U.S. Department of Justice
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Bureau of Justice Assistance

Early Experiences With Criminal History Records Improvement

Monograph

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Foreword

The Criminal History Records Improvement (CHRI) Program was the first installment in a long-term and multifaceted effort by the U.S. Department of Justice to assist States in improving the quality of their criminal history records. CHRI Program awards totaling more than $27 million were made to 53 jurisdictions (all 50 States, the District of Columbia, American Samoa, and the Commonwealth of the Northern Mariana Islands) from fiscal year (FY) 1990 through FY 1993. The CHRI Program was administered by the Bureau of Justice Statistics (BJS). The evaluation leading to this monograph was supported through BJS's sister agency within the Office of Justice Programs (OJP), the Bureau of Justice Assistance (BJA).

The CHRI Program's goals were to enhance State criminal history records by improving their quality and timeliness, assist States in meeting new standards for voluntary reporting of criminal record information to the Federal Bureau of Investigation (FBI), and overcome obstacles to identifying felons who attempted to purchase firearms. To accomplish these goals, the CHRI Program supported a wide array of technological activities that ranged from baseline data quality audits to the design and implementation of sophisticated electronic interfaces between a State's central repository and its court information system(s).

CHRI's origin dates to the passage of the Anti-Drug Abuse Act of 1988, which also established the BJA Criminal Justice Records Improvement (CJRI) Program. Under CJRI, States receiving awards on an annual basis under the Edward Byrne Memorial State and Local Law Enforcement Assistance Formula Grant Program are required to apply a minimum of 5 percent of each award to activities seeking to improve the accuracy and completeness of records related to the disposition of cases and offenders by the criminal justice system. Other CJRI goals are to automate all criminal history recordkeeping systems and to promote interface between State repositories and the FBI's criminal history record programs. Funding under the CJRI Program began in FY 1992 and continues today. From the beginning, States saw the CJRI Program as a mechanism to expand on and complete activities begun under the CHRI Program.

With the passage of the Brady Handgun Violence Protection Act and the National Child Protection Act in 1993, the CJRI Program goals were expanded to include assisting States in implementing the provisions of these acts. At the same time, BJS was given the responsibility of administering a complementary program, the National Criminal History Improvement Program (NCHIP), which also supports Brady and Child Protection Act goals. BJA and BJS continue to work in tandem, using these programs to assist States in addressing these complex and important national priorities.

BJS is now supporting continuation of the evaluation, which will address CHRI, CJRI, and NCHIP activities. Thus, this monograph becomes a record of and a building block to, rather than a final report on, a comprehensive nationwide examination of the quality of State criminal justice recordkeeping systems.

BJA is pleased to contribute to this Federal and State partnership effort by supporting improvement of and providing information on these very significant activities. They serve not only to improve criminal history record systems but also to enhance interagency cooperation within States and to heighten awareness of the importance of criminal history record information nationwide.

Nancy E. Gist
Director

Acknowledgments

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Executive Summary

Over several years, the U.S. Department of Justice (DOJ) has supported a multifaceted effort to improve the quality of State criminal history records. A key component of this effort is the multiyear Criminal History Records Improvement (CHRI) Program, administered by the Bureau of Justice Statistics (BJS), within DOJ's Office of Justice Programs (OJP). A total of 81 awards were made between fiscal year (FY) 1990 and FY 1993 to all 50 States, the District of Columbia, American Samoa, and the Northern Mariana Islands. These 81 awards have supported a wide range of activities, from baseline data quality audits to the design and implementation of sophisticated electronic interfaces between a State's central repository and its court information system(s). In addition to improving the accuracy, timeliness, and completeness of records in the criminal history repositories of each State, CHRI funds have enhanced the viability of an eventual national criminal history system, strengthened interagency cooperation among State agencies, and heightened awareness of the importance of criminal history records.

The CHRI Program has clearly made a critical contribution to improving the quality of criminal history records.

When this evaluation of the CHRI Program ended in April 1994, 22 States were still working on their CHRI projects; the findings reported here should therefore be viewed as preliminary. Nevertheless, the CHRI Program has clearly made a critical contribution to improving the quality of criminal history records; indeed, it is a long-term effort to bring all States into compliance with Federal and State data quality standards.

Fortunately, as the CHRI projects are completed in each State, other Federal moneys become available for continuing the data quality initiative, including funds from the Bureau of Justice Assistance (BJA) under the Criminal Justice Records Improvement (BJA/CJRI) Program and, potentially, the Brady Handgun Violence Protection Act and the National Child Protection Act, both of 1993. In fact, the continuing stream of Federal funds no doubt led most States to use CHRI funds to initiate multiyear data quality improvement efforts that address underlying systemic problems in criminal history recordkeeping, rather than focusing on one-time activities that may be more expedient than effective.

The remainder of this Executive Summary discusses the background and provides an overall assessment of the CHRI Program, offering recommendations for guiding future programs in the area of criminal history records improvement.

History

The origin of the CHRI Program dates to the congressional passage of Section 6213(a) of the Anti-Drug Abuse Act of 1988. This law required the Attorney General, in consultation with the Secretary of the Treasury, to develop a system for the immediate and accurate identification of felons who attempt to purchase firearms. Pursuant to this mandate, the Attorney General appointed the Task Force on Felon Identification in Firearm Sales. In May 1989, this task force published its recommendations. In a related effort, Queues Enforth Development, Inc. (Q.E.D.) was contracted to undertake a study on the feasibility of identifying persons, other than felons, ineligible to purchase firearms.

In his comments on the May 1989 report, then-Attorney General Richard Thornburgh noted several obstacles in providing for the immediate and accurate identification of felons who attempt to purchase firearms. One obstacle is that many criminal history records are incomplete, particularly regarding the final disposition of the case; another concerns inaccurate data. To address these data quality issues, as well as to facilitate implementation of the Felon Identification in Firearm Sales system, the Attorney General made a number of recommendations. In particular, he recommended using $9 million per year of the Anti-Drug Abuse Act discretionary funds in FY 1990, FY 1991, and FY 1992 to fund the CHRI Program.

Goals

The three overall goals of the CHRI Program are to:

- Enhance State criminal history records to identify convicted felons accurately.
- Meet the new Federal Bureau of Investigation (FBI)/BJS voluntary reporting standards for identifying such individuals.
- Improve the quality and timeliness of criminal history record information.

In general, the primary focus of the CHRI Program is to improve disposition reporting. Because the genesis of the CHRI Program was an effort to identify convicted felons who attempt to purchase firearms, the emphasis on disposition reporting is appropriate.

Evaluation

Given the amount of Federal moneys directed to the CHRI Program, it was decided that a private contractor should conduct an evaluation of the program. BJA issued a request for proposals in September 1991. The BJA solicitation stated that the CHRI evaluation should:

- Assess the impact of the CHRI Program on data quality in each of the participating States, particularly regarding timeliness, accuracy, completeness, and the ability of the State to identify felons and to comply with the FBI/BJS voluntary standards.
- Identify promising approaches and strategies for improving data quality.

BJA selected Q.E.D. to conduct the evaluation and in March 1992 awarded the company a 2-year grant for this effort.

The objectives helped Q.E.D. select a two-pronged evaluation approach: (1) an overall impact evaluation of all participating CHRI States and (2) a systemic study of three to five States that have developed and implemented particularly innovative or successful data quality improvement activities. The impact evaluation should benefit DOJ officials who need to know "how well these funds were spent." Individual States, however, can be viewed as the primary beneficiaries of the detailed systemic study because systems or procedures implemented successfully in one State might be adopted in other States.

It is helpful to contrast the CHRI evaluation study goals with those of the BJS-sponsored surveys on the status of criminal history records. Whereas the surveys focus on *what* the status of data quality is, the CHRI evaluation study addresses *why* data quality has improved and *how* specific activities improved data quality. Put another way, the BJS-sponsored surveys reflect a *snapshot-based* approach, whereas the CHRI evaluation study reflects an *activity-based* approach. The two approaches are clearly complementary.

The BJS-sponsored surveys reflect a snapshot-based approach, whereas the CHRI evaluation study reflects an activity-based approach.

Findings of the CHRI evaluation study can be summarized as follows. In terms of Program awards:

- In total, 53 jurisdictions—the 50 States plus American Samoa, the District of Columbia, and the Northern Mariana Islands (hereinafter referred to as "States")—received 81 CHRI awards.
- The amount of CHRI awards ranged from $112,842 to $921,669. The average award was $521,227.
- States were able to leverage other State and Federal money to expand and extend the scope of their CHRI projects.

For the CHRI evaluation study, 12 data quality improvement strategies that underscore the long-term goals of a quality criminal history system were identified. The States selected to implement strategies consistent with CHRI Program goals:

- The most common CHRI-supported strategy has been to improve automation of the central repository: 46 of 53 jurisdictions used CHRI funds for this purpose.

- The only other strategy addressed by more than half of the States (29 of 53) with CHRI funds was automation of disposition reporting.

Forty-six activities related to the 12 strategies were also identified. The implementation status and funding of these activities were as follows:

- The number of activities proposed by each State ranged from 1 to 10. The average number to be implemented was four. The level of effort required to implement each activity varied widely; for this reason, the number of activities being implemented should not be considered a measure of performance.
- In total, the CHRI Program is supporting 213 data quality improvement activities throughout the 53 jurisdictions; at the end of this initial evaluation stage (April 1994), approximately two-thirds of these activities had been completed and one-third were still ongoing in 22 States.
- Only CHRI funds were used to support 66 percent of the 213 activities: State and BJA/CJRI funds were used to complement the CHRI support of the other 34 percent of the activities.

Eight of the possible 46 activities were supported by CHRI funds in 10 or more States:

- Electronic interfaces between the courts and the central repository data base were designed or implemented by 22 States, but the percentage of dispositions submitted electronically in these 22 States varied.
- Baseline audits of criminal history record systems were conducted by 17 States. Audit results concur with results of the BJS data quality survey and underscore the urgent need for continued efforts to improve data quality.
- Felony flagging systems were developed by 17 States to allow the States to determine quickly whether an offender has been convicted of a felony. The use of State-specific felony definitions in these efforts raises questions about the feasibility of achieving consistency in a national felony flag system.
- Disposition backlogs were processed by 15 States. As of April 1994, these States added 1.2 million dispositions to central repository data bases.
- Long-term data quality improvement plans were developed by 12 States.
- Computerized criminal history (CCH) programs were rewritten by 11 States.
- Manual criminal history records were automated by 11 States.
- Unreported dispositions were obtained by 10 States from other criminal justice agencies.

In addition to helping the States meet the three CHRI Program goals, this program has:

- Improved the national criminal history system.
- Improved interagency cooperation.
- Heightened awareness of the importance of criminal history record information.

Much of the impact of the CHRI Program has yet to be realized. As of April 1994, CHRI funds were still supporting activities in 22 States. Most important, in most States the same data quality improvement activities supported with CHRI funds were being continued with BJA/CJRI funds.

Although the accomplishments of the CHRI Program are significant, the program should be viewed in the context of the total long-term effort to improve data quality and to bring all States into compliance with State and Federal standards. On the basis of experience with the CHRI Program, a few observations can be made on the level of effort still required. First, the CHRI Program has enabled each State to implement only a small fraction of all the needed data quality improvement activities. Second, an activity is never really completed in the sense that no more resources need be directed to that activity. Third, the CHRI-supported data quality audit results, observations in the States, and the results of the BJS data quality survey underscore the urgent need for continued emphasis on improving data quality. Finally, it is critical that evaluations of programs like CHRI continue to be made.

