



Effects of NIBRS on Crime Statistics

Executive Summary

Many law enforcement agencies are hesitant about moving from the Uniform Crime Reporting (UCR) Program's Summary Reporting System (SRS) to its National Incident-Based Reporting System (NIBRS) because of the perception that reporting crime through NIBRS will appear to increase the agency's crime. The perception is based on the following reporting differences:

- The SRS collects aggregated monthly crime in ten offense categories.
- NIBRS collects disaggregated offense, victim, offender, property, and arrestee information for 49 offenses.
- The SRS employs a hierarchy rule, which NIBRS does not.
- NIBRS counts up to 10 offenses per incident.

An example of these differences can be seen in an incident involving murder, robbery, and motor vehicle theft. The Hierarchy Rule in the SRS states when more than one offense occurs within an incident, only the most serious crime contributes to the agency's monthly crime totals. Therefore, the agency would count only the homicide for the monthly totals because homicide is the highest offense on the hierarchy. When reported through NIBRS, however, the agency would count the murder, the robbery, and the motor vehicle theft.

Due to the differences between the SRS and NIBRS reporting standards, it can appear that an agency has higher levels of crime after switching to NIBRS. Agencies, of course, understand that NIBRS reporting does not actually increase crime, but often fear that the public, media, and government officials will misinterpret the *apparent* change in crime and attribute the increased crime counts to failed policing administration and leadership rather than a change in how the crime data are being reported. In spite of this concern, NIBRS participation increased from 663 reporting agencies in 1991 to 6,299 agencies in 2014.

Analysis of the NIBRS data and the data that were converted to SRS data sets showed the following effects on reported crime due to the removal of the Hierarchy Rule and to an allowance for reporting multiple offenses:

- Rape: No effect.
- Robbery: Increased 0.6 percent.
- Aggravated Assault: Increased 0.6 percent.
- Burglary: Increased 1.0 percent.
- Larceny: Increased 2.6 percent.
- Motor Vehicle Theft: Increased 2.7 percent.
- Total SRS Offenses: Increased 2.1 percent.
- Incidents that involved multiple offenses: 10.6 percent of all reported incidents.



Agencies moving to NIBRS can use this information to explain that increases in their crime rates are due, at least in part, to the elimination of the Hierarchy Rule and to the allowance of reporting up to ten offenses in a single incident. In addition, the long-term effect of using SRS data to develop policies may be negative because SRS data may not address the true nature of the crime problem.



Introduction

Since 1930, the FBI's Uniform Crime Reporting (UCR) Program has collected statistics from law enforcement agencies who voluntarily submit monthly aggregate totals for seven Part I crimes through the Summary Reporting System (SRS). By the late 1970s, the FBI and its partner law enforcement agencies saw the need for a new crime reporting program which not only included a host of expanded crime categories, but which also collected more comprehensive data about crime incidents in general. After working together to develop the blueprint for a new data collection program, the UCR Program began collecting data through the National Incident-Based Reporting System (NIBRS) in 1991.

Though NIBRS was seen as a major improvement over the SRS, not all law enforcement agencies were willing to make the change to a more robust and disaggregated system for reporting crime data. The cost of changing to NIBRS electronic data submission was, and still is, an expensive transition for law enforcement agencies. Additionally, and aside from potential costs, some law enforcement agency administrators fear that transitioning to NIBRS from the SRS will make it appear that their agency has an unwarranted increase in the level of crime in their jurisdiction. However, the apparent increase in crime volume when switching to NIBRS is easily explained due to the elimination of the Hierarchy Rule. The Hierarchy Rule in the SRS requires that law enforcement agencies only report the most serious offense occurring in an incident, whereas NIBRS collects up to ten offenses for each incident of crime.

It is important to understand the value of data that law enforcement agencies release to the public. The true value of these data are realized only when the data are accurate and the integrity of the data allows for the necessary confidence to make valid conclusions about crime within communities and across the nation. UCR data are used by government entities (at all levels), businesses, and citizens to make important decisions. Administrators choose locations to target resources, businesses choose locations to conduct profitable ventures, and families chose locations to establish safe homes and send children to safe schools based on the accuracy and integrity of crime data.

Providing erroneous or incomplete crime data will yield inaccurate information and cause people to make inaccurate conclusions. This can result in ineffective policies, business practices, and



personal decisions. The harm of such inaccuracy may cost billions of dollars in ineffective policy implementation, unprofitable ventures, and loss due to crime.

