NEVADA COMPUTERIZED CRIMINAL HISTORY BASELINE AUDIT RESULTS

Executive Summary

APRIL 2014

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BACKGROUND

In 2011, the Nevada Department of Public Safety (DPS) completed a project to evaluate its arrest and disposition reporting process and examine methods for improving them. Among the project findings was the recognition that a baseline understanding of Computerized Criminal History (CCH) data quality has not been established before, but it is imperative to do so as a means to measure the impact of CCH processing improvements and related investments. This audit is among the first steps in a long-range plan for the overall improvement of CCH records quality, and is funded by a 2012 National Criminal History Improvement Program (NCHIP) grant.

DPS retained MTG Management Consultants, LLC, of Seattle, Washington to conduct a statistical records audit of the Nevada CCH system.
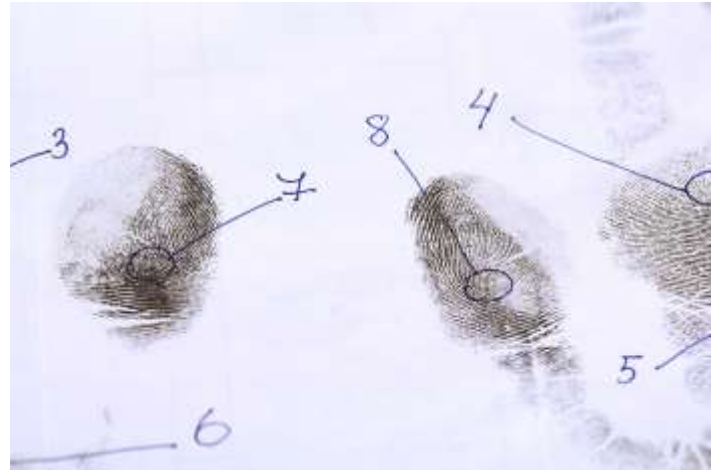
OBJECTIVES

The primary objective of this project is to conduct a quantitative evaluation of the Nevada DPS CCH system. Outcomes of the project include:

- Establishing baseline statistics on the extent of arrest and disposition reporting to the Nevada DPS General Services Division.
- Determining where criminal history records are incomplete.
- Identifying potential targets for future records reconciliation and outreach programs to retrieve missing CCH information.
- Guiding Nevada DPS plans to modernize the CCH system.
- Understanding the overall extent of conditions leading to incomplete, inaccurate, and untimely information.

In performing this audit, DPS placed a priority on assessing the completeness, timeliness, and accuracy of sampled arrest records containing criterion offenses that potentially disqualify an individual from a firearm purchase or employment in a long-term healthcare facility, or require them to register as a sex offender. In addition, the agency sought a reasonably high level of statistical confidence and accuracy from this assessment.

AUDIT APPROACH

The audit set out to collect 384 random law enforcement arrest record events and their corresponding court dispositions from source agencies (e.g., police departments, booking agencies, courts). Sampled cases were limited to those considered to contain criterion offenses, that is, those cases where a conviction would result in the subject being disqualified from purchasing a firearm or employment in a long-term healthcare facility, or would require them to register as a sex offender.

STATISTICAL RELIABILITY

The audit used generally accepted standards for calculating audit sample sizes. The following table shows projected and actual statistical validity measures:

Measure	Projected	Actual
Confidence Level	95%	95%
Population	250,000	250,000
Sample Size	384	374
Confidence Interval	5.00	4.96

Although 10 fewer records were collected than projected, there was a higher confidence interval

because of the higher than expected quality of the data within the records collected.

PROCESS

The audit collected 374 random law enforcement arrest records from the source agency of record between the years of 2008 and 2012. From there, the corresponding court case dispositions were collected from the court source of record. The audit then compared the information on the source documentation with the information resident in the CCH database while noting where information had any of the following attributes:

- *Erroneous (E)* – The data element from the CCH database does not match the corresponding information on the source document.
- *Missing (M)* – The data is available on the source document but missing from the CCH database record.
- *No Source Data (S)* – There is no source document data for a field that has a value in the CCH database records.
- *Correct (C)* – None of the above conditions apply, and the data is complete and correct.