CHRI-supported data quality audit results, observations in the States, and the results of the BJS data quality survey underscore the urgent need for continued emphasis on improving data quality.

Recommendations for Future Criminal History Records Improvement Programs

Given different States' views of data quality problems and improvement activities, the ultimate objectives of an ideal criminal history system, the status of related grant programs, and the lessons and experiences of the CHRI Program, it is recommended that the following five measures be undertaken for future criminal history records improvement efforts:

- Continue funding of records improvement initiatives.
- Continue to require establishment of multiagency task forces.
- Fund baseline activities.
- Continue to emphasize automation.
- Work toward implementing paperless reporting systems.

Finally, three recommendations are made for research and evaluation:

- Continue evaluation of CHRI-like activities, especially other federally supported efforts to improve criminal history data quality.
- Develop and publish a guide for improving data quality to expand and pilot test the guide-related ideas promulgated in the CHRI evaluation study, including such concepts as the data quality chain and the data quality index.
- Assess the usefulness of criminal history records.

Introduction

During the past 5 years, the need to improve the quality of criminal history records has been one of the major challenges facing Federal, State, and local criminal justice agencies. This report presents the findings of an evaluation of the Criminal History Records Improvement (CHRI) Program, a $27 million effort funded and administered by the Bureau of Justice Statistics (BJS) to meet this need.

The CHRI Program originated with the passage of Section 6213(a) of the Federal Anti-Drug Abuse Act of 1988. This law required the U.S. Attorney General, in consultation with the Secretary of the Treasury, to develop a system for the immediate and accurate identification of felons who attempt to purchase firearms. To meet this mandate, then-Attorney General Richard Thornburgh established the Task Force on Felon Identification in Firearm Sales. In May 1989, the Task Force published its *Report to the Attorney General on Systems for Identifying Felons Who Attempt To Purchase Firearms*.[1] A related study, *Identifying Persons, Other Than Felons, Ineligible To Purchase Firearms: A Feasibility Study,* was undertaken at the same time.[2]

In comments on the first study, Attorney General Thornburgh noted two major obstacles in providing for the immediate and accurate identification of felons (especially those attempting to purchase firearms). One of the obstacles was the incompleteness of many existing criminal history records, particularly in regard to information on final case disposition. The second obstacle was the inaccuracy of data. To address these issues as well as to facilitate implementation of the Felon Identification in Firearm Sales system, the Department of Justice initiated a multifaceted effort to improve the quality of criminal history records at the State level. First, the Federal Bureau of Investigation (FBI) and BJS were directed to publish criminal history data quality standards.[3] Second, funds were provided to the FBI to reduce their

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[1] U.S. Department of Justice. 1989 (October). *Report to the Attorney General on Systems for Identifying Felons Who Attempt To Purchase Firearms.* Washington, DC.

[2] Tien, J.M., and T.F. Rich. 1990 (May). *Identifying Persons, Other Than Felons, Ineligible To Purchase Firearms: A Feasibility Study.* Washington, DC: U.S. Department of Justice.

[3] Federal Bureau of Investigation and Bureau of Justice Statistics. (February 13) 1991. "Voluntary Standards for Improving the Quality of Criminal History Records and Guidelines for Identifying Felony Convictions." *Federal Register* 56(30).

backlog of fingerprint cards and disposition reports and to automate their manual criminal history records. Third, the Attorney General recommended that $9 million of the Anti-Drug Abuse Act discretionary funds be used in fiscal year (FY) 1990, FY 1991, and FY 1992 to fund the CHRI Program.

In addition to establishing the CHRI Program, the Federal Government has directed approximately $21 million per year since FY 1992 toward criminal history records improvement through the Bureau of Justice Assistance (BJA) Criminal Justice Records Improvement (CJRI) Program.[4] In FY 1995, $100 million was appropriated for criminal history records improvement under the Brady Handgun Violence Prevention Act of 1993.

In addition to establishing the CHRI Program, the Federal Government has directed approximately $21 million per year since FY 1992 toward criminal history record improvement through the BJA/CJRI Program.

Emphasis on criminal history records is appropriate for a number of reasons. First, criminal history records are critical to the day-to-day operation of virtually every Federal, State, and local criminal justice agency. Law enforcement officers, prosecutors, judges and other court officials, corrections staff, probation officers, and parole officers all depend on timely and accurate criminal history information for processing offenders through the criminal justice system. In fact, availability of reliable information is a critical component of the criminal justice system.

Second, noncriminal justice uses of criminal history records are rapidly increasing. The Brady Act and the National Child Protection Act of 1993 dramatically expanded the importance of criminal history records for determining eligibility to purchase a firearm and for screening childcare facility employees. In addition, most States permit some noncriminal justice agencies access to criminal history records for employment, licensing, and other purposes.

Third, although the need for access to criminal history records continues to increase, long-term problems with the quality of these records persist. These problems were first widely discussed in 1967, with publication of the report by the President's Commission on Law Enforcement and the Administration of Justice, which noted that criminal history records were frequently inaccurate, incomplete, and inaccessible.[5] Yet a data quality survey conducted in 1988 found that only 11 of the 50 States surveyed reported that 70 pejvent or more of arrests in their criminal history data base had entries for final dispositions.[6] By 1992 results of another survey showed that 16 States reported meeting that standard.[7] At the national level, only one-third of the offenders listed in State

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[4] To avoid confusion with the CHRI Program, this program is called the BJA/CJRI Program in this report.

[5] President's Commission on Law Enforcement and Administration of Justice. 1967 (February). *The Challenge of Crime in a Free Society*. Washington, DC: U.S. Government Printing Office.

[6] SEARCH. 1991 (March). *Survey of Criminal History Information Systems*. Washington, DC: U.S. Department of Justice, Office of Justice Programs, Bureau of Justice Statistics.

[7] SEARCH. 1993 (November). *Survey of Criminal History Information Systems, 1992*. Washington, DC: U.S. Department of Justice, Office of Justice Programs, Bureau of Justice Statistics.

criminal history repositories were also listed in the FBI Interstate Identification Index (III).[8]

Fourth, criminal justice agencies in every jurisdiction are responsible for reporting criminal records to State central repositories. Unfortunately, many of these repositories have suffered budget cuts that have caused them to become seriously understaffed and/or to be left with inadequate or outdated automation capability. Acceptable data quality cannot be ensured until appropriate reporting procedures are developed and effective automated systems are able to receive, store, and retrieve information quickly and accurately.

CHRI Program

In general, the primary focus of the CHRI Program is to identify impediments to disposition reporting, to develop plans and procedures to improve such reporting, and to allocate resources to overcome obstacles preventing complete disposition reporting. Because the genesis of the CHRI Program was an effort to identify convicted felons who attempted to purchase firearms, the emphasis on disposition reporting is appropriate.

Under the CHRI Program, 81 awards were made in FY 1990 through FY 1993 to all 50 States, the District of Columbia, American Samoa, and the Northern Mariana Islands.[9] The awards supported a wide range of activities, from baseline data quality audits to the design and implementation of sophisticated electronic interfaces between a central record repository and the court's information system.

The findings of this report are preliminary because 22 States were still working on their CHRI projects when this evaluation was completed in April 1994. In addition, many CHRI-initiated activities are being continued under funding from other Federal grant programs, such as the BJA/CJRI Program. Although the final impact of the CHRI Program has not yet been realized, it has already made a significant contribution to the ongoing process of improving the quality of criminal history records. In addition to improving the accuracy, timeliness, and completeness of records at the State criminal history repositories, CHRI funds increased the possibility of a national criminal history records system, improved interagency cooperation among State agencies, and heightened awareness in the criminal justice community of the importance of criminal history records.

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[8] SEARCH. 1993 (November). *Use and Management of Criminal History Record Information: A Comprehensive Report*. Washington, DC: U.S. Department of Justice, Office of Justice Programs, Bureau of Justice Statistics.

[9] Throughout this report the term "State" refers to any and/or all 53 of these administrative divisions.

Improving the quality of criminal history data bases to comply with Federal and State standards is a long-term and costly process that will require a conscious effort to complete. Despite the problems with funding and reporting protocols, the CHRI Program has already contributed significantly toward accomplishing this objective.

CHRI Program Goals

The purpose of the CHRI Program is to improve the accuracy of identifying and recording information on convicted felons. The specific goals of the CHRI Program were to:

- Enhance State criminal history records.
- Meet the new FBI/BJS voluntary reporting standards.
- Improve the quality and timeliness of criminal history records information.

To meet these goals, eight broad funding categories were established to:

- Develop systems and procedures to identify convicted felons through an examination of automated or manual criminal history records and to include a felony flag in criminal history records.
- Develop systems and procedures to improve reporting to the central repository of all arrests, dispositions, and other related criminal justice information.
- Develop programs and procedures to meet the new FBI reporting standards for identifying convicted felons, including making such records available to authorized State, local, and Federal criminal justice agencies.
- Implement a State master name index (MNI) or enhance existing automated MNI's by increasing the number of individuals listed in the index.
- Establish a computerized criminal history (CCH) record system or facilitate an increase in the number of individuals recorded in existing systems to improve the quality and timeliness of criminal history records.
- Develop procedures to participate in the III.
- Conduct a baseline audit of criminal history records systems to assess existing data quality levels, to identify problems in the present system, and to establish a basis for evaluating the success of a data quality improvement program.
- Upgrade existing data systems by acquisition of auxiliary equipment such as disks, printers, and communication lines.

Program Status

As shown in Exhibit 1–1, all States participated in and received funds from the CHRI Program. Because 28 jurisdictions received 2 awards, the total number of awards was 81. A total of $27.6 million was awarded, with the amounts of

individual awards ranging from $112,842 to $921,669; the average award was $521,227. Exhibit 1–1 also shows the CHRI per capita funding amounts, based on estimated 1990 State population figures. Because CHRI awards were not based on a formula, as were BJA/CJRI Program funds, it is perhaps not surprising that the larger grant dollar per capita awards went to those jurisdictions with small populations: American Samoa; the Northern Mariana Islands; Alaska; Delaware; Washington, D.C.; Vermont; Montana; and North Dakota.

Exhibit 1–2 shows the start and projected end dates of each CHRI project. The timeframe of CHRI projects extended well beyond the original 3-year period of fiscal years 1990, 1991, and 1992. In fact, 32 States extended their CHRI project periods into calendar year 1994. Exhibit 1–2 also shows the time period of the evaluation study. In particular, it should be noted that CHRI projects have been operating since September 1990, fully 19 months before the start date of the evaluation, and 22 States expected to end their CHRI projects after the end date of the study (April 1994). Consequently, the findings of this study should be regarded as preliminary.

Related Programs and Legislation

Since the CHRI Program was announced in May 1990, several key events occurred to accelerate activity in criminal justice record improvement. Some of the responses to the Attorney General's recommendations and the Federal legislation described earlier in this chapter have appeared in the form of publications or additional legislation, as shown in Exhibit 1–3. Three of the most significant related programs are described in the following section.

These grant programs, as they are funded, will build on efforts initiated with CHRI funds. In the end, each of these programs will provide aggregate information that will interact with and complement the improvement of criminal history records throughout the United States.