The following analysis aims to evaluate the increase in crime volume reported by law enforcement agencies when using NIBRS data specifications, rather than the SRS. Further, why this change occurs and why it will not be apparent in law enforcement agency crime trends is discussed. In short, when NIBRS data are converted to the SRS for the purpose of trending, the hierarchy rule is reapplied. In spite of reporting more data, agencies do not experience an increase in crime when changing from the SRS to NIBRS reporting specifications.

To achieve the goal of evaluating the change in crime data that law enforcement agencies may experience, this study simply compares the difference in crime volume and computes the percentage difference in crime volume due to the hierarchy rule. The analysis was conducted at the national level and is used as a reasonable estimate of how changing from an SRS reporting agency to a NIBRS reporting agency affects the amount of crime submitted to the FBI's UCR Program. NIBRS data for 2014 was used to determine this effect. Law enforcement agencies reporting at least one Group A offense occurring in 2014 were represented.¹

History: UCRs Evolution from a Socioeconomic Indicator to a Means of Transparency

These seven crimes were established in 1930 and are the nation's premier indicator of the nature of crime in the United States: murder, rape, robbery, aggravated assault, burglary, motor vehicle theft, and larceny. Together, these seven offenses were called Crime Index offenses because they were *indicators* illustrating the extent to which crime was increasing or decreasing in the United States. Since the collection and reporting of data was a completely manual process—meaning there were no computers to help account for the number of crimes occurring in the nation—the Crime Index offenses were used to determine the general level of crime in the nation. Since, in essence, these seven crimes represented nearly all types of crime, no other types of crime needed to be collected. Moreover, it also would not have been feasible to collect/report each and every crime with the manually intensive methods of collecting data in the 1930s. (An eighth index crime, arson, was added in 1979. The term [Crime Index was discontinued](#) in 2003 and the eight offenses are since referred to as Part I crimes. The ninth and tenth Part I crimes, human trafficking—commercial sex acts and human trafficking—involuntary servitude, were added in 2013.)

Computers had begun automating manual processes for UCR in 1960 which allowed for collecting more disaggregated data. By 1984, the nation was entering the information age, and technology allowed for the collection of greater amounts of crime data. NIBRS was created to

¹ The data file used to create this report was generated on 7/7/2015. Agencies are allowed to report 2014 NIBRS data until December 2015. It is assumed the majority of law enforcement agencies already reported NIBRS data for 2014, though there may be slight differences in results from NIBRS data files created after 7/7/2015 should the data be used to replicate this study. The conclusions derived from such findings are assumed to not be significantly different from the findings presented in this study.



take advantage of technological advances in order to meet the need for a more detailed crime data collection format. Rather than focus on aggregate totals inferring crime rate changes, the NIBRS collects an *accounting* of information on incidents of crime within an agency and geographic location. After all, data must reflect the true phenomenon that has taken place at a particular time and location.

To meet the public's need for accounting crime incidents, the NIBRS expanded the eight SRS offenses to 49 Group A offenses with data about victims, offenders, property, and arrests being collected along with elements for each offense. NIBRS also included arrest-only information collected for an additional 10 Group B offenses.²

By the new millennium, the concept of a Crime Index, which provided a total crime count based on the seven original SRS offenses, was challenged. The FBI's UCR Program began to question the validity of comparing crime rates based on the combined total count of the seven Crime Index offenses to represent an agency's overall level of criminality. For example, the Crime Index equally weighted a murder and a burglary. Therefore, a town recording two murders appeared to have the same level of crime as a town reporting two burglaries. As mentioned earlier in this article, this imprecise representation of crime levels was removed from the UCR vernacular in 2003.

The public's need for expanded victim information was realized around this same time. In 2001, the FBI UCR Program received requests to expand the definition of rape to include male victims (the legacy definition only included female victims) and victims of sodomy and sexual assault with objects. NIBRS, however, already contained this more inclusive definition of rape.

In 2014, several changes were made in NIBRS: data collection was expanded to collect data on cargo theft, new hate crime categories were added, the race category of Asian/Pacific Islander was separated into two distinct race categories, two human trafficking categories were added, an offense for purchasing prostitution was added, and a law enforcement victim type was added.

To meet the public's expanding needs for crime data, the following efforts are underway to enhance NIBRS:

- A partnership with the National Academy of Science and the Bureau of Justice Statistics (BJS) will modernize the nation's crime statistics.
- The National Crime Statistics Exchange Project, in partnership with BJS, aims to provide a valid and reliable sample of crime data used to develop national NIBRS crime estimates.
- The FBI UCR Program plans to transition to a NIBRS-only reporting system.