Additionally, the audit tools used recorded arrest and disposition event timing in terms of accuracy between source documents and latency from the date of the event versus the date when the event was actually recorded.

AUDIT RESPONSIVENESS

The greatest challenge the audit project faced related to the engagement of law enforcement and court agencies to participate in the audit by collecting and forwarding records to the auditors. The following table summarizes audit participation:

Measure	Sought	Received
Law Enforcement Records	384	374
Court Records	384	262

The audit team requested an extension to the original project deadline, from September 30, 2013, to March 31, 2014, to continue efforts to increase the number of records collected. This is indicative of the governance and technical issues previously noted in the 2011 report.

AUDIT RESULTS

The audit calculates overall data quality using common standards for assessing records receipt, completeness, accuracy, and timeliness as outlined below.

ASSESSMENT OF RECORDS RECEIPT

The likelihood of a record being received by the CCH repository agency (NV DPS) during the audit period is:

Measure	Result
Arrest Record	97.34%
Disposition Record	51.56%

ASSESSMENT OF RECORDS COMPLETENESS

The likelihood of a CCH record containing all of the requisite data elements available from the corresponding source document for records evaluated during the audit period is:

Measure	Result
Arrest Record	61.76%
Disposition Record	94.90%

ASSESSMENT OF RECORDS ACCURACY

The likelihood of a CCH record accurately reflecting the content on the corresponding source document for records evaluated during the audit period is:

Measure	Result
Arrest Record	48.13%
Disposition Record	57.58%

ASSESSMENT OF RECORDS TIMELINESS

The likelihood of a CCH record reflecting the corresponding source document time stamps for official dates of action and the corresponding measure of CCH posting latency are as follows:

Measure	Timeliness Accuracy	Timeliness Latency
Arrest Record	97.9%	2.61 Days
Disposition Record	76.8%	80.93 Days

CCH DATA QUALITY ASSESSMENT

The final data quality assessment is calculated by multiplying the factors of records receipt, completeness, accuracy, and timeliness. This is presented in terms of arrest records, disposition records, and aggregate measurement inclusive of both arrests and dispositions.

ARREST RECORDS DATA QUALITY

Measure	Value
Probability of a Recorded Record in CCH:	97.34%
Probability of a Recorded and Complete Record in CCH:	60.11%
Probability of a Recorded, Complete, and Accurate Record in CCH:	28.93%
Probability of a Recorded, Complete, Accurate, and Timely Record in CCH:	**28.32%**

DISPOSITION RECORDS DATA QUALITY

Measure	Value
Probability of a Recorded Record in CCH:	51.56%
Probability of a Recorded and Complete Record in CCH:	48.93%
Probability of a Recorded, Complete, and Accurate Record in CCH:	28.17%
Probability of a Recorded, Complete, Accurate, and Timely Record in CCH:	**21.63%**

FINAL DATA QUALITY ASSESSMENT

Measure	Value
Probability of a Recorded, Complete, Accurate, and Timely Arrest Record:	28.32%
Probability of a Recorded, Complete, Accurate, and Timely Disposition Record:	21.63%
Probability of a Fully Recorded, Complete, Accurate, and Timely CCH Record:	**24.97%**

NATIONAL COMPARATIVES

Many states employ agency programs to continually monitor and improve CCH data quality. This monitoring includes periodic random audits and programs targeted at finding and correcting aged or errant CCH data. While these measures are not typically published, we can surmise that in the experience of the auditors, which have conducted many similar audits nationally, Nevada is on par with peer state averages nationally in terms of overall CCH data quality. This is further supported by measures derived from the following publications:

- 2012 Bureau of Justice (BoJ) Statistics Survey of Criminal History Systems (referred to in the tables below as BJS CCH Survey).
- 2005 BoJ Statistics Measuring the Performance of Criminal History Records Systems: The Records Quality Index (referred to in the tables below as BJS Records Quality Index).