BJA/CJRI Program

Perhaps the most important response to the Attorney General's recommendations was an amendment to the Crime Control Act of 1990. The amendment required States to spend 5 percent of their annual BJA formula grant funds (about $21 million of $423 million in FY 1992) on improving the quality of their criminal history records.

The objectives of the BJA/CJRI Program, created by this amendment, are similar to those of the CHRI Program:

- Complete criminal histories by including the final disposition of all arrests for felony offenses.
- Automate all criminal justice histories and fingerprint records.
- Improve the frequency and quality of criminal history reports to the FBI.

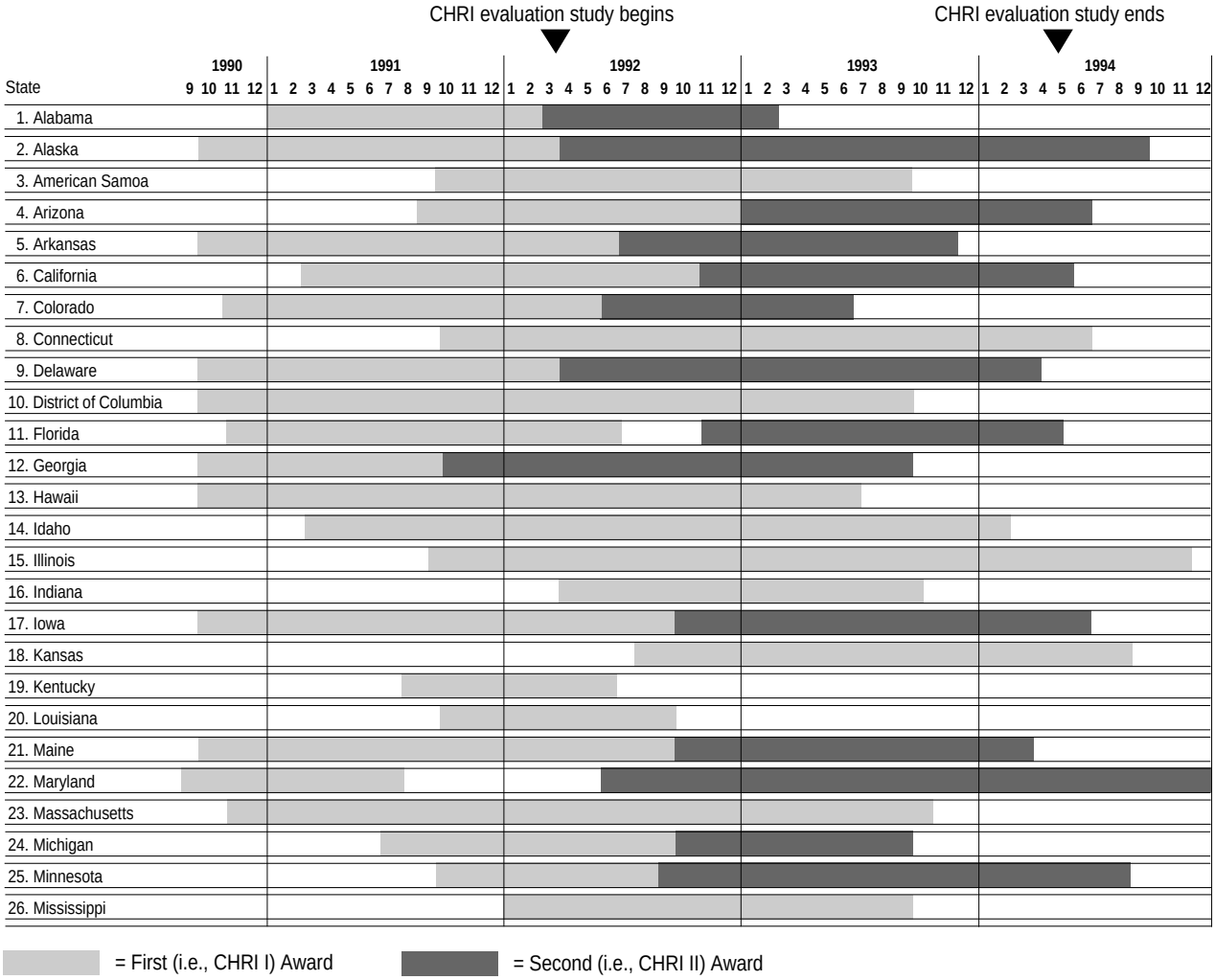
Exhibit 1–1 CHRI Projects: Funding Levels

State	Awards		1990 Population	Per capita $
	#	$ Amount		
Alabama	2	442,112	4,185,700	0.11
Alaska	2	669,170	538,300	1.24
American Samoa	1	112,842	46,800	2.41
Arizona	2	564,660	3,638,800	0.16
Arkansas	2	863,539	2,436,600	0.35
California	2	603,772	29,227,500	0.02
Colorado	2	454,013	3,372,500	0.13
Connecticut	1	500,000	3,282,100	0.15
Delaware	2	686,831	672,000	1.02
District of Columbia	1	474,600	620,100	0.77
Florida	2	431,747	12,898,100	0.03
Georgia	2	901,599	6,526,600	0.14
Hawaii	1	500,000	1,121,000	0.45
Idaho	1	235,341	1,021,200	0.23
Illinois	1	500,000	11,696,900	0.04
Indiana	1	433,096	5,617,900	0.08
Iowa	2	777,447	2,857,800	0.27
Kansas	1	363,856	2,518,000	0.14
Kentucky	1	499,800	3,766,200	0.13
Louisiana	1	120,711	4,425,000	0.03
Maine	2	500,566	1,222,700	0.41
Maryland	2	722,055	4,717,600	0.15
Massachusetts	1	431,672	5,927,500	0.07
Michigan	2	280,970	9,345,300	0.03
Minnesota	2	562,554	4,360,100	0.13
Mississippi	1	135,046	2,657,100	0.05
Missouri	2	759,091	5,222,700	0.15
Montana	2	432,182	814,300	0.53
Nebraska	2	670,000	1,606,800	0.42
Nevada	1	281,920	1,099,500	0.26

Exhibit 1–1 CHRI Projects: Funding Levels (continued)

State	Awards		1990 Population	Per capita $
	#	$ Amount		
New Hampshire	1	480,352	1,106,400	0.43
New Jersey	2	920,882	7,789,800	0.12
New Mexico	1	549,593	1,542,200	0.36
New York	2	764,041	18,078,200	0.04
North Carolina	1	395,120	6,603,800	0.06
North Dakota	1	351,049	680,800	0.52
Northern Mariana Islands	1	122,066	62,700	1.95
Ohio	2	833,249	10,934,800	0.08
Oklahoma	1	176,500	3,286,900	0.05
Oregon	2	567,253	2,786,500	0.20
Pennsylvania	2	815,994	12,090,000	0.07
Rhode Island	1	272,025	1,004,300	0.27
South Carolina	2	850,677	3,526,100	0.24
South Dakota	1	305,338	724,000	0.42
Tennessee	1	433,384	4,967,200	0.09
Texas	2	819,358	16,983,700	0.05
Utah	1	350,000	1,719,900	0.20
Vermont	1	370,217	562,200	0.66
Virginia	2	899,683	6,104,400	0.15
Washington	2	921,669	4,683,600	0.20
West Virginia	2	548,051	1,896,600	0.29
Wisconsin	2	833,104	4,891,100	0.17
Wyoming	1	134,234	481,900	0.28
TOTAL	**81**	**$27,625,031**	**249,949,800**	**$0.11** (average)

Exhibit 1–2 CHRI Projects: Timeframe



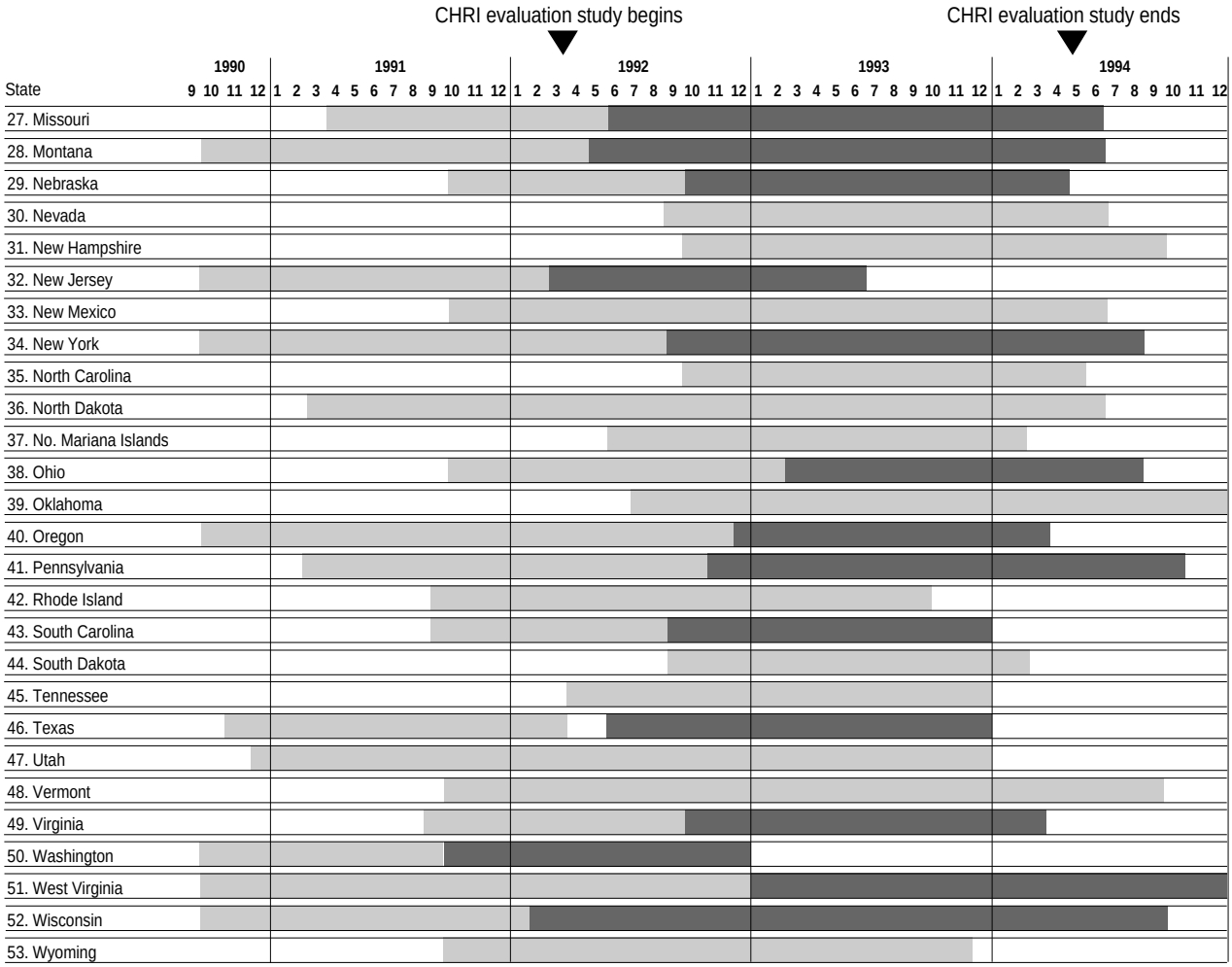
*Source: Bureau of Justice Statistics. 1994 (March 7). "Updated CHRI Summary and Other CHRI Information." Internal BJS Memorandum.