² An eleventh Group B offense, runaways, was dropped in 2011 as it is not technically a criminal offense. Runaway offenses are still collected in UCR databases as agencies may still report runaways, but it is not required and is no longer published in UCR data releases.



NIBRS data has been used in recent years to provide more transparency in law enforcement. NIBRS data can be very useful to agencies in this regard because, unlike SRS data, the public is able to examine a jurisdiction's detailed crime data. Since most records management software will report NIBRS data in an automated fashion, the public can be sure agencies are not reporting false crime numbers to make their crime rate appear to decrease when it has not. In effect, NIBRS data provides tamper-proof transparency for law enforcement agencies, which has a positive impact on law enforcement public relations.

The following are the current NIBRS record descriptions. They are indicative of the UCR Program's evolution from an indicator-based system in the 1930s, to a technological accounting-based and victim-focused system via NIBRS. (These descriptions are likely to change in the future as the need for different, better, and more detailed crime data grows; as technology capacity increases; and as the familiarity with its use makes data collection and analysis easier.)

NIBRS Segments

- Incident Information
 - Incident Date
 - Incident Hour
 - Exceptional Clearance
 - Exceptional Clearance Date
- Offense Information
 - Offense Codes
 - Attempted vs. Completed
 - Offender Suspected Use (of alcohol, drug, or computers)
 - Location
 - Type and Number of Premises Entered
 - Type of Criminal Activity
 - Weapon/Force Used
 - Bias Motivation
- Property Information
 - Loss Type
 - Property Description
 - Value of Property
 - Date Recovered



- Number of Motor Vehicles Stolen/Recovered
- Drug Types and Amounts
- Victim Information
 - Connection to Offenses
 - Type of Victim
 - Age/Sex/Race/Ethnicity/Resident Status of Victim
 - Assault and Homicide Circumstances
 - Injury Types
 - Relationships to Offenders
- Offender Information
 - Age/Sex/Race/Ethnicity³ of Offender
- Arrestee Information
 - Arrest Date
 - Type of Arrest
 - Arrest Offense Code
 - Arrestee Weapons
 - Age/Sex/Race/Ethnicity/Resident Status of Arrestee
 - Disposition of Minors
- Group B Arrest Information
 - Type of Arrest
 - Arrestee Weapons
 - Age/Sex/Race/Ethnicity of Arrestee
 - Disposition of Minors

NIBRS Offenses

Group A Offenses⁴—The following offenses are reported in Group A Incident Reports. There are 23 Group A crime categories made up of 49 offenses (Offense Codes are in parentheses):

Arson (200)

Assault Offenses

³ Ethnicity category was added in the 2013 data collection.

⁴ FBI. (1/17/2013). *NIBRS User Manual*, <https://www.fbi.gov/about-us/cjis/ucr/nibrs/nibrs-user-manual>. pp. 14-18.



Aggravated Assault (13A)

Simple Assault (13B)

Intimidation (13C)

Bribery (510)

Burglary/Breaking and Entering (220)

Counterfeiting/Forgery (250)

Destruction/Damage/Vandalism of Property (290)

Drug/Narcotic Offenses

Drug/Narcotic Violations (35A)

Drug Equipment Violations (35B)

Embezzlement (270)

Extortion/Blackmail (210)

Fraud Offenses

False Pretenses/Swindle/Confidence Game (26A)

Credit Card/Automated Teller Machine Fraud (26B)

Impersonation (26C)

Welfare Fraud (26D)

Wire Fraud (26E)

Gambling Offenses

Gambling Offenses Betting/Wagering (39A)

Operating/Promoting/Assisting Gambling (39B)

Gambling Equipment Violations (39C)

Sports Tampering (39D)

Homicide Offenses

Murder and Nonnegligent Manslaughter (09A)



Negligent Manslaughter (09B)

Justifiable Homicide (09C)

Kidnaping/Abduction (100)

Larceny/Theft Offenses

Pocket-picking (23A)

Purse-snatching (23B)

Shoplifting (23C)

Theft From Building (23D)

Theft From Coin-Operated Machine or Device (23E)

Theft From Motor Vehicle (23F)

Theft of Motor Vehicle Parts or Accessories (23G)

All Other Larceny (23H)

Motor Vehicle Theft (240)

Human Trafficking

Human Trafficking/Commercial Sex Acts (64A)⁵

Human Trafficking/Involuntary Servitude (64B)⁵

Pornography/Obscene Material (370)

Prostitution Offenses (40A)

Assisting or Promoting Prostitution (40B)

Purchasing Prostitution (40C)⁵

Robbery (120)

Sex Offenses

Rape (11A)

Sodomy (11B)

⁵ These offenses were added in the 2013 data collection.



