

May 2018

State of West Virginia  
Department of Military Affairs and Public Safety  
Division of Justice and Community Services

## Criminal History Records in West Virginia: A Statewide Data Quality Review

*Douglas H. Spence, Ph.D., ORSP Director*

West Virginia's criminal history records (CHR) database provides a centralized record of all arrests that occur in the state. It is routinely used by law enforcement officers, the courts, and other criminal justice agencies in investigations as well in the prosecution and sentencing of offenders. In addition, the database also serves a variety of other important public purposes, including screening applicants for firearm purchases, providing background checks for employment and professional licensing, and identifying individuals who are subject to protective orders or have outstanding warrants. The CHR database therefore plays a vital role in the administration of justice in the state, and it is imperative that it provide information that is of the highest possible quality.

The present study assesses the completeness, accuracy and timeliness of the records submitted to the CHR database using a reverse audit methodology. The reverse audit is considered by the Bureau of Justice Statistics (BJS) to be the most rigorous method for assessing the quality of criminal history records data, and requires researchers to directly examine the records stored at arresting agencies in order to compare them with those in the CHR database. Consequently, this method enables researchers to assess not only whether records were sent, but also to identify any discrepancies which may exist between the record in the central database and the original source record at the arresting agency. This method also facilitates the comparison of the results from the present study with those of two prior audits conducted in WV in 1997

### *Report Highlights...*

This study employs a reverse auditing methodology to assess the completeness, accuracy and timeliness of arrest records submitted to the state's central criminal history records database.

Auditors examined a representative sample of more than 1,300 source records obtained from 30 different arresting agencies and then compared them to the records stored in the central database.

The results show that submission rates for most arrest records components have improved significantly since prior records audits conducted in 1997 and 2005.

However, the timeliness of submissions to the central database has decreased since the previous audit, and the records in the study sample exhibited significant variation in regard to the completeness and accuracy of arrest record components.

The implications of these findings for assessments of the overall quality of state criminal history records data and for recent efforts to enhance data quality are discussed.

and 2005. The results of this comparison reveal that while data quality has improved for some indicators, it has declined for others, and significant variability exists across records in regard to their completeness and timeliness.

The next section of this report provides a detailed description of the data collection process, sampling procedures and analytic methods used in the present data quality review. This is followed a discussion of the results and their implications for the overall quality of the records stored in state's CHR database. This report then concludes with a comparison of the results of the two previous data quality reviews in West Virginia with those of the present study, and a discussion of the policy implications and opportunities for future research suggested by these findings.

## DATA AND METHODS

### *Data Collection Process*

The present study employs a reverse auditing methodology to assess the completeness, accuracy and timeliness of records in the state's central records depository maintained by the state police. This methodology entails the collection of arrest and disposition information from original source documents stored at local law enforcement agencies and then the comparison of this information to the corresponding CHR records maintained at the repository. The goal of this comparison is to ensure that all arrest events identified in the source documents are reflected in the relevant individual's CHR, that the arrest and disposition information are recorded accurately, and that the time elapsing between the date of the arrest and the arrival of the records at the repository falls within established standards. The reverse auditing process is considered to be the most reliable and accurate way of assessing the quality of CHRs and is the approach recommended by the BJS (Lester & Haas, 2005).

The review of original source documents was conducted with the assistance of a standard data collection form (presented in Appendix A). This form is based on the one utilized in the previous two CHR data quality reviews conducted in WV (in 1997 and 2005,

### *Report Highlights...*

The present study employs a reverse auditing methodology.

This approach entails the collection of arrest and disposition information from original source documents stored at arresting agencies.

Information from source documents is then compared to information contained on the corresponding CHR records maintained at the state's central records repository.

Comparisons of arrest record information were guided by a standard data collection form that recorded information from arrest records, fingerprint cards and court disposition reports.

respectively) and consists of three sections. The first section captures basic information pertaining to an individual arrest event recorded on source documents at the arresting agency. This includes the date and criminal charges associated with the arrest, as well as information describing the arrested individual, such as their name, date of birth, and social security number. Auditors first use this section to record the details contained in the original source documents, and then when later reviewing the arrested individual's CHR at the central records repository, mark whether each piece of information is reflected accurately and completely on the CHR.

The second section of the data collection form is used to capture the information contained in the fingerprint card related to the arrest. Unlike the other arrest information, which is derived primarily from paper files housed at the arresting agency, the fingerprint card information was obtained in most cases from files housed at the repository. This is because arresting agencies typically send the fingerprints cards directly to the repository and do not store them with the other source documents (although some arresting agencies did maintain copies of the fingerprint cards in their records). Consequently,

auditors use this section of the data collection form to assess only the completeness of fingerprints cards, and not their accuracy, because in most cases there are no copies of the fingerprint card in the source documents to compare with the fingerprint card maintained at the CIB.