Given similar program goals, it is not surprising that the same types of data quality improvement activities were implemented under both programs. In fact, many States view the BJA/CJRI Program as an extension of the CHRI Program. This is particularly important because many of the CHRI-supported projects were multiyear efforts addressing systemic reporting problems.

Although the objectives of the BJA/CJRI Program are similar to those of the CHRI Program, there are important differences between the two (see Exhibit 1–4).

Among the differences outlined in Exhibit 1–4, the following are most significant:

Exhibit 1–2 CHRI Projects: Timeframe (continued)



*Source: Bureau of Justice Statistics. 1994 (March 7). "Updated CHRI Summary and Other CHRI Information." Internal BJS Memorandum.

■ **Funding basis.** The BJA/CJRI Program is a formula, rather than discretionary, program. Exhibit 1–5 compares the amounts awarded to each State under the CHRI Program with the first 2 years of the BJA/CJRI Program. The exhibit highlights the importance of the CHRI Program for smaller States; in fact, 22 States received more CHRI funds than BJA/CJRI funds for FY 1992 and FY 1993. Also, the BJA/CJRI Program requires States to provide a 25-percent match to the Federal funds, while CHRI funds have no match required. As of March 1994, only 82 percent of BJA/CJRI Program FY 1992 funds had been released.

Exhibit 1–3 Criminal History Records Improvement Milestones

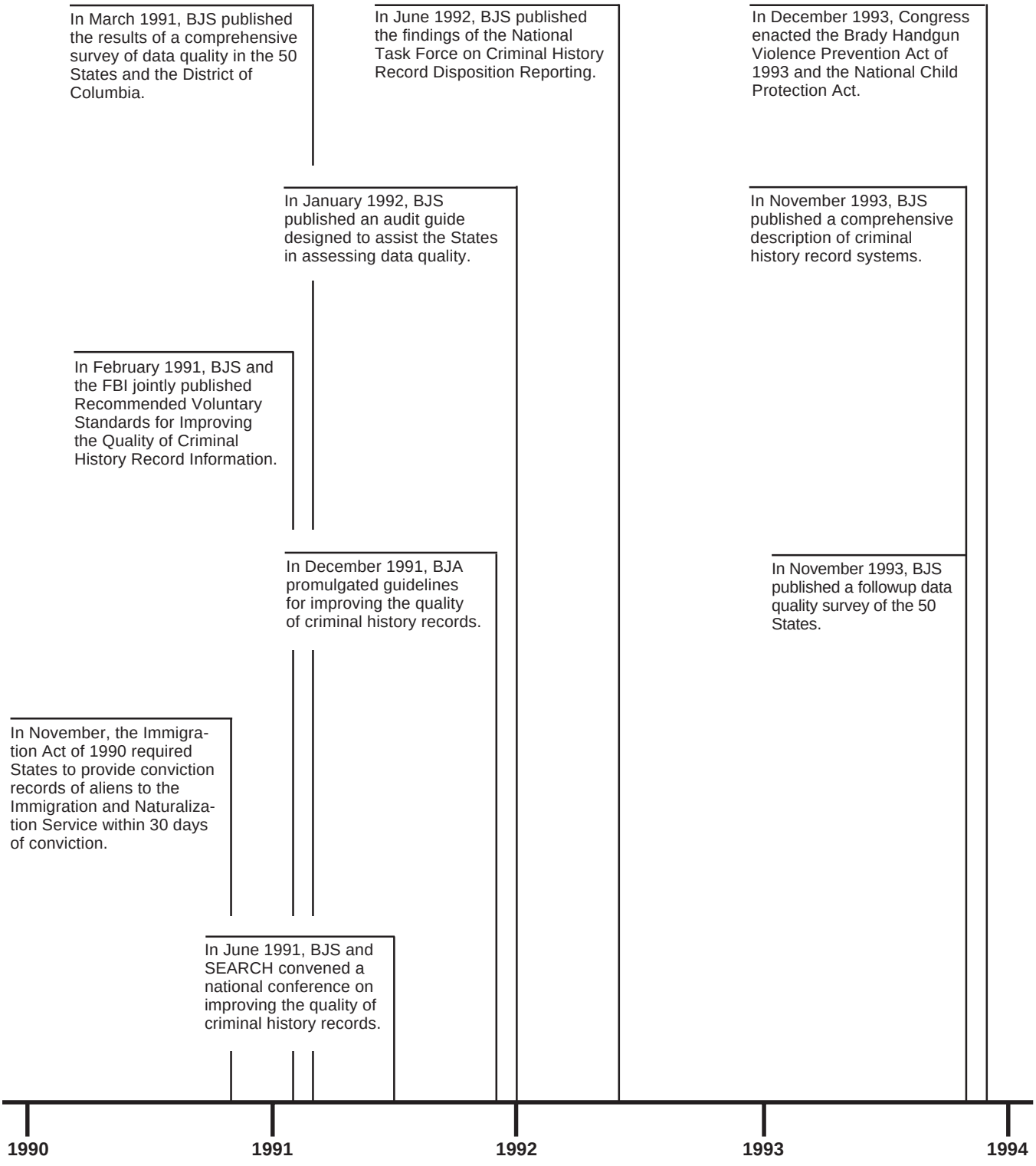
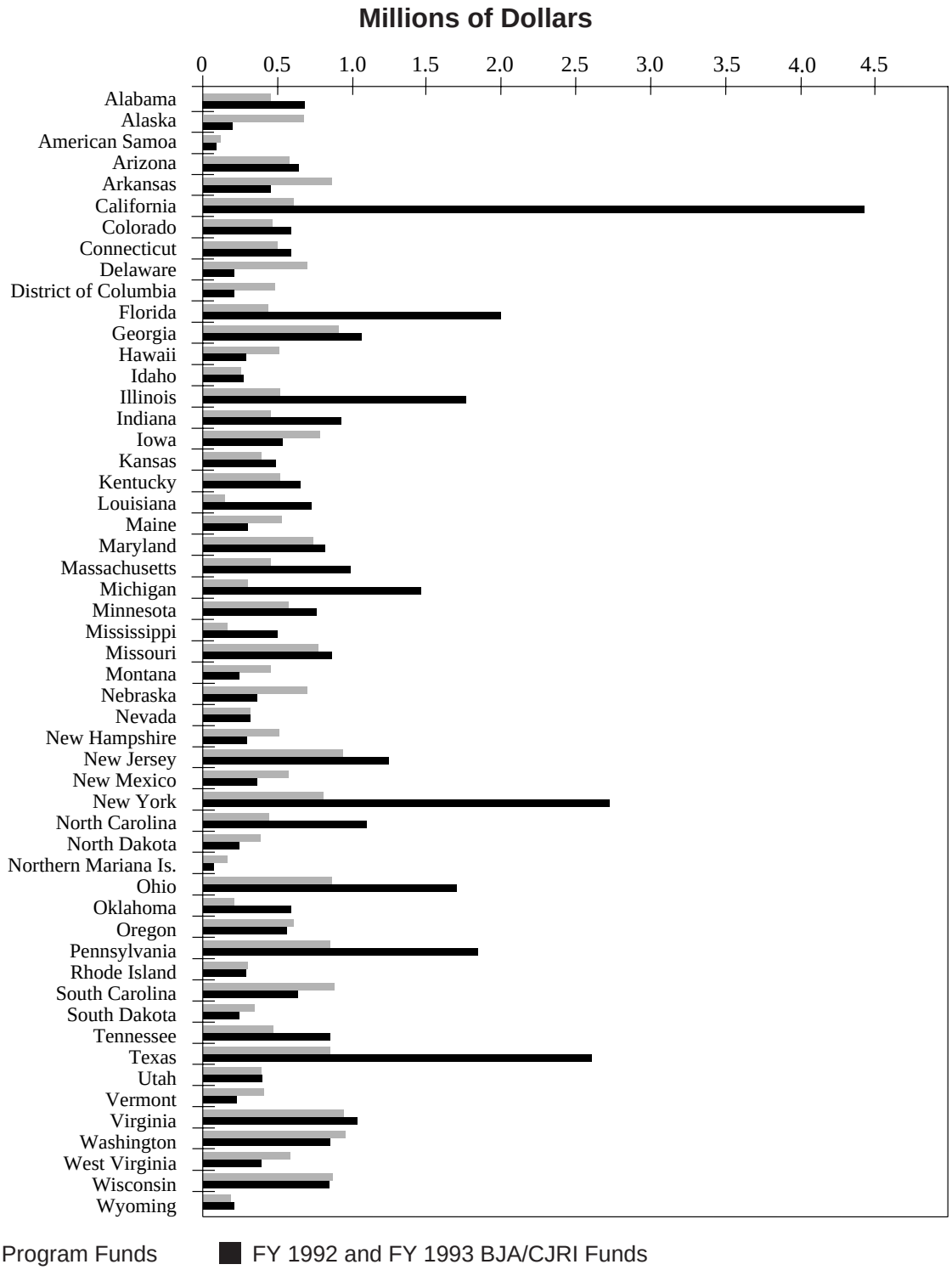


Exhibit 1–4 CHRI and BJA/CJRI Programs: Key Characteristics

Characteristic	CHRI Program	BJA/CJRI Program
Program period	FY 1990, 1991, 1992 awards (funding usage into 1994)	Each fiscal year beginning with FY 1992
Program funding	$27 million over the 3-year period	At least 5 percent of annual State Formula Grant Award; $21.15 million allocated in FY 1992
Basis for funding allocation	Discretionary program; awards not based on State population	Formula program; award based on State population
Leveraging of other funds	Approximately one-third of CHRI-supported activities were being continued with BJA/CJRI funds	Required minimum 25 percent in State matching funds
Primary program focus	Narrow focus (improve automation at central repository and improve disposition reporting to central repository)	Broad focus (improve quality of criminal records at local, county, and State levels)
Program approval process	States required to propose activities that will address primary program focus	States required to form multiagency task force, assess data quality, identify reasons for underreporting, and develop a plan for improving records
Program status	As of April 1994, 22 States were still working on their CHRI projects	As of March 1994, 35 States had plans approved by BJA; 82 percent of FY 1992 money had been released

- **Approval process.** The two programs differ substantially in terms of their approval processes. For the CHRI Program, States were required simply to submit a proposal that addressed the overall program objectives. The BJA/CJRI Program, however, requires that the States convene a multiagency task force, assess data quality in the State, identify the reasons for underreporting, and submit a detailed data quality improvement plan.
- **Program focus.** The CHRI and BJA/CJRI Programs differ most significantly in program focus. The focus of the CHRI Program was on the central repositories: improving the degree of automation of the repository and improving disposition reporting to the repository. Not surprisingly, most of the activities initiated by the States using CHRI funds were related to the central repository. In contrast, the broader scope of the BJA/CJRI Program emphasizes all types of State, county, and local criminal records.

Exhibit 1–5 CHRI and BJA/CJRI Programs: Funding by State



In many States, activities involving local courts, prosecutors, public defenders, and law enforcement agencies were supported by the BJA/CJRI Program.