Sexual Assault With An Object (11C)

Fondling (11D)

Incest (36A)

Statutory Rape (36B)

Stolen Property Offenses (Receiving, etc.) (280)

Weapon Law Violations (520)

Group B Offenses⁶—The following offenses are reported in Group B Arrest Reports. They include all offenses that are not Group A offenses. Group B offenses are reported using the following 10 crime categories:

1. Bad Checks (90A)
2. Curfew/Loitering/Vagrancy Violations (90B)
3. Disorderly Conduct (90C)
4. Driving Under the Influence (90D)
5. Drunkenness (90E)
6. Family Offenses, Nonviolent (90F)
7. Liquor Law Violations (90G)
8. Peeping Tom (90H)
9. Trespass of Real Property (90J)
10. All Other Offenses (90Z)

Participation

In 1991, NIBRS' first year, 663 law enforcement agencies converted from the SRS and provided crime data to the FBI in the new, highly-disaggregated NIBRS format. Twenty-five years later, more than 6,299 agencies actively participated in the NIBRS data collection. Those agencies submitted more than 76 million incidents involving Group A offenses and nearly 26 million incidents involving Group B offenses (See Table 1 and Figure 1).

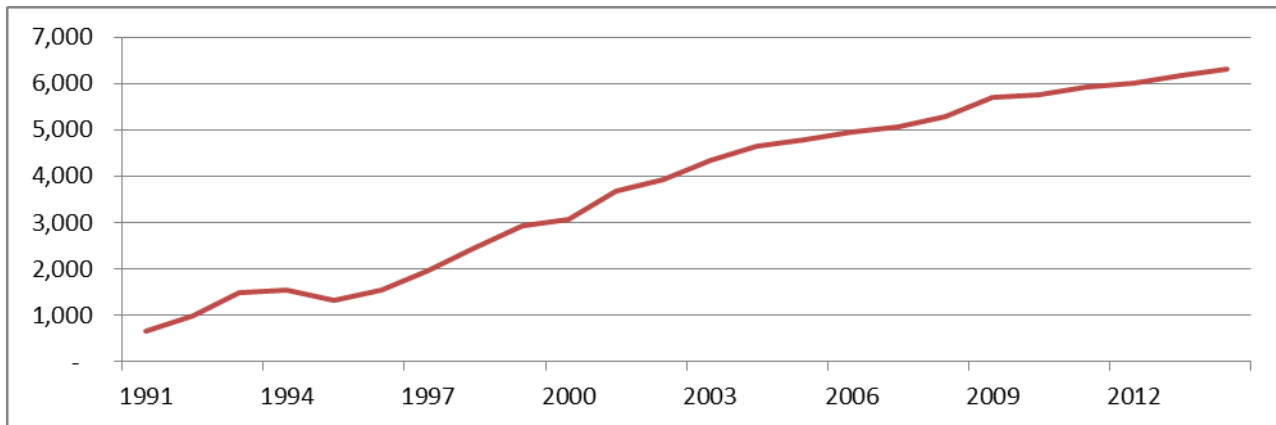
⁶ An 11th category, Runaway, was discontinued in 2010.



Table 1: NIBRS ORIs, Incidents Involving Group A Offenses, and Group B Offenses by Year⁷

Year	ORIs	Group A	Group B	Year	ORIs	Group A	Group B
1991	663	582,369	227,485	2003	4,344	3,597,576	1,154,498
1992	990	760,509	266,438	2004	4,648	4,036,881	1,296,557
1993	1,474	876,646	332,714	2005	4,791	4,561,703	1,457,435
1994	1,553	894,350	345,323	2006	4,947	4,847,671	1,540,038
1995	1,307	836,846	318,524	2007	5,062	4,945,692	1,588,734
1996	1,530	1,063,339	387,663	2008	5,290	4,959,971	1,648,144
1997	1,961	1,460,136	541,424	2009	5,695	4,992,094	1,746,930
1998	2,449	1,822,384	711,548	2010	5,744	4,998,914	1,753,973
1999	2,924	2,136,872	830,071	2011	5,929	5,020,791	1,720,606
2000	3,063	2,616,248	937,668	2012	6,004	5,001,060	1,713,703
2001	3,662	3,232,081	1,044,178	2013	6,178	4,927,535	1,667,350
2002	3,923	3,418,648	1,126,216	2014	6,299	4,759,438	1,565,192
				Total		76,349,754	25,922,412

