officers and quality control checks can assist officers and reduce errors in data collection.

Prepare government officials and community members through education. The SPD spent an entire year preparing city officials and other community members for the potential increase in crime rates that would come from more accurate reporting and submitting data to the state IBR (incident-based reporting) system or NIBRS. Similarly, there was concern that community members would potentially express fears about their safety from reporting property crimes and low-level offenses that might have been previously undocumented in the Uniform Crime Report (UCR). To allay some of these fears, the SPD reports trends instead of actual numbers, but the impact of the NIBRS reporting change in Seattle has not yet been fully explored.

Conclusion

The access and sharing of high-quality incident data through regional and national information sharing tools provides law enforcement executives with critical information that can be used to identify trends and better understand the nature of crime and criminal behavior in their jurisdictions. As more law enforcement agencies submit their data to NIBRS, the overall picture of criminal activity in communities and the United States will improve. The National Crime Statistics Exchange (NCS-X) initiative represents one effort to increase NIBRS reporting nationally by focusing on adding a selected sample of state and local agencies, including all of the United States' largest departments, to the existing 6,000+ NIBRS-reporting agencies. The goal is to create accurate and detailed nationally representative crime measures while also moving towards more comprehensive incident-based reporting across the United States.

The SPD is just one example of an agency that has successfully transitioned to more accurate incident data collection, reporting, and sharing. Through NIBRS, the department has been able to more efficiently and effectively deploy resources, contribute to evidence-based decisions affecting public policy, and continue to ensure public safety. The department—as well as other law enforcement agencies—has successfully undergone this process and is willing to serve as a resource to assist with describing how to work with vendors, selling the idea to patrol officers, working with community groups, and performing innovative analysis. Agencies should also be sure to work with their state UCR/NIBRS program and the FBI during the planning and implementation phases. ♦

Notes:

[1]James H. Burch II and Michael N. Geraci, "Data-Driven Approaches to Crime and Traffic Safety," *The Police Chief* 76, no. 8 (July 2009), www.policechiefmagazine.org/magazine/index.cfm?fuseaction=display&article_id=1839&issue_id=72009 (accessed May 12, 2014).

[2]Hana Kim, "Stealing Smartphones from Owners—'Apple Picking'—Turns Violent," *Q13 Fox News*, November 12, 2013, http://q13fox.com/2013/11/12/violent-and-frequent-attacks-for-smartphones/#axzz2yrZ3BXJD (accessed May 12, 2014).

[3]Dale Johnson, "Holiday Safety Tips," Public Safety, *Our Broadview Neighborhood*, December 7, 2013, www.broadviewseattle.org/2013/12/07/holiday-safety-tips (accessed May 12, 2014).

[4]Meghan Barr, "Prosecutors Push for Anti-Phone Theft Measures," *Seattle Times*, June

13, 2013, http://seattletimes.com/html/businesstechnology/2021180211_apussmartphonetheft.html (accessed May 12, 2014).

[5]J. David Goodman, "For Car Thieves, the Older and Heavier the Ride, the Better," *The New York Times*, April 8, 2014, www.nytimes.com/2014/04/09/nyregion/for-car-thieves-the-older-and-heavier-the-ride-the-better.html?src=xps (accessed May 12, 2014).

Resources to learn more about quality incident-level data and analysis in policing:

- Seattle PD's webpage with interactive crime statistics: http://web6.seattle.gov/mnm/incidentresponse.aspx
- WASPC's webpage with interactive NIBRS statistics for Washington State: https://www.waspc.org/windex.php?d=237
- NCS-X initiative website: www.iacptechnology.org/ncs-x.html

Please cite as:

> Dick Reed, Karen Lissy, and Kevin Strom,"Importance of Quality, Timely, and Detailed Incident Data: Lessons from the Seattle Police Department," Technology Talk, *The Police Chief* 81 (June 2014): 74–75.

The Police Chief is the official publication of the **International Association of Chiefs of Police.**

All contents © 2003–2016 International Association of Chiefs of Police. All Rights Reserved.

Copyright and Trademark Notice | Member and Non-Member Supplied Information | Links Policy

44 Canal Center Plaza, Suite 200, Alexandria, VA USA 22314 | 703.836.6767 or 1.800.THE IACP

Designed and Built by Matrix Group International, Inc.®