Brady Handgun Violence Prevention Act

On November 30, 1993, Congress passed Public Law 103–159, the Brady Handgun Violence Prevention Act. The purpose of the act is to provide a waiting period before approving the purchase of a handgun and to establish a national instant criminal background check system. Firearms dealers would be required to access the system before transfer of any firearm could be made. The Handgun Violence Prevention Act authorizes $200 million for FY 1994 and all fiscal years thereafter for the improvement of criminal history records. Specifically, the provisions of the act allow the States to use grant funds for the following purposes:

The Handgun Violence Prevention Act authorizes $200 million for FY 1994 and all fiscal years thereafter for the improvement of criminal history records.

- To create a computerized criminal history records system or upgrade/improve an existing system.
- To improve accessibility to the national instant criminal background system.
- Once the national system is established, to assist the States in transmitting criminal records to it.

National Child Protection Act

On December 20, 1993, Congress passed Public Law 103–209, the National Child Protection Act of 1993. The purpose of the act is to establish procedures for national criminal background checks for childcare providers. It authorizes $20 million for FY 1994, FY 1995, FY 1996, and FY 1997 for the improvement of criminal history records. Specifically, the intention of the act is to assist the States in:

- Computerizing criminal history files.
- Improving existing computerized criminal history files.
- Improving accessibility to the national criminal history background check system.
- Transmitting criminal records to or indexing criminal history records in the national criminal history background check system.

Scope of Report

This report is composed of four chapters and three appendixes. This chapter has provided background information on criminal history records and on the CHRI and related programs. Chapter 2 describes the approach taken in this study to evaluate the CHRI Program, including study objectives, the data quality framework, and conduct of the study. Chapter 3 describes the conduct and impact of the CHRI Program: the efforts undertaken with CHRI funds to improve data quality, accomplishments made with CHRI funds, and some of the innovative approaches used for improvement of data quality. Chapter 4 summarizes program funding; focuses on the future by describing characteristics of an ideal criminal history system; and makes recommendations for future criminal history records improvement programs.

Chapter 4 is followed by a bibliography and three appendixes. Appendix A is a glossary of pertinent abbreviations and acronyms; Appendix B provides a detailed description of each State's CHRI project(s); and Appendix C discusses in detail the results of a survey on data quality administered to State central repository personnel. Inclusion of these project descriptions and survey results in appendixes should not diminish their importance; indeed, sharing this information should help States do a better job of improving their own data quality as they learn about the experiences and best practices of other States.

Study Approach

Before considering the impact of the CHRI Program, it is important to describe the overall study approach. Three important components of the study approach were study objectives, data quality framework, and study conduct.

Individual States will benefit from the detailed systemic study, as it is hoped that systems or procedures implemented successfully in one State can be adapted by other States.

Study Objectives

The goals of the CHRI evaluation were to:

- Assess the impact of the CHRI Program on data quality in each of the participating States, especially regarding timeliness, accuracy, completeness, the State's ability to identify felons, and the State's ability to comply with the FBI/BJS voluntary standards.
- Develop a guide to assist States in improving data quality.
- Identify promising approaches and strategies for improving data quality.

Three comments should be made regarding these study objectives. First, these objectives helped Queues Enforth Development (Q.E.D.) select a two-pronged evaluation approach. Q.E.D. has conducted (1) an overall impact evaluation of all participating CHRI States and (2) a systemic study of four selected States that developed and implemented particularly innovative or successful data quality improvement activities. The impact evaluation should benefit officials in the Department of Justice who need to know how well program funds were spent. Individual States will benefit from the detailed systemic study, as it is hoped that systems or procedures implemented successfully in one State can be adapted by other States.

Second, it is helpful to contrast the CHRI evaluation study goals with those of the BJS-sponsored surveys on the status of criminal history records.[1] Whereas the surveys focused on the question, "What is the status of data quality?" the CHRI evaluation study addressed the questions, "Why has data quality improved?" and "How did specific activities improve data quality?" In other words, the BJS-sponsored surveys reflect a *snapshot-based* approach,

[1] See Notes 2 and 3 in Chapter 1.

and the CHRI evaluation study reflects an *activity-based* approach. Although the two assessment efforts took different approaches, the two approaches are clearly complementary.

Data Quality Framework

A broad systemic approach for measuring data quality and for evaluating data quality improvement activities was adopted. As summarized in Exhibit 2–1, this approach is based on a comprehensive set of data quality measures that include input, process, and outcome measures.[2]

- *Input measures* describe the support elements, or the basic building blocks, of data quality and include enabling legislation and guidelines, policies and procedures, a multiyear plan, agency cooperation, leadership commitment, and technological resources. From an evaluation perspective, input measures reflect how funds are being used, such as for an audit, new reporting procedures, a new computerized criminal history system, and additional resources. On a programmatic basis, input measures would suggest the program's potential for success. Without adequate input, there may not be a program.
- *Process measures* describe how arrest and disposition records are processed: what percentage are submitted to the repository, how quickly they are submitted, how quickly they are entered, whether they are accurate and complete, and whether they are properly linked. Poor process measures are usually symptoms rather than causes of data quality problems. Thus, for example, poor linkage is usually a symptom of some other underlying cause such as the lack of tracking numbers on the record. From an evaluation perspective, process measures reflect the immediate impact of funding on how records are processed. Improved process measures may result in a higher disposition reporting percentage or a shorter elapsed time from arrest record receipt to data base update.
- *Outcome measures* describe how useful criminal history records are to the users of such records: criminal justice agencies, firearms dealers, employers, and repository staff. Providing useful information is the ultimate goal of State repositories, even though timeliness, accuracy, and completeness are usually seen as the basis for defining data quality. From an evaluation perspective, outcome measures reflect the ultimate impact of the program on the usability of criminal history records.

The data quality framework in Exhibit 2–1 provides an informative perspective for viewing both the FBI/BJS voluntary reporting standards and the BJA

[2] Tien, J.M. 1979. "Towards a Systematic Approach to Program Evaluation Design." *IEEE Transactions on Systems, Man and Cybernetics: Special Issue on Public Systems Methodology*. SMC–9:494–515. See also Tien, J.M. 1990. "Program Evaluation: A System and Model-Based Approach." In A.P. Sage (Ed.), *Concise Encyclopedia of Information Processing in Systems and Organizations,* pp. 382–388. New York: Pergamon Press.

Exhibit 2–1 Data Quality Measures: Framework

Category	Data Quality Measure	Definition
Input		
	Guidelines/enabling statutes	Degree to which State enacted legislation and appropriate agency statutes and guidelines to ensure and encourage data quality
	Policies/procedures	Degree to which State implemented effective policies and procedures to enhance data quality
	Multiyear plan	Degree to which State had appropriate plan to improve data quality
	Agency cooperation	Degree to which various agencies within State worked together to improve data quality
	Leadership commitment	Degree to which pertinent leadership viewed data quality as a high-priority issue
	Human resources	Degree to which repository was adequately staffed, given volume of work
	Technological resources	Degree to which repository had adequate computer and related equipment
Process		
	Submission extent	Degree to which reporting agencies submitted fingerprint cards and disposition reports
	Submission timeliness	Time lapse between event occurrence and receipt of record
	Submission accuracy	Degree to which submitted reports had discrepancies with original source documents
	Update timeliness	Time lapse between record receipt and data base update
	Update accuracy	Degree to which received reports differed from data base records
	Identification accuracy	Degree to which offenders were accurately identified
	Identification timeliness	Time lapse between receipt of fingerprint card and suspect identification
	Record linkage	Degree to which repository accurately matched new arrest and disposition reports to persons already in data base
	Record completeness	Degree to which data elements in submitted reports were filled in
	Data base completeness	Degree to which repository automated records of all recent arrests and dispositions
	Felony flagging	Degree to which repository determined whether offenders were convicted felons
Outcome		
	Record accessibility	Degree to which criminal history information was available for use by other criminal justice agencies and other appropriate agencies, individuals, and employers
	Accessibility timeliness	Time lapse between record request and information receipt
	Record utility	Degree to which information provided was relevant to needs of requester

criteria for waiver of the BJA/CJRI Program, as is done in Exhibit 2–2. Many of the standards and criteria can be contained in the measures framework.

However, it is interesting to consider those data quality measures that are not in the set of standards and criteria. Most conspicuous is the absence of outcome measures. Although it is important to focus on process measures such as data completeness, data timeliness, and felony flagging, the purpose of these efforts should not be forgotten: to enhance the outcomes of data accessibility and utility.

In addition, an objective of the CHRI Program evaluation was to understand not only what activities States implemented to improve data quality, but how and why States selected those activities. Therefore this report considers what problems prompted selection of those activities, how the States identified the problems, how they prioritized the problems, and how they ascertained the causes of the problems. Addressing these issues should provide insight into whether the States are concerned about the symptoms or the causes of poor data quality and whether they are focusing on their weakest data quality link. One hypothesis is that those States addressing their weakest data quality link will obtain the greatest improvement in their data quality.

Identifying convicted felons and improving disposition reporting became priority activities for the States.

Of course, each State should not be judged on improvements in all the measure groups listed in Exhibit 2–1, but rather only on those that directly apply to whatever data quality improvement activities are implemented. In particular, many CHRI activities affect only one or two measures listed in Exhibit 2–1. Additionally, for the formal CHRI evaluation, the issue of why States selected particular activities was not investigated because the CHRI Program announcement stated which data quality improvement activities would be funded. Thus, identifying convicted felons and improving disposition reporting became priority activities for the States, regardless of whether the activities addressed the States' weakest data quality links. An investigation into why States selected particular data quality improvement activities would be more appropriate for an evaluation of the BJA/CJRI Program, because for that program, States were required to select their strategies and activities on the basis of detailed assessments of their current systems.

Study Conduct

All of the States were quite cooperative in discussing their CHRI projects and in responding to data requests. The CHRI project director was the key contact in each State; this person coordinated requests for information, documentation, and other data and supplied additional contacts.

As noted earlier, a two-pronged evaluation was undertaken: an overall impact evaluation of CHRI projects in all the States and a more focused set of systemic evaluations in a small number of States that were implementing particularly innovative and successful data quality improvement activities. For States

Exhibit 2–2 Data Quality Measures: FBI/BJS Standards and BJA Criteria

Data Quality Measure	FBI/BJS Voluntary Reporting Standards	BJA Criteria for Waiver of the BJA/CJRI Program
Input		
Policies/procedures	"Every State shall ensure that annual audits of a representative sample of State and local criminal justice agencies shall be conducted by the State to verify adherence to State and Federal standards and regulations."	"New records for offenders with prior manual records are entered into automated files (including the manual record)." "Each State shall establish a plan under which the State will provide without fee to the INS, within 30 days of the date of their conviction, the certified records of conviction of aliens who have been convicted of violating the criminal laws of the State."
Security	"Wherever criminal history record information is collected, stored, or disseminated, each State shall institute procedures to ensure the physical security of such information; to prevent unauthorized access, disclosure, or dissemination; and to ensure that such information cannot be improperly modified, destroyed, accessed, changed, purged, or overlaid."	
Process		
Submission extent	"Every State shall maintain fingerprint impressions or copies thereof as the basic source document for each arrest (including incidents based upon a summons issued in lieu of an arrest warrant) recorded in the criminal history record system." "Every State shall ensure that fingerprint impressions of persons arrested for serious and/or significant offenses are included in the national criminal history records system."	
Record completeness	"Arrest fingerprint impressions submitted to the State repository and FBI ID should be complete, but shall at least contain the following data elements: date of arrest, originating agency identification number, arrest charges, a unique tracking number (if available), and subject's full name, date of birth, sex, race, and social security number (if available)."	