Figure 1: Number of ORIs Reporting NIBRS Records by Year, 1991-2014⁷



⁷ Totals for agencies and reports for 2014 may change because records may be submitted to the FBI until December 2015. (Please see footnote 1.) The number does not include zero reporting agencies which are active but report no crime.



The Hierarchy Rule in Depth

In the SRS, offenses are ranked in terms of severity, and only the highest-ranked offense is reported in incidents which have multiple offense types. The exceptions are the offenses of Arson and Human Trafficking. These offenses do not follow the Hierarchy Rule in that they are *always* reported. SRS offenses are reported in the following order:

- I. Murder and Nonnegligent Manslaughter (abbreviated to Murder)
- II. Rape⁸
- III. Robbery
- IV. Aggravated Assault
- V. Burglary
- VI. Larceny
- VII. Motor Vehicle Theft
- VIII. Arson (always reported, does not follow the Hierarchy Rule)
- IX. Human Trafficking – Commercial Sex Acts (always reported, does not follow the Hierarchy Rule)
- X. Human Trafficking – Involuntary Servitude (always reported, does not follow the Hierarchy Rule)

According to the Hierarchy Rule, murder, human trafficking, and arson are always counted in the SRS, however the other six Part I crimes are not always reported in multiple-offense incidents. If, for example, a murder and rape occur within the same incident, only the murder is counted in the SRS. Further, if an aggravated assault occurs in the same incident as a burglary, the burglary is not counted.

There are also a few considerations which are true to both NIBRS and the SRS. For example, aggravated assault is always inherent to robbery, so only a robbery is counted when both occur in the same incident.⁹ Similarly, larceny is not reported with burglary as it is inherent to the crime.¹⁰ NIBRS, however, would capture each crime mentioned above. Up to ten offenses of the 49 offenses reported in NIBRS can be listed in an incident's offense segments.

Table 2 shows the number of NIBRS offenses that are removed from crime counts when the data are converted to the SRS. As murder is at the top of the hierarchy, there is no reduction in the number of murder offenses when converting from NIBRS to the SRS. However, there were 12

⁸ In 2011, the FBI's CJIS Advisory Policy Board changed the definition of Rape in the SRS to include male victims, sodomy, and sexual assault with objects. The change was approved by the FBI Director and implemented starting with the 2013 UCR data collections. NIBRS always collected information for these sex offense. The expanded definition of rape was used in this study.

⁹ The exception in NIBRS would be if there were multiple victims in an incident and some were not robbed, but all were victims of aggravated assault.

¹⁰ The exception in NIBRS would be if offenders committed larceny offenses outside of a structure after committing burglary offenses within the same incident.



rape victims involved in incidents where murder was also involved. Similarly, for 4,458 NIBRS burglaries, there was a murder, a rape, a robbery, or an aggravated assault which happened in the same incident. The 12 rapes and 4,458 burglaries would not be counted in the UCR SRS data collection due to conditions established by the Hierarchy Rule.

Nationally, there is a minimal percentage increase (less than 0.04%) in crime volume for rape when law enforcement agencies move from the SRS to NIBRS. Robbery increased by little more than one-half of one percent (0.6%), aggravated assault and burglary each increased by 1.0 percent, larceny increased by 2.6 percent, and motor vehicle theft increased by 2.7 percent.

Table 2: Percent Increases in Crime Volume by Removing the Hierarchy Rule

	Incidents	Offenses	Reduction to Hierarchy	Percent Increase
Murder ¹¹	3,418	3,650	0	-
Rape ¹¹	36,035	37,635	12	0.0
Robbery	75,581	75,581	382	0.6
Aggravated Assault ¹¹	167,992	203,740	1,154	0.6
Burglary ¹²	570,470	570,470	4,458	1.0
Larceny ¹³	1,666,327	1,666,327	43,248	2.6
Motor Vehicle Theft	162,652	162,652	4,689	2.7
Totals	2,682,475	2,720,055	53,743	2.1

The concern of many law enforcement agency officials is that the inclusion of these crimes, particularly property crimes, will appear as an increase in crime when switching from SRS reporting to NIBRS reporting. As previously discussed, the apparent increase is simply due to the difference between how crimes are counted in NIBRS versus the SRS and its application of the Hierarchy Rule. Further, none of the increases amount to a change greater than 2.7 percent.