In addition, it should also be noted that some arresting agencies in the state have adopted the LiveScan fingerprinting system. This system enables arresting agencies to take digitized pictures of fingerprints which are then sent electronically to the repository, obviating the need for a paper fingerprint card. For records in which the arrestee was fingerprinted using a LiveScan system, this section of the data collection form records whether this information was sent electronically to the CIB and appears in the CHR.

The third section of the data collection form captures the information contained in the court disposition report (CDR). The CDR records the charge, plea, finding and sentence for the arrested individual's case. Reviewers use this section of the data collection form to record whether all of necessary elements of the CDR are reflected accurately on the CHR, and to measure the length of time lapsing between the date of disposition and the arrival of the CDR at the CIB.

### *Sample Selection*

The study sample was obtained using a stratified sampling process that unfolded in several stages. First, researchers identified the total population of 412 eligible law enforcement agencies in the state, including municipal police departments, county sheriff's offices and state police detachments. These agencies were then classified into one of three strata based on categories developed by the Federal Bureau of Investigation (FBI) and utilized in the previous two criminal history records audits in WV (Lester & Haas, 2005). Stratum 1 includes the 5 large municipal police departments that serve populations of 25,000 or more residents, while Stratum 2 includes the remaining 211 municipal police departments that serve smaller populations, and Stratum 3 includes all 196 state police detachments and county sheriff's offices in the state. The agencies were then further categorized into 1 of 4 geographic regions

using the regional framework employed by the WV state police's Uniform Crime Report (UCR) Unit and commonly used in the annual publication of state crime statistics.

Once the population of law enforcement agencies had been stratified, auditors then began the process of randomly selecting agencies for the study sample. This was done by selecting 2 agencies from Stratum 1 for the state as a whole, and then by selecting 4 agencies from Stratum 2 and 4 agencies from Stratum 3 for each of the 4 regions, resulting in a total of 34 selected agencies

These agencies were then contacted by the auditors and sent a letter that requested their participation in a federally recommended review of the state's criminal history records system and described the purpose and scope of the study (see Appendix B). Unfortunately, 6 of the originally selected agencies were unable to participate in the study due to severe flooding that occurred in the southern part to the state in the summer of 2016. However, the auditors were able to secure the participation of 2 additional agencies to serve as replacement sites, resulting in a final sample of 30 arresting agencies (see Table 1). Following the procedure utilized in previous CHR audits in West Virginia, each of the agencies in the sample was asked to pull the records for all arrests that occurred

### *Report Highlights...*

The study sample consists of records from 1,318 arrests made by 30 different arresting agencies in 2008 and 2012.

Arresting agencies were selected using a stratified sampling process, which ensured that the sample contained agencies from every region in the state, and included municipal police departments, county sheriff's offices and state police detachments.

As a result of this process, the 1,318 records examined in this study provide a representative sample of the total population of arrests made arresting agencies in 2008-2012.

This sampling procedure also replicates the process employed in two previous data quality reviews conducted in West Virginia.

**Table 1: Selected Law Enforcement Agencies by Geographic Region and Sampling Strata**

Agency	Strata	Records (N)	Proportion of Sample (%)
<b>Northern Region</b>			
Wellsburg SP	3	4	0.3
Wheeling SP	3	16	1.2
Westover PD	2	25	1.9
Morgantown PD	1	162	12.3
Morgantown SP	3	49	3.7
Kingwood SP	3	20	1.5
Bridgeport PD	2	17	1.3
Moundsville PD	2	27	2.0
Braxton Co.	3	12	0.9
<b>Eastern Region</b>			
Keyser SP	3	32	2.4
Keyser City PD	2	2	0.2
Martinsburg PD	2	194	14.7
Buckhannon SP	3	16	1.2
Berkeley Springs SP	3	10	0.8
<b>Western Region</b>			
Dunbar PD	2	62	4.7
Spencer PD	2	11	0.8
Vienna PD	2	20	1.5
Roane Co.	3	13	1.0
Grantsville SP	3	15	1.1
Parkersburg SP	3	59	4.5
Ripley SP	3	14	1.1
Charleston PD	1	364	27.6
<b>Southern Region</b>			
Summersville PD	2	26	2.0
Williamson SP	3	23	1.7
Summersville SP	3	12	0.9
Summers Co.	3	6	0.5
Fayette Co.	3	59	4.5
Mount Hope PD	2	4	0.3
Logan PD	2	33	2.5
Jesse SP	3	11	0.8
Total Sample		1,318	100.0

in the month of April in the years 2008 and 2012. Auditors from the Office of Research and Strategic Planning (ORSP) then conducted site visits to record the information from these arrest records using the data collection form. This resulted in a representative sample of 1,318 arrests from 30 randomly selected agencies from around the state.