Exhibit 2–2 Data Quality Measures: FBI/BJS Standards and BJA Criteria (continued)

Data Quality Measure	FBI/BJS Voluntary Reporting Standards	BJA Criteria for Waiver of the BJA/CJRI Program
Record completeness (continued)	"All disposition reports submitted to the State repository and FBI ID shall contain the following: FBI number (if available), name of subject, date of birth, sex, State identification number, social security number (if available), date of arrest, tracking number (if available), arrest offense literal, and agency identifier number of agency reporting arrest."	
Data base completeness		"All criminal history records from the past 5 years have been automated." "All master name index records from the past 5 years have been automated."
Submission timeliness	"States shall ensure to the maximum extent possible that arrest and/or confinement fingerprints are submitted to the State repository and, when appropriate, to the FBI ID within 24 hours; however, in the case of single-source States, State repositories shall forward fingerprints, when appropriate, to the FBI ID within 2 weeks of receipt." "States shall ensure to the maximum extent possible that final dispositions are reported to the State repository and, when appropriate, to the FBI ID within a period not to exceed 90 days after the disposition is known."	"Fingerprints taken at arrest and/or confinement are submitted to the State repository and, when appropriate, to the FBI ID within 24 hours. In single-source States, the State repository shall forward fingerprints, when appropriate, to the FBI ID within 2 weeks of receipt." "Final disposition reports are submitted to the repository and, if appropriate, to the FBI within 90 days after disposition is known."
Update timeliness		"Procedures have been established to ensure that all records related to felony offenses are entered into the automated system within 30 days of receipt by the central repository, and all other records are entered within 90 days."
Felony flagging	"Every State shall accurately identify to the maximum extent feasible all State criminal history records maintained or received in the future that contain a conviction for an offense classified as a felony (or equivalent) within the State." "All final disposition reports submitted to the State repository and the FBI ID that report a conviction for an offense classified as a felony (or equivalent) within the State shall include a flag identifying the conviction as a felony."	"Of current arrest records, 95 percent identify felonies." "A reasonable attempt should be made to improve the flagging of felonies in existing records, with a goal of achieving felony identification for 90 percent of the offenses in the repository that occurred during the past 5 years." "Of current felony arrest records and fingerprints, 95 percent are complete."

Exhibit 2–2 Data Quality Measures: FBI/BJS Standards and BJA Criteria (continued)

Data Quality Measure	FBI/BJS Voluntary Reporting Standards	BJA Criteria for Waiver of the BJA/CJRI Program
Felony flagging (continued)		"A reasonable attempt should be made to improve the availability of past records, with a goal of achieving complete records for 90 percent of felony arrests during the past 5 years." "Of current felony arrest records, 95 percent contain disposition information, if a disposition has been reached." "A reasonable attempt should be made to improve the availability of disposition information, with a goal of achieving disposition information for 90 percent of felony arrests during the past 5 years." "Of current sentences to and releases from prison, 95 percent are available." "A reasonable attempt should be made to improve the availability of incarceration information, with a goal of achieving incarceration information for 90 percent of felony arrests during the past 5 years."

Sources: Federal Bureau of Investigation and Bureau of Justice Statistics. 1991 (February 13). "Voluntary Standards for Improving the Quality of Criminal History Records and Guidelines for Identifying Felony Convictions." *Federal Register* 56(30). See also, Bureau of Justice Assistance. 1991b (December). *Guidance for the Improvement of Criminal History Records.* Washington, DC: U.S. Department of Justice, Office of Justice Programs.

not in the systemic study, the primary means of data collection was telephone contacts with key State CHRI project personnel and analysis of documentation and data provided by the State.

In addition, site visits were made to 16 States for meetings with key CHRI project personnel. These States were recommended by the BJS CHRI project monitors, mainly on the basis of some interesting aspects of the funded projects. The 16 States were California, Connecticut, Delaware, the District of Columbia, Florida, Illinois, Maryland, Missouri, New Jersey, New York, North Carolina, Oregon, Pennsylvania, South Carolina, Virginia, and Washington. By contrast, multiple site visits were made to the four States in the systemic study group for interviews with key persons involved in data quality improvement efforts and for conduct of onsite data collection to measure the impact of the activities.

In recommending States for the systemic study, the following four criteria were considered, with the most important criterion listed first:

- The site should be implementing activities considered very important for improving data quality.
- The site should be implementing activities that are considered of great interest because a significant number of other States are contemplating their implementation.
- The group of sites should have an appropriate variation of activities, geographic locations, and sizes.
- The group of sites should constitute a systemic study cohort that is feasible within the constraints of the evaluation study.

A data quality survey of all States was conducted in early 1993 to gain insight into the first two criteria, among other purposes. (The survey is discussed in detail in Appendix C.) In the end, the States of Delaware, Maryland, Missouri, and New York were chosen. The more detailed study of the systemic States gave better insight into some of the implemented activities and their effectiveness in improving data quality.

Program Implementation

Chapter 3 addresses the conduct and impact of the CHRI Program, recognizing that when this evaluation ended, some CHRI projects were still ongoing. All of the data quality improvement efforts that the CHRI Program supported are categorized, and the supporting strategies, activities, and tasks are defined.

The chapter also discusses the work that has been accomplished to date with CHRI funds. Following a statistical overview is a narrative discussion of each of the key data quality improvement strategies, which focuses on innovative and successful approaches to improving data quality. Detailed information about the CHRI-supported data quality improvement activities implemented in each State is contained in Appendix B.

The CHRI Program's data quality improvement strategies reflect broad, long-term objectives related to criminal history records. For this evaluation, 12 strategies were identified.

Program Components

The CHRI Program consisted of 81 separate CHRI projects. The classification system developed for this evaluation is summarized in Exhibit 3–1. As shown in the exhibit and described in the following paragraphs, the system has three tiers: strategies, activities, and tasks.

Strategies

Data quality improvement strategies[1] reflect broad, long-term objectives related to criminal history records. For this evaluation, 12 strategies were identified:

- Assessment of the current system.
- Development of a data quality improvement plan.
- Enactment of legislation.
- Implementation of training programs.

[1] There are, of course, many ways of describing data quality improvement efforts. In one publication, four groups of data quality improvement strategies are defined: administrative, data entry, data maintenance, and regulatory (SEARCH. 1988 (April). *Strategies for Improving Data Quality*. Washington, DC: U.S. Department of Justice.).

Exhibit 3–1 CHRI Strategies and Activities: A Classification Scheme

Strategy/Activity	Activity Definition	Activity Focus
Assess Current System		
Conduct audit	Conduct a statistical examination of the current level of data quality at one or more agencies	Reach a consensus on the status of data quality
Conduct user needs assessment	Conduct a survey of users of criminal history information to determine their criminal history information needs	Determine whether current criminal history reporting and dissemination system is meeting the needs for users
Document reporting system	Produce a report detailing procedures being used to report criminal history information	Facilitate design and implementation of new procedures for improving reporting
Implement monitoring system	Develop an automated system for continually tracking overall data quality and for identifying exceptional cases	Facilitate assessment of data quality and identification of data quality problems
Develop Plan		
Develop data quality improvement plan	Develop an implementation schedule for priority data quality improvement activities	Coordinate improvement activities among all the agencies involved in reporting and maintaining records
Enact Legislation		
Enact mandatory reporting legislation	Enact legislation establishing reporting requirements and sanctions for noncompliance	Improve completeness, accuracy, and timeliness of reporting to the central repository
Implement Policies/Procedures		
Implement unique tracking number	Establish a unique identifier that links an arrest record to a disposition record	Increase the percentage of reported dispositions that can be linked to an arrest
Revise repository procedures	Implement new procedures for processing arrest and disposition reports	Improve the accuracy and timeliness with which a repository processes records
Establish data standards	Establish statewide standards on the interpretation and format of specific data elements	Facilitate interagency transfer of criminal history information
Standardize reporting procedures	Develop model procedures for reporting arrest and disposition information	Improve completeness, accuracy, and timeliness of reporting to the central repository
Conduct Training		
Conduct training programs at local agencies	Conduct programs that increase awareness of reporting statutes, procedures, and the importance of data quality	Improve completeness, accuracy, and timeliness of reporting to the central repository

Exhibit 3–1 CHRI Strategies and Activities: A Classification Scheme (continued)

Strategy/Activity	Activity Definition	Activity Focus
Automate Central Repository		
Install CCH	Install a computerized criminal history system for storing and retrieving information reported to the repository	Improve repository's ability to efficiently process records and respond to user requests
Install AFIS	Install an automated fingerprint identification system for managing fingerprints	Improve repository's ability and capacity to process fingerprint cards and search fingerprint files
Upgrade CCH	Upgrade or replace an existing computerized criminal history system	Enhance CCH reliability and capabilities to allow for electronic interfaces
Upgrade AFIS	Upgrade or replace an existing automated fingerprint identification system	Enhance AFIS reliability and capabilities to store additional fingerprint cards
Upgrade OBTS system	Upgrade or replace an existing offender-based transaction system	Enhance OBTS capabilities and reliability
Obtain unreported arrests	Obtain from law enforcement agencies (paper) arrest records that were never reported to the repository	Improve the completeness of criminal history data bases
Obtain unreported dispositions	Obtain from courts and prosecutors (paper) disposition records that were never reported to the repository	Improve the completeness of criminal history data bases and ability to identify felons
Merge external data bases into CCH	Obtain from contributing agency a tape or diskette containing unreported arrest or disposition records	Improve the completeness of criminal history data bases
Process fingerprint card backlog	Classify and enter backlogged fingerprint cards	Improve timeliness of arrest data entry and completeness of criminal history data base
Process disposition report backlog	Enter backlogged disposition reports	Improve timeliness of disposition data entry and completeness of criminal history data base
Process FBI rap sheet backlog	Process backlogged FBI rap sheets and update offender records with FBI numbers	Improve timeliness of FBI data entry and completeness of criminal history data base
Automate manual records	Convert manual criminal history records to automated format	Improve the completeness of automated criminal history data bases
Automate Disposition Reporting		
Install court information system	Install an information system for facilitating processing of current cases and for storing and retrieving past case information	Improve court's ability to efficiently process current court cases and maintain court records
Install prosecutor information	Install an information system for facilitating processing of current cases and for storing and retrieving past case information	Improve prosecutor's ability to efficiently process current cases and maintain prosecutor records
Upgrade court information system	Upgrade or replace an existing court information system	Enhance court system capabilities to allow for electronic interfaces
Upgrade prosecutor information system	Upgrade or replace an existing prosecutor information system	Enhance system capabilities to allow for electronic interfaces

Exhibit 3–1 CHRI Strategies and Activities: A Classification Scheme (continued)