No Need for Apprehension

Any increases in crime volume due to the ability to report multiple offenses in the NIBRS are eliminated when trending. For trends, NIBRS data are converted to SRS data and the Hierarchy Rule is again applied. This reduces crime counts in multiple-offense incidents to what would

¹¹ The number of offenses differs from the number of incidents for murder, rape, and aggravated assault because these Crimes Against Persons offense categories count one offense for each victim in the incident. Robbery, burglary, and motor vehicle theft are considered Crimes Against Property and count only one offense per incident.

¹² The Hotel Rule (see the *SRS Users Manual* at <https://www.fbi.gov/about-us/cjis/ucr/nibrs/summary-reporting-system-srs-user-manual>, pp 43 for explanation) and number of premises entered were not considered for burglary offense totals.

¹³ NIBRS allows for the reporting of eight different types of larceny offenses per offense. Incidents with more than one larceny offense type reported were aggregated to only count one larceny per offense to simulate how this would be reported in the SRS.



have been reported if the agency was only reporting according to SRS specifications. When the FBI UCR Program starts trending NIBRS data, comparisons to pre-NIBRS data submissions would not be included in trends.

Reporting NIBRS data does not actually increase crime within jurisdictions, even though there is a slight, but visible, effect on crime rates. As shown in Table 3, approximately one in ten of NIBRS incidents have multiple offenses (10.6%), and only 1 percent (1.1%) of NIBRS incidents have multiple offenses affected by the Hierarchy Rule. NIBRS shows a small (2.1%) percentage increase from the SRS in crime volume which is easily explained by the allowance of reporting incidents with multiple offenses and the absence of the Hierarchy Rule.

Table 3: Number of Offenses per Incident, 2014

Offenses	Frequency	Percent	Cumulative Percent
1	4,253,081	89.4	89.4
2	457,479	9.6	99.0
3	43,304	0.9	99.9
4	4,778	0.1	100.0
5	688	-	100.0
6	93	-	100.0
7	14	-	100.0
8	1	-	100.0
Total	4,759,438	100.0	100.0

Conclusion

The elimination of the SRS has been discussed for some time in UCR governance meetings. In several speeches in 2015, FBI Director James B. Comey called for “more and better data related to those we arrest, those we confront for breaking the law and jeopardizing public safety, and those who confront us.” The CJIS Advisory Policy Board (a joint group of law enforcement executives, academics, and data analysts who are stakeholders in the UCR Program) the International Association of Chiefs of Police, the National Sheriffs’ Association, Major City Chiefs Association, Major County Sheriffs’ Association have all pledged their support for that call. The result of this dialogue and agreement is the FBI and its partners undertaking the cessation of SRS reporting and the across-the-board implementation of NIBRS.

When this change is eventually made, a similar 2.1 percent increase in the number of reported crimes should be expected for agencies transitioning from SRS to NIBRS data. One strategy to ease this perceived uptick in crime is that agencies can provide a side-by-side comparison of their NIBRS data with a few years of NIBRS data that has been converted to SRS data and



demonstrate what the trend of crime rates would look like if the agency was still only reporting in the SRS. The converted data could help soften and explain the *appearance* of increased crime while lending even more transparency to the agency's crime reporting to the public.

Law enforcement agency officials can use this study to demonstrate how changing from SRS reporting to NIBRS reporting might affect their local crime counts. It is accepted that incident-based data collections will have more robust and accurate crime counts over traditional tally-based systems like the SRS. Any reports law enforcement agencies generate can show how the elimination of the Hierarchy Rule has affected the agency's data by trending and comparing data prior to the law enforcement agency's conversion to the NIBRS.

Above all, law enforcement agencies are engaged in partnerships with their communities to maximize public safety. Inaccurate information concerning crime in these communities and the nation may cause enormous social costs and waste of public and private resources. Effective policies must be enacted based on relevant and accurate information provided through NIBRS in order to meet the goal of maximizing public safety.

Though NIBRS adds a level of complexity, as well as initial costs to agencies, there is greater value for agencies who transition from the incomplete story of crime told through the antiquated SRS data to a more accurate, transparent, and complete story of crime articulated through NIBRS.