As can be seen in Table 2, this sample includes arrests for a wide range of offenses in terms of both type and severity. Consistent with the results of the most recent prior CHR data quality review (Lester & Haas 2005), the sample is comprised primarily of less serious, nonviolent offenses. Roughly 38% of the sample was comprised of arrests for offenses that fell into the public order/other category, which consisted mostly of arrests for driving on a suspended license (6.4%), arrests in response to a capias or warrant (6.3%) and arrests for failure to appear in court (5.4%). Approximately 22% of the sample was comprised of arrests for person offenses, of which assault/battery was the most common (20.8%), while about 16% of the sample was comprised of arrests for driving under the influence (DUI). Arrests for property offenses and drug offenses each comprised about 12% of the sample. In cases where an arrest event recorded multiple charges falling into different categories, that event was classified according to the charge with the most serious type of offense.

#### *Measurement*

The accuracy and completeness of CHR was measured using the data collection form. For each CHR element, ORSP auditors first recorded whether the information on the CHR was complete or incomplete and then whether information was accurate or contained an error. If the element was missing entirely from the source document it was coded as “missing on source”, or MOS, and if it was missing from the CHR it was coded “missing on rap sheet” or MRS. As noted above, the accuracy of fingerprint card elements was not assessed because they were typically only found in the CIB and are usually not retained with the source records at the arresting agency.

In addition to measuring the accuracy and completeness of the individual CHR elements, the auditors also produced composite measures for each of the three sections of the CHR, which record the

arrest information, information about the fingerprint card, and the contents of the CDR, respectively. Each section was considered complete if all of the critical elements of the section were complete. If a section was not complete, then it was coded to reflect the most serious error present in any of the elements. MRS was considered the most serious error, followed by MOS, with a code of incomplete or inaccurate being the least serious error. Following the methodology of the previous audit, this process was also used to create a composite measure of completeness for the CHR as a whole.

The auditors assessed the timeliness of CHR records by measuring the number of days between the arrest and the arrival of the fingerprint card, between the arrest and the date of the disposition, between the arrest and the arrival of the CDR, and between the disposition and the arrival of the CDR. By measuring the time between these important events in the arrest record submission process, the auditors were able to see how well

#### *Report Highlights...*

Reviewers used the data collection form to record the information contained in three crucial components of the arrest record for each arrest event in the study sample.

The first component includes information about the date and criminal charges for the arrest, as well as information about the arrested individual.

The second component includes the information contained in the fingerprint card for the arrest.

The third component includes information contained in the court disposition report for the arrest, such as the charge, plea, finding and sentence for the arrested individual's case.

The information contained in these arrest record components was compared to the information contained in the CHR database to assess the completeness, accuracy and timeliness of the records maintained in the database.

**Table 2: Criminal History Records by Offense Category and Most Serious Offense**

	N	%
<b>Person Offenses</b>		
Murder/Manslaughter	2	0.1
Sexual Assault/Abuse	7	0.5
Child Abuse/Neglect	3	0.2
Robbery	9	0.6
Assault/Battery	272	20.8
All Person Offenses	293	22.2
<b>Property Offenses</b>		
Burglary/Breaking and Entering	29	2.2
Grand Larceny	12	0.8
Forgery/Fraud	27	2.1
Worthless Check	11	0.7
Shoplifting	43	3.3
Minor Property Offenses	44	3.3
All Property Offenses	166	12.4
<b>Drug Offenses</b>		
Manufacture/Sale/Delivery	56	4.3
Possession	94	7.2
All Drug Offenses	150	11.5
<b>Driving Under the Influence (DUI)</b>		
All DUI Offenses	210	16.1
<b>Public Order/Other</b>		
Weapon Offenses	9	0.6
Fugitive from Justice	20	1.5
Obstruction/Resisting	26	2.1
Driving on a Suspended License	84	6.4
Public Intoxication	49	3.7
Failure to Appear	71	5.4
Capias/Warrant	83	6.3
Minor Other Offenses	155	11.8
All Public Order/Other Offenses	497	37.8
<b>Total</b>	<b>1,316</b>	<b>100.0</b>

Note: In cases where data were missing or where discrepancies existed between records in the CHR database and source documents, source records were used to identify the most serious offense.

the system adheres to BJA standards and other state requirements. This information is vital for measuring improvements in the performance of the state’s criminal history records system over time. Following procedures employed by the UCR, person offenses were considered the most serious, followed by property offenses, drug offenses, DUI offenses and public order/other offenses.