Strategy/Activity	Activity Definition	Activity Focus
Interface prosecutor and CCH	Install a system for electronically transmitting records between a prosecutor information system and the repository's CCH	Improve extent and timeliness of reporting to repository and eliminate redundant data entry
Interface court and CCH	Install a system for electronically transmitting records between a court information system and the repository's CCH	Improve extent and timeliness of reporting to repository and eliminate redundant data entry
Interface prosecutor and court	Install a system for electronically transmitting records between a prosecutor information system and a court information system	Improve timeliness of reporting to court and eliminate redundant data entry
Automate Arrest Reporting		
Install booking system	Install an automated system for recording arrest and offender data at law enforcement agencies	Improve the accuracy and completeness of arrest data and eliminate redundant data recording
Install live scan devices	Install live scan fingerprinting devices at law enforcement agencies	Improve readability of fingerprints and facilitate digital transmission of fingerprint images
Interface booking system and court	Install a system for electronically transmitting records between a law enforcement booking system and a court information system	Improve timeliness of reporting to court and eliminate redundant data entry
Interface booking system and prosecutor	Install a system for electronically transmitting records between a law enforcement booking system and a prosecutor information system	Improve timeliness of reporting to prosecutor and eliminate redundant data entry
Interface booking system and CCH	Install a system for electronically transmitting records between a law enforcement booking system and the repository's CCH	Improve extent and timeliness of reporting to repository and eliminate redundant data entry
Interface live scan and AFIS	Install a system for electronically transmitting fingerprint images to an AFIS	Reduce the delay between offender fingerprinting and when the offender is positively identified
Automate Custodial Reporting		
Interface corrections and CCH	Install a system for electronically transmitting records between a corrections information system and the repository's CCH	Improve extent and timeliness of reporting to repository and eliminate redundant data entry
Interface supervisory agencies and CCH	Install a system for electronically transmitting records between a supervisory information system and the repository's CCH	Improve extent and timeliness of reporting to repository and eliminate redundant data entry

Exhibit 3–1 CHRI Strategies and Activities: A Classification Scheme (continued)

Strategy/Activity	Activity Definition	Activity Focus
Identify Felons		
Set felony flags in existing records	Set a felony flag in the CCH for each offender that indicates whether the offender is a convicted felon	Enhance ability to determine quickly whether an offender is a convicted felon
Develop felon analysis system	Develop a system that examines an offender's automated criminal history records and determines the offender's felony conviction status	Enhance ability to determine quickly whether an offender is a convicted felon
Improve National System		
Participate in III	Develop the necessary systems and procedures so that the State can participate in the III	Improve the quality and viability of the national criminal history system
Increase III records responsibility	Transfer the responsibility of criminal history records in the national system from the FBI to the State where the offense was committed	Improve the quality and viability of the national criminal history system
Automate disposition reporting to FBI	Install a system for electronically transmitting disposition records from the repository to the FBI	Improve extent and timeliness of reporting to repository and eliminate redundant data entry
Set felony flags in III records	Set a felony flag for offenders listed in III that indicates whether the offender is a convicted felon	Enhance ability to determine quickly whether an offender is a convicted felon
Improve Records Accessibility		
Improve CCH accessibility	Develop systems for improving accessibility of criminal history information by authorized agencies	Enhance the ability of users to access and analyze criminal history records
Improve court records accessibility	Develop systems for improving accessibility of court case information by authorized agencies	Enhance the ability of users to access and analyze court records

To achieve the goals embodied in the strategies, States had to implement data quality improvement activities. For this evaluation, 46 activities that supported the 12 strategies were identified.

- Implementation of policies and procedures.
- Automation of the central repository.
- Automation of disposition reporting.
- Automation of arrest reporting.
- Automation of custodial reporting.
- Identification of felons.
- Improvement of the national system.
- Improvement of records accessibility.

Activities

To achieve the goals embodied in the strategies, States had to implement data quality improvement activities. For this evaluation, 46 activities that supported the 12 strategies were identified. Exhibit 3–1 also identifies the activities associated with each strategy. The definition and purpose of each activity is also indicated. Thus, for example, several different activities could be undertaken to achieve the goal of automating the central repository. These include developing the necessary automated systems, processing backlogs of fingerprint cards and disposition reports, and automating manual criminal history records. Similarly, to assess the current status of data quality, four different activities could be implemented: conducting a baseline audit, conducting a user needs assessment, documenting the current reporting system, and implementing a data quality monitoring system.

In reviewing Exhibit 3–1, it is obvious that judgments had to be made about what constituted a strategy and an activity. Although some of the activities seem quite general (for example, automate manual records) and others seem quite specific (for example, set felony flags in existing records), the focus is on those activities of interest to BJA, BJS, and the States. For example, if a State purchased personal computers and other equipment to facilitate obtaining and entering unreported dispositions, this effort is described as one activity (obtain unreported dispositions) rather than two (purchase equipment and obtain unreported dispositions). In this framework, the equipment purchases constitute a task within the "obtain unreported dispositions" activity.

Tasks

Each activity has associated with it a number of different tasks that represent well-defined work to be performed. For example, five tasks are typically involved in systems development activities such as development of a computerized criminal history (CCH) or an electronic interface between two information systems: requirements analysis, technical specification, software development, pilot testing, and implementation. Each task could be divided further into subtasks, but for the sake of brevity, tasks and subtasks related to each activity are not listed in Exhibit 3–1.

Implementation Overview

Exhibit 3–2 lists the States that used CHRI funds to support each of the data quality improvement activities defined in Exhibit 3–1. For each activity, the States have been divided into two groups: those that, as of April 1994, were using CHRI funds to support these activities and those that had completed CHRI-supported work on the activity. Completion of a CHRI project does not imply that work on an activity has been completed. Indeed, many States used CHRI funds to complete only one task of a multitask activity. Many States continue to work on an activity with other State and Federal funds.

The most common activity supported by CHRI funds involved interfacing court information systems with the central repository CCH system so that dispositions could be reported electronically.

As indicated in Exhibit 3–2, the most common activity supported by CHRI funds involved interfacing court information systems with the central repository CCH system so that dispositions could be reported electronically. Twenty-two States used CHRI funds for this purpose. Given that the goal of the CHRI Program is to improve disposition reporting, this use of funds is clearly appropriate. Other activities implemented by more than 10 States included: developing a long-term data quality improvement plan, upgrading a CCH, obtaining unreported dispositions, processing disposition report backlogs, automating manual criminal history records, and setting felony flags on existing criminal history records.

Exhibit 3–3 summarizes and prioritizes this information, showing the number of States that implemented activities in each of the data quality improvement strategies. A majority of States (46) implemented activities that improved automation of the central repository. Automation of disposition reporting was the only other strategy that more than half the States addressed with CHRI funds.

Exhibit 3–4 offers a State-based perspective on the CHRI Program by listing the number of activities, the completion status, and the extent of solely CHRI-supported activities in each State. The exhibit suggests a wide distribution in the number of activities proposed by each State, ranging from a low of 1 to a high of 10, with an average of 4. However, the number of activities implemented by a State should not be interpreted as a measure of performance. First, the number of activities listed does not account for the amount of funding received by a State, and State funding under the CHRI Program ranged from a low of $112,842 to a high of $921,669.

Second, and more important, the level of effort required to implement each activity varied widely. Some activities could be implemented in just a few weeks, while others entailed a multiyear effort. In addition, the level of effort required for a particular activity varied by State, depending on existing conditions and available resources.

Finally, statistics do not reflect the number of tasks within an activity the State has completed. For example, three States used CHRI funds to develop an electronic interface between law enforcement booking systems and their CCH system. However, two of the three States (Nebraska and Washington)

Exhibit 3–2 CHRI Projects: By Activity

Strategy/Activity	States With CHRI-Funded Projects*		
	Ongoing	Completed	#
Assess Current System			
Conduct audit		AK, AZ, CO, CT, HI, ID, IN, IA, MN, MO, MS, NV, NM, OH, OR, PA, WI	17
Conduct user needs assessment		IA, MT	2
Document reporting system	NY		1
Implement monitoring system		OR, WI	2
Develop Plan			
Develop data quality improvement plan	CT, NV, NH	AZ, CA, IL, LA, MA, MP, MS, NE, WA	12
Enact Legislation			
Enact mandatory reporting legislation		MT	1
Implement Policies/Procedures			
Implement unique tracking number	AK, MT	CT, IA, TX	5
Revise repository procedures		NE, WA	2
Standardize reporting procedures	NY		1
Conduct Training			
Conduct training programs at local agencies	AZ, MN, MO, MT, PA	CO, NE, WA, WY	9
Automate Central Repository			
Install CCH	AS, DC, ME, NM, NMI, VT, WV	TN	8
Upgrade CCH	MO, NY, VA	AZ, MN, NE, NJ, ND, RI, TX, UT	11
Upgrade AFIS		MT, NM	2
Upgrade OBTS system	MO		1
Obtain unreported arrests	IL		1
Obtain unreported dispositions	IL	AL, AR, DE, FL, HI, MI, NY, RI, SD	10
Merge external data bases into CCH	NM, OK		2
Process fingerprint card backlog	ID, NV	GA, IN, MA, PA	6
Process disposition report backlog	CA, ID, OH, WI	AZ, GA, IA, MN, NE, NJ, OR, PA, SC, VA, WA	15
Process FBI rap sheet backlog		WA, WI	2
Automate manual records	AS, DC, KS, ME, NH, NC, VT	DE, PA, TN, WY	11

Exhibit 3–2 CHRI Projects: By Activity (continued)

Strategy/Activity	States With CHRI-Funded Projects*		
	Ongoing	Completed	#
Automate Disposition Reporting			
Install court information system		AL, GA	2
Install prosecutor information system	ND		1
Upgrade court information system		DE, FL, KY	3
Upgrade prosecutor information system	MO		1
Interface prosecutor and CCH	AK, MO, NM, ND		4
Interface court and CCH	AZ, CA, CN, ID, IA, OH, SD	DE, GA, HI, MA, MI, MN, NB, NJ, OR, RI, SC, TX, UT, WA, WY	22
Interface prosecutor and court		UT	1
Automate Arrest Reporting			
Install live-scan devices		PA	1
Interface booking system and court	VA	FL	2
Interface booking system and prosecutor		UT	1
Interface booking system and CCH	MD	NB, WA	3
Interface live scan and AFIS	MD, MN		2
Automate Custodial Reporting			
Interface corrections and CCH	AZ, IA, KS	MI, NB, NJ, TX, UT	8
Interface supervisory agencies and CCH		MA, NB	2
Identify Felons			
Set felony flags in existing records	PA	AK, FL, HI, IL, IA, MI, MN, MO, MT, OR, SC, TN, VA, WA, WI, WY	17
Develop felon analysis system	MD	NJ	2
Improve National System			
Participate in III	KS, NH, SD, WI	AK, IL, NV, ND, WA	9
Increase III records responsibility		MO, PA	2
Automate disposition reporting to FBI	CA	MO, NB, OH	4
Set felony flags in III records	MN	MO, VA	3
Improve Records Accessibility			
Improve CCH accessibility		WY	1
Improve court records accessibility		NC	1

*As of April 1994

Exhibit 3–3 CHRI Projects: By Strategy

Strategy	Number of States Addressing Strategy*	%
Automate central repository	46	89
Automate disposition reporting	29	55
Assess current system	19	36
Identify felons	19	36
Improve national system	16	30
Develop plan	12	23
Automate custodial reporting	9	17
Conduct training	9	17
Automate arrest reporting	8	15
Implement policies and procedures	8	15
Improve records accessibility	2	4
Enact legislation	1	2

*The number of jurisdictions participating in the CHRI Program is 53.

completed only the requirements and specifications definition tasks by the end of their CHRI project, and the third, Maryland, completed the requirements, specifications, software development, and pilot testing of tasks.