ARRESTS WITH CORRESPONDING DISPOSITIONS

Percentage of Arrests that Have Corresponding Dispositions	BJS CCH Survey	BJS Records Quality Index
National Average (High)	73%	59%
National Average (Low)	52%	49%
2012 Nevada Audit	*51%*	*51%*

DISPOSITION POSTING TIMELINESS

Percentage of Arrests that Have Corresponding Dispositions	BJS CCH Survey	BJS Records Quality Index
National Average (High)	29 Days	182 Days
National Average (Low)	25 Days	145 Days
2012 Nevada Audit	*81 Days*	*81 Days*

FINDINGS VALIDATION

One of the goals of the audit was to validate a series of findings regarding the difficulties in disposition reporting to the state CCH. The following subsections detail where these findings from the 2011 report are substantiated by the audit:

ORGANIZATIONAL

- No single point of ownership or authority exists for the overall criminal history reporting process in Nevada.
- There are widespread inconsistencies in the use and understanding of reportable charges to the CCH repository.
- CCH users generally perceive the CCH data to be largely incomplete.

POLICY AND PROCEDURAL

- Policy regarding what constitutes a retainable charge is not well understood by contributing stakeholders and is managed poorly in practice.
- Disposition reporting formats vary widely.
- Charge-level tracking practices are problematic.

WORK FLOW

- The transfer of criminal history data among contributing agencies is characterized by a high degree of manual intervention.
- Criminal history reporting practices and responsibilities vary greatly at the local agency level.

ENVIRONMENTAL

- There are inconsistencies in the manner in which case dismissals are reported to DPS, especially regarding the agency of responsibility.
- There are difficulties associated with the coding translations of the Nevada Offense Codes (NOCs).
- Nevada has a high rate of automatic fingerprint submissions via Live-Scan compared to most states.
- Received dispositions can contain interim disposition statuses as opposed to fully adjudicated charge information.
- A DPS standard for the reporting of court disposition information exists, but is largely not utilized.

It is noted that some findings from the 2011 report were beyond the scope of this audit. Further, there were no findings invalidated by the audit.

AUDIT OBSERVATIONS

There were many takeaways from the audit identified in the baseline audit deliverable. In addition to these, there are two new overarching observations:

- *Records Control* - Where DPS can control records (i.e. Live-Scan and arrest data), data quality is generally very good. Conversely, where DPS relies on information that they can not readily control (i.e. prosecution and court data), data quality is much lower.

- *Currently Available Electronic Disposition Data* - The audit found publically available disposition information that was not resident in CCH. This was primarily from court websites in larger jurisdictions that allowed disposition queries based on case numbers, person name, and other identifiers. This indicates the potential for electronic interfaces among courts and DPS using existing systems. Of course, these tools need to be validated and well understood before assessing their full potential as automated tools for updating CCH records.

NEXT STEPS

NV DPS is working on a comprehensive plan for the improvement of CCH records data quality. Additionally, DPS is weighing options and approaches for upgrades and improvements to the underlying technologies supporting CCH and many other DPS technical systems. Progress against the 2012 Disposition Reporting Environment Implementation Plan is indicated below:

Initiative / Project	Description	Status
I	**EXISTING RECORDS IMPROVEMENT**	
Project 1	CCH Records Statistical Audit	Complete
Project 2	CCH and Partner Systems Reconciliation	Current
Project 3	Training and Outreach	Current
Project 4	Suspense File Reengineering	Pending
II	**PROJECT GOVERNANCE FOUNDATION**	
III	**AUTOMATION DEVELOPMENT**	
IV	**PILOT IMPLEMENTATION**	
V	**STATEWIDE IMPLEMENTATION**	

As shown, DPS continues to dedicate resources toward the improvement of CCH records. Automation improvements between DPS and the courts continue to be the basis for the greatest improvements to CCH data quality. However, this must be a well-coordinated and highly governed effort to achieve real gains.

NEVADA COMPUTERIZED CRIMINAL HISTORY BASELINE AUDIT RESULTS

To obtain more information about this CCH audit, please contact:

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