### Analysis Plan

The analysis proceeds in three general stages. First, we examine the completeness of the CHR record as a whole and report submission rates for fingerprint cards and CDRs by different types of arresting agencies and for different types of offenses. Then, in the second stage, we examine the accuracy and completeness of each the three major components of the CHR—the arrest information, the fingerprint card and the CDR. Here, we report both the composite measures for each of these sections and the measures for the individual elements contained in each section. Finally, in the third stage we examine the timeliness of the information contained in the CDR and highlight differences in timeliness for records of arrests for different types of offenses and from different arresting agencies.

## ANALYSIS RESULTS

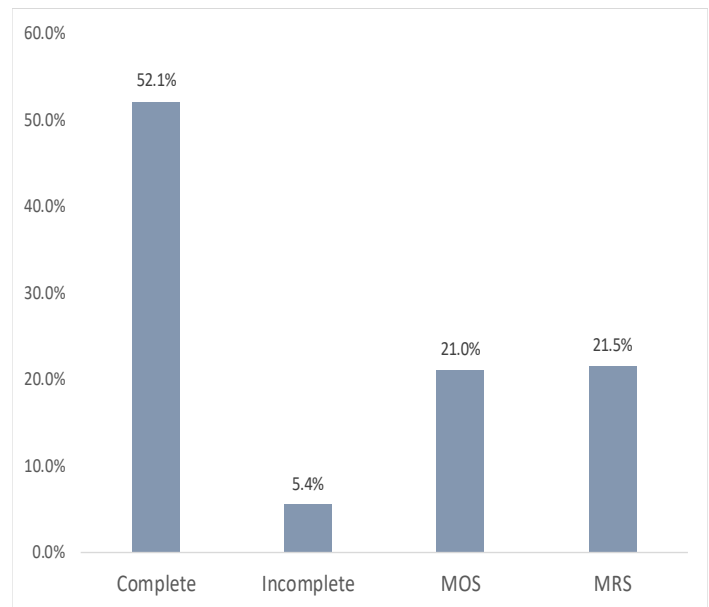
### Overall Criminal History Record

Figure 1 displays the completeness of the CHRs for all of the arrests in the sample. It shows that about 52% of all CHRs were complete, and contained all of the critical information for every section of the CHR. Most of the remaining CHRs had critical elements that were either missing from the CHR (roughly 21.5%) or from the source documents (about 21%). Approximately 5.4% of CHRs had all critical elements present on both the CHR and the source document, but had at least one element with incomplete information.

In Table 3 we examine the submission rates for fingerprint cards and CDRs across different types of agencies and across arrests for different types of offenses. Here, the results show that fingerprint cards and CDRs

**Figure 1**

Completeness of Criminal History Records (N = 1,318)



Note: “MOS” denotes records where information was missing on the source document. “MRS” denotes records where information was missing on the rap sheet.

were most likely to be submitted by county sheriffs followed by municipal police departments and state police detachments. Roughly 74.9% of the arrests by county sheriffs in the sample had a fingerprint card submitted to the CIB and 82.7% had a CDR. Arrests by municipal police departments had fingerprint cards and CDRs about 70% of the time, and arrests by state police detachments had fingerprint cards submitted in about 35% of cases and CDRs submitted in about 41% of cases. There was relatively little variation in terms of submission rates across arrests with different types of offenses. However, consistent with the findings of the previous audit, arrests for person offenses and DUIs were the most likely to have fingerprint cards and CDRs submitted, while arrests for public order/other offenses were the least likely.

### Arrest Information

Table 4 describes the completeness of each of the individual elements comprising the arrest information portion of the CHR. It shows that most of these elements

**Table 3**

## Fingerprint Cards and CDR Forms Received by Agency Type and Offense Type

	% Fingerprint Cards Received	% CDR Forms Received
<b>Agency Type</b>		
Municipal PD	69.7	69.6
State Police	35.0	41.0
County Sherriff	74.9	82.7
<b>Offense Type</b>		
Person	70.3	74.1
Property	69.1	68.0
Drug	70.5	73.8
DUI	73.8	77.6
Public Order/Other	63.5	64.3

Note: Offense information was missing on the both rap sheet contained in the CHR database and one of the source documents for 2 arrest events. These arrests were excluded from this analysis.

**Table 4**

## Completeness of Critical Arrest Record Elements

	Complete		Incomplete		MOS		MRS	
	<i>N</i>	%	<i>N</i>	%	<i>N</i>	%	<i>N</i>	%
Name	1,313	99.6	5	0.4	0	0.0	0	0.0
Date of Birth	1,317	99.9	1	0.1	0	0.0	0	0.0
State of Birth	852	64.6	0	0.0	423	32.1	41	3.1
Social Security #	1,299	98.6	1	0.1	9	0.7	8	0.6
Arrest Date	1,038	78.8	0	0.0	4	0.3	276	20.9
Charges	951	72.2	81	6.2	0	0.0	285	21.6
ORI #	1,028	78.0	0	0.0	54	4.1	228	17.3
Sex	1,317	99.9	0	0.0	1	0.1	0	0.0
Race	1,315	99.8	0	0.0	1	0.1	0	0.0
Height	1,314	99.7	0	0.0	4	0.4	0	0.0
Weight	1,310	99.4	0	0.0	7	0.5	0	0.0
Eye Color	1,195	90.7	0	0.0	121	9.2	1	0.1
Hair Color	1,184	89.8	0	0.0	116	8.8	4	0.3

Note: "MOS" denotes records where information was missing on the source document. "MRS" denotes records where information was missing on the rap sheet contained in the CHR database.

**Table 5****Accuracy of Critical Arrest Record Elements**

	Accurate		Inaccurate		MOS		MRS	
	N	%	N	%	N	%	N	%
Name	1,260	95.6	58	4.4	0	0.0	0	0.0
Date of Birth	1,283	97.3	35	2.7	0	0.0	0	0.0
State of Birth	802	60.8	50	3.8	423	32.1	41	3.1
Social Security #	1,262	95.8	38	2.9	9	0.7	8	0.6
Arrest Date	1,023	77.6	15	1.1	4	0.3	276	20.9
Charges	1,019	77.3	13	1.0	0	0.0	285	21.6
ORI #	1,021	77.5	7	0.5	54	4.1	228	17.3
Sex	1,312	99.5	5	0.4	1	0.1	0	0.0
Race	1,294	98.2	22	1.7	2	0.2	0	0.0

Note: “MOS” denotes records where information was missing on the source document. “MRS” denotes records where information was missing on the rap sheet contained in the CHR database.

were complete on the CHR for more than 90% of records. However, there were a few elements that fell below this threshold. Most notably, the charges for the arrest were complete for only about 72% of arrests, and the ORI number and the arrest date were complete for only about 78.0% and 78.8% of arrests respectively. For most of these arrests, this information was missing on the rap sheet but not on the source documents.

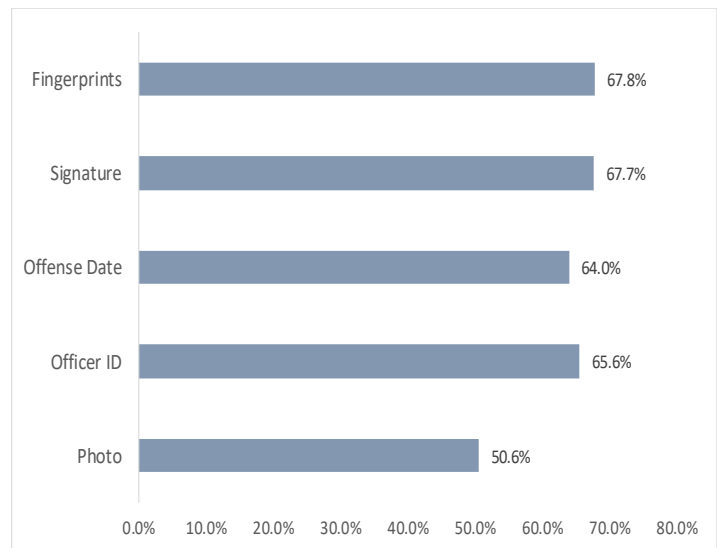
Table 5 reports the accuracy of all critical arrest information elements, except for information about the individuals’ height, weight, eye color and hair color. It shows that more than 95% of the arrest records in the sample accurately recorded the name, date of birth, social security number, sex and race of the arrested individual. However, accuracy rates were lower for the individual’s state of birth (60.8%) and the arrest date (77.6%), ORI number (77.5%) and charges (77.3%).

### *Fingerprint Cards*

The completeness of the fingerprint cards associated with each arrest are examined in Figure 2 and Table 6. Figure 2 shows that most elements of the fingerprint card were complete on more than 60% of elements. The most common reason why fingerprint cards were incomplete was a lack of information related to the availability of

**Figure 2**

### Completeness of Fingerprint Cards, by Element (N = 1,318)



Note: Fingerprint cards were assessed for completeness using original source documents at the arresting agency. Elements were considered complete if they were present on source documents.



**Table 6**  
Completeness of Fingerprint Cards by Offense Type

Offense Type	Complete		Incomplete		MOS	
	N	%	N	%	N	%
Person	142	71.0	1	0.5	57	28.5
Property	77	63.6	0	0.0	44	36.3
Drug	61	58.0	1	0.9	43	40.9
DUI	113	72.4	0	0.0	43	27.5
Public Order/Other	214	67.5	1	0.3	102	32.1

Note: Fingerprint cards were assessed for completeness using original source documents at the arresting agency. Cards were considered complete if all critical elements were present on the source document, incomplete if all elements were present but at least one element contained incomplete information, and missing on source if one or more critical elements was missing from the source document.

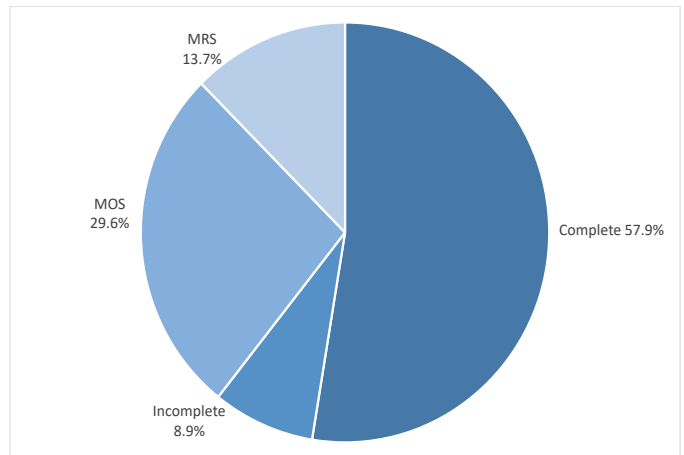
arrestee photographs, which was observed in only about 50% of records. Table 6 compares the rates of completeness for fingerprint cards across arrests for different types of offenses. Consistent with the results of previous audits in WV, it shows that fingerprint cards were most likely to be complete for arrests related to DUIs or person offenses, and least likely to be complete for arrests related to property and drug offenses.

#### *Court Disposition Report Forms*

Figure 3 describes the completeness of the dispositional information contained in the CDRs. It shows that roughly 58% of arrests in the sample had CDRs that were assessed as complete for all three critical elements (the disposition date, the final disposition, and the CDR number). Of those arrest records that were not assessed as complete, the most common reason was that the record was missing one or more critical elements on the source document (about 30% of arrests in the sample), followed by records that were missing one or more elements on the rap sheet (about 14% of the sample) and records that had all necessary elements but had incomplete information on one or more elements (about 9% of the sample).

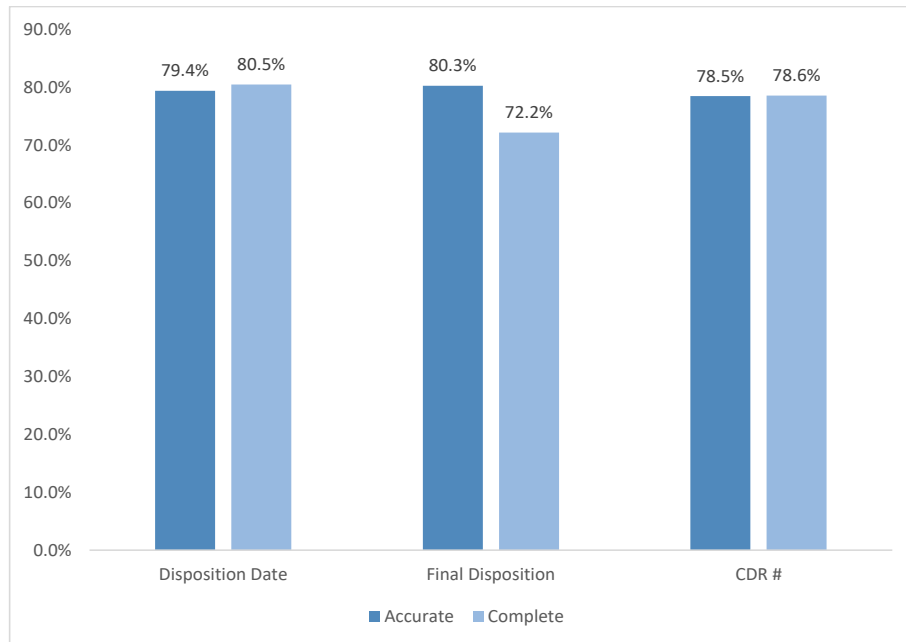
Figure 4 presents the rates of completeness and accuracy for each of the critical elements on the CDR form. It shows, first of all, that more than 70% of records had complete and accurate information for all critical elements. The lowest rate of completeness was observed for the

**Figure 3**  
Completeness of Dispositional Information  
(N = 1,318)



Note: "MOS" denotes records where information was missing on the source document. "MRS" denotes records where information was missing on the rap sheet contained in the CHR database.

**Figure 4**  
Completeness of Accuracy of Critical CDR Form Elements (N = 1,318)



final disposition information (72.2%) while the highest completeness rate was observed for the disposition date (80.5%). However, the final disposition information did have the highest accuracy rate (80.3%) while the lowest accuracy rate was observed for the CDR number (78.5%).

#### *Timeliness*

In Table 7, we examine the timeliness with which information is submitted to the criminal history records system. It shows the number of days elapsing between the date of arrest and the date on which the CIB received the fingerprint card (about 26 days on average), the date of the disposition (about 150 days on average), and the day that the CIB received the CDR form (about 184 days on average). In addition, Table 7 also reports the median and standard deviation for the days elapsing. Here, the results show that there was considerable variability in the number of days elapsing between each time point, as the values for the standard deviations were near or above the values for the means for each measure.

#### *Report Highlights...*

Approximately 52% of records and contained all of the critical information for every section of the CHR.

Most of the records that lacked information had critical elements that were either missing from the CHR (roughly 21.5% of records) or from the source documents (about 21% of records).

Submission rates for CDR forms have improved significantly over time, rising from 43.5% in 2005 to 70.1% in 2016.

However submission rates for fingerprint cards have declined slightly, falling from 68.8% in 2005 to 61.2% in 2016.

On average, 26 days elapsed between the date of arrest and the arrival of the fingerprint card at the CIB, an increase of 13 days compared to the findings of the previous audit in 2005.

**Table 7****Timeliness of Critical Arrest Record Elements**

Time Period	Mean	Days Elapsing	
		Median	S.D.
Arrest to fingerprint card arrival	26.2	5.0	53.1
Arrest to court disposition	149.6	103.0	152.1
Arrest to CDR arrival	184.1	135.5	153.2

Note: Totals for each measure are as follows: Arrest to fingerprint card arrival (N = 843), arrest to court disposition (N = 915), arrest to CDR arrival (N = 838).

## DISCUSSION AND CONCLUSION

### *Comparison with the Results of Previous Audits*

The present study provides an assessment the completeness, timeliness and accuracy of records submitted to WV’s criminal history records system using a reverse auditing methodology recommended by the BJS. As a result of the use of this methodology, this study produced findings for several indicators of data quality which can be compared directly to the results of two prior data quality reviews in WV that were conducted in 1997 and 2005. These comparisons provide several insights into the impact of efforts to enhance the quality of submissions to the state’s criminal history records system.

First, the results indicate that there has significant improvement in the submissions rates for CDR forms. In 1997, just 12.4% of arrest records in the state records system contained the associated CDR form. The submission rate for CDR forms rose to 43.5% in 2005, and the present results show that it had increased further to 70.1% by 2016. This suggests that recent efforts to improve the transfer of CDR forms to the state data system have generally been successful, and that most records now contain a CDR form.

Another important indicator for previous audits is the submission rate for fingerprint cards. Here, the results indicate that while submission rates increased between 1997 and 2005 (growing from 41.6% to 68.8%), they fell slightly in 2016, and now stand at 61.2%. This finding is somewhat surprising, as improving the submission rates for fingerprint cards has been an important point

of emphasis for efforts to modernize the fingerprint submission system in the state, primarily through the use of LiveScan technology. However, it should be noted that the LiveScan has not yet been fully adopted throughout the state and it is possible the continued use of two different processes for submitting fingerprint cards may have a negative impact on submission rates.

A third area of comparison concerns the timeliness of submissions for important arrest record components. In this regard, the 1997 audit reported that, on average, the fingerprint card arrived at the CIB about 49 days after the date of arrest. While the 2005 audit reported that the average time between arrest and fingerprint card arrival had shortened dramatically to about 13 days, the present study indicates that by 2016 the average time had increased to about 26 days on average. The data from the present study also show substantial variation in the timeliness of fingerprint card submissions. In the 2016 data, approximately 68% of arrest records had fingerprint cards that were submitted within less than 13 days. Thus, the timeliness of most fingerprint card submissions in 2016 was better than the average in 2005. The average number of days until submission in the 2016 sample is still substantially greater, however, because of the impact of a relatively small number of records (roughly 7% of the sample) which had fingerprint cards that were submitted long after the arrest date (i.e., more than 90 days). Consequently, these results suggest that inconsistency across agencies in the timeliness of submissions to the central records repository may be driving the increase in the average number of days elapsing between the date of

---

arrest and the arrival of the relevant arrest information.

The results of the present study also show a slight increase in the number of days elapsing between the date of arrest and the arrival of the CDR form. In 1997, it took 162 days on average for CDR forms to arrive at CIB after an arrest. This time frame fell to about 155 days on average in the 2005 audit but increased in the 2016 audit to about 184 days on average. However, similar to the data for fingerprint submissions, this timeliness measure is affected by the impact of a relatively small proportion of records with a large number of days elapsing between arrest and submission. Roughly 57% of records in the 2016 data had CDR forms that were submitted in less than 155 days and therefore had CDR forms that were received more quickly than the those submitted for the average arrest record included in the 2005 audit. Yet the average number of days elapsing between arrest and the receipt of CDR forms is significantly higher, due largely to the fact that, for about 13% of records in the 2016 audit, CDR submission dates were more than 365 days after the date of arrest.

### *Conclusion*

In sum, the results of the present study indicate that while submission rates for CDR forms have improved, submission rates for fingerprint cards have decreased slightly and the average number of days elapsing between the date of arrest and the arrival of fingerprint cards and CDR forms at the CIB has increased. Consequently, the present study raises some concerns about the effectiveness of recent efforts to improve the quality of submissions to the state's criminal history records system. Although the descriptive analyses conducted here are not sufficient to determine the cause of any decreases in data quality, they do suggest that some of these findings are due to a significant increase in the variability of many data quality measures. For example, all timeliness measures for arrest record submissions showed a high degree of variability, as evidenced by the large standard deviations for these measures, and it appears that the data may have been skewed by a relatively small proportion of records with unusually high values. Likewise, the measures of completeness and accuracy also display significant variability across different arrest record components and

across different types of offenses and arresting agencies. This suggests that while efforts to enhance the quality of criminal history records submissions may have had some impact, this effect has not been consistent, and consequently has not lead to significant improvements in aggregate data quality measures for some indicators.

Ultimately, more research is needed to further investigate the processes driving the findings presented here. While the reverse audit methodology employed in the present study provides valuable insights into the relationship between the records stored at local arresting agencies and those maintained at the CIB, this approach does not entail an examination of the procedures for records submission at arresting agencies. Additional field research could supplement the findings presented here with interviews or surveys of administrators and staff at arresting agencies and at the CIB aimed exploring the processes related to records submission and the ways in which they may have changed over time. Furthermore, since efforts to enhance records collection are still ongoing, it is also possible that future data quality reviews which use more recent samples of arrest records may uncover different results. It is therefore important for the state to continue its commitment to the use of rigorous audits to assess the quality of submissions to this vital records system.

### **REFERENCES**

Lester, T.K., & Haas, S. M. (2005). *West Virginia Criminal History Data Quality Review*. Charleston, WV: Criminal Justice Statistical Analysis Center, Division of Justice and Community Services, Department of Military Affairs and Public Safety.

### **ACKNOWLEDGEMENTS**

The author would like to thank to Tom Arnold and Kelsi Boyd for their valuable assistance with this project. The author is also grateful to Sergeant Scott Pettry and the staff of the West Virginia State Police Criminal Records Unit for their help in providing the criminal history reports and other information from the repository included in this review.



## DMAPS AND DJCS ADMINISTRATION

Jeff Sandy, CFE, CAMS, Cabinet Secretary, DMAPS

W. Richard Staton, DJCS Director

Jeffrey D. Estep, DJCS Chief Deputy Director

Douglas H. Spence, PhD, ORSP Director

Leslie Boggess, DJCS Deputy Director



1124 Smith Street, Suite 3100

Charleston, WV 25301

(304) 558-8814 phone

(304) 558-0391 fax

[www.djcs.wv.gov](http://www.djcs.wv.gov)

The Division of Justice and Community Services is the designated state criminal justice planning agency. The Division is responsible for fostering public safety in West Virginia by providing planning, system coordination, grant administration, training and technical assistance, monitoring, research, statistical services, and law enforcement training.

The Office of Research and Strategic Planning's (ORSP) mission is to generate statistical and analytical products concerning crime and the criminal justice system for the public and justice system professionals and policy-makers, establishing a basis for sound policy and practical decisions for the criminal justice system in West Virginia.