The completion status of the State CHRI activities varies from a low of 0 percent to a high of 100 percent, with an average of 68.1 percent. This figure compares with 24.9 percent in April 1993 and 47.8 percent in November 1993.[2] Clearly, given that only two-thirds of the activities were completed, it is inappropriate to offer final evaluation findings. It should also be noted that although all the activities listed in Exhibit 3–1 were CHRI supported, they were not implemented exclusively with CHRI funds. Only 66.2 percent of the strategies were supported exclusively with CHRI funds. This statistic is a very positive finding because it demonstrates that CHRI funding was used to leverage other State and Federal funds to improve the quality of criminal history records.

[2] Tien, J.M., and T.F. Rich. 1993 (April). *Criminal History Records Improvement Evaluation and Guide: Interim Report*. Cambridge, MA: Queues Enforth Development, Inc. See also Tien, J.M., and T.F. Rich. 1993 (November). *Criminal History Records Improvement Evaluation and Guide: Second Interim Report*. Cambridge, MA: Queues Enforth Development, Inc.

Exhibit 3–4 CHRI Projects: By State

State	Number of Activities		
	Total (% of activities for all jurisdictions)	Done (% of State activities)	Funded by CHRI (% of State activities)
Alabama	2 (0.9)	2 (100.0)	0 (0.0)
Alaska	5 (2.3)	3 (60.0)	4 (80.0)
American Samoa	2 (0.9)	0 (0.0)	2 (100.0)
Arizona	7 (3.3)	4 (57.1)	7 (100.0)
Arkansas	1 (0.5)	1 (100.0)	1 (100.0)
California	4 (1.9)	1 (25.0)	4 (100.0)
Colorado	2 (0.9)	2 (100.0)	0 (0.0)
Connecticut	4 (1.9)	2 (50.0)	4 (100.0)
Delaware	4 (1.9)	4 (100.0)	3 (75.0)
District of Columbia	2 (0.9)	0 (0.0)	0 (0.0)
Florida	4 (1.9)	4 (100.0)	1 (25.0)
Georgia	4 (1.9)	4 (100.0)	1 (25.0)
Hawaii	4 (1.9)	4 (100.0)	2 (50.0)
Idaho	4 (1.9)	1 (25.0)	2 (50.0)
Illinois	5 (2.3)	3 (60.0)	5 (100.0)
Indiana	2 (0.9)	2 (100.0)	2 (100.0)
Iowa	7 (3.3)	5 (71.4)	4 (57.1)
Kansas	3 (1.4)	0 (0.0)	0 (0.0)
Kentucky	1 (0.5)	1 (100.0)	0 (0.0)
Louisiana	1 (0.5)	1 (100.0)	1 (100.0)
Maine	2 (0.9)	0 (0.0)	0 (0.0)
Maryland	3 (1.4)	0 (0.0)	0 (0.0)
Massachusetts	4 (1.9)	4 (100.0)	4 (100.0)
Michigan	4 (1.9)	4 (100.0)	3 (75.0)
Minnesota	8 (3.8)	5 (62.5)	6 (75.0)
Mississippi	2 (0.9)	2 (100.0)	2 (100.0)
Missouri	10 (4.7)	5 (50.0)	8 (80.0)
Montana	6 (2.8)	4 (66.7)	5 (83.3)
Nebraska	10 (4.7)	10 (100.0)	7 (70.0)
Nevada	4 (1.9)	2 (50.0)	4 (100.0)
New Hampshire	3 (1.4)	0 (0.0)	3 (100.0)
New Jersey	5 (2.3)	5 (100.0)	3 (60.0)
New Mexico	5 (2.3)	2 (40.0)	2 (40.0)
New York	4 (1.9)	1 (25.0)	2 (50.0)
North Carolina	2 (0.9)	1 (50.0)	2 (100.0)

Exhibit 3–4 CHRI Projects: By State (continued)

State	Number of Activities		
	Total (% of activities for all jurisdictions)	Done (% of State activities)	Funded by CHRI (% of State activities)
North Dakota	4 (1.9)	2 (50.0)	2 (50.0)
Northern Mariana Islands	2 (0.9)	1 (50.0)	0 (0.0)
Ohio	4 (1.9)	2 (50.0)	4 (100.0)
Oklahoma	1 (0.5)	0 (0.0)	1 (100.0)
Oregon	5 (2.3)	5 (100.0)	3 (60.0)
Pennsylvania	8 (3.8)	6 (75.0)	5 (62.5)
Rhode Island	3 (1.4)	3 (100.0)	3 (100.0)
South Carolina	3 (1.4)	3 (100.0)	2 (66.7)
South Dakota	3 (1.4)	1 (33.3)	3 (100.0)
Tennessee	3 (1.4)	3 (100.0)	2 (66.7)
Texas	4 (1.9)	4 (100.0)	3 (75.0)
Utah	5 (2.3)	5 (100.0)	2 (40.0)
Vermont	2 (0.9)	0 (0.0)	2 (100.0)
Virginia	5 (2.3)	3 (60.0)	3 (60.0)
Washington	9 (4.2)	9 (100.0)	5 (55.6)
West Virginia	1 (0.5)	0 (0.0)	0 (0.0)
Wisconsin	6 (2.8)	4 (66.7)	5 (83.3)
Wyoming	5 (2.3)	5 (100.0)	2 (40.0)
Total	**213 (100.0)**	**145 (68.1)**	**141 (66.2)**
Average (Per State)	**4.0 (na)**	**2.7 (68.1)**	**2.7 (66.2)**

Note: For the purpose of this exhibit, a State is considered to have completed an activity if CHRI funds are no longer supporting the activity.

na: Not applicable.

Following are discussions of several of the data quality improvement strategies and activities undertaken to execute the strategies.

Assessment of the Current System

A complete understanding of the strengths and limitations of the current criminal history system is required if data quality is to be improved. This understanding can be obtained through a range of activities, four of which were supported with CHRI funds: baseline audits, user needs assessments, documentation of the current reporting system, and implementation of data quality monitoring systems. Of the four, the audit was the most common activity.

Baseline Audits

CHRI funds supported baseline audits in 17 States. Given that only 11 States had conducted audits before the CHRI Program was established,[3] expanding knowledge about the Nation's criminal history systems through baseline audits should be viewed as a major accomplishment of the CHRI Program. The statistical results of most of the baseline audits have been reported in the most recent BJS-sponsored data quality survey.[4] The audit results underscore the urgent need for continued efforts to improve data quality.

Two comments on the audit process should be made. First, most of the States conducting an audit had never before been audited. In spite of this, many central repository officials reported that they were not surprised by the audit results. At the same time, officials were nearly unanimous in praising the audit process—particularly those officials from States that hired private vendors to conduct them. As one official stated, "Having an impartial third party spell out the problems was invaluable for building a consensus on how we should proceed." This sentiment was particularly true if a multiagency task force was involved in the audit process. If the task force was involved in the audit process from the beginning, its members were much more likely to agree to the audit recommendations.

Second, 13 of the 17 States hired private vendors to conduct the audits; 3 States (Colorado, Missouri, and New Mexico) recruited central repository staff to conduct the audits; and 1 State (Iowa) asked a separate agency to conduct the audit. Nearly all States that hired private contractors to perform the audits experienced delays—sometimes several months long—in the procurement process. Given this fact, it seems unlikely that States will conduct audits annually, as recommended by FBI/BJS standards. A more workable approach would be to develop an ongoing audit capability.

An alternative to infrequent baseline data quality audits is an ongoing program of data quality monitoring. Such a program could range in complexity from measuring a single data quality attribute to measuring the health of the entire criminal history system.

Ongoing Data Quality Monitoring

An alternative to infrequent baseline data quality audits is an ongoing program of data quality monitoring. Such a program could range in complexity from measuring a single data quality attribute to measuring the health of the entire criminal history system. For example, the Oregon State Police, using CHRI funds, developed and implemented a personal computer (PC)-based fingerprint card monitoring system for cards that are unreadable. The arrest data on the fingerprint card are recorded in a data base, which is then periodically analyzed to track rejected fingerprint cards and to direct training resources toward agencies with higher than average rates of fingerprint card rejection. Wisconsin developed a monitoring system that flags dispositions that have remained open longer than expected.

[3] Note 2 in Chapter 1.

[4] Note 3 in Chapter 1.

A more comprehensive ongoing monitoring program might involve routine collection of perhaps one dozen easy-to-collect measures that could reflect the collective health of the criminal history records system. These measures would not only monitor data quality at the central repository but also diagnose the underlying data quality problems. That is, rather than conducting infrequent, large-scale audits, the central repository could use "vital sign" measures continuously to assess data quality status, much as a physician might use various physiological measures to monitor the status of a hospitalized patient. In addition, this small set of measures could be combined into a data quality index that could provide a convenient way for States to determine whether their data quality was improving. This evaluation did not find such a monitoring system or index in use, so it is an area for future research.

Development of a Plan

All States are required to develop data quality improvement plans in order to receive BJA/CJRI funds. . . . These plans became blueprints for each State's BJA/CJRI Program and, in some cases, a second CHRI award.

All States are required to develop data quality improvement plans in order to receive BJA/CJRI funds. CHRI funds were used by 12 States to develop data quality improvement plans. Developed by multiagency task forces with the assistance of private contractors, these plans became blueprints for each State's BJA/CJRI Program and, in some cases, a second CHRI award.

In terms of plan content, the data quality problems identified and the data quality improvement activities recommended varied from State to State. For example, the data quality improvement plan developed by Massachusetts focused on the steps needed to make that State's CCH fingerprint supported. Minnesota's audit report recommended the following: eliminating backlogs; simplifying, automating, and integrating central repository operations; implementing systems that focused on the noncriminal justice market; establishing a coordinating group to oversee criminal history; establishing a user focus group; improving education and training; and performing periodic audits.

In reviews of these and other plans developed for the BJA/CJRI Program, one feature stands out. In most States, the same data quality improvement activities supported with CHRI funds were continued with BJA/CJRI funds, as noted in Exhibit 3–5:

- Of the 35 States that had their FY 1992 BJA/CJRI plans approved, 22 continued their CHRI activities with BJA/CJRI funding. A common example of this continuation related to the automated disposition reporting strategy. Many States brought one county at a time online with automated disposition reporting; thus, CHRI funding brought some counties online, while BJA/CJRI funding brought others online.
- Only 7 of 35 States implemented activities with BJA/CJRI funding different from those activities implemented with CHRI funds. Nevertheless, these BJA/CJRI activities overlap those activities implemented by other States with CHRI funds.

Exhibit 3–5 Relationship Between BJA/CJRI and CHRI Programs

State*	One or More CHRI Activities Being Continued With BJA/CJRI Funds	Plan Developed With CHRI Funds Being Implemented With BJA/CJRI Funds	No CHRI Activities Being Implemented With BJA/CJRI Funds
Alabama	X		
Arizona		X	
Arkansas			X
California		X	
Connecticut		X	
Delaware	X		
District of Columbia	X		
Florida	X		
Hawaii			X
Idaho	X		
Illinois		X	
Iowa	X		
Louisiana		X	
Maine	X		
Maryland			X
Massachusetts		X	
Michigan	X		
Minnesota	X		
Missouri	X		
Montana	X		
Nebraska	X	X	
New Jersey	X		
New York	X		
North Dakota	X		
Ohio			X
Oklahoma			X
Pennsylvania	X		
Rhode Island			X
South Carolina	X		

Exhibit 3–5 Relationship Between BJA/CJRI and CHRI Programs (continued)

State*	One or More CHRI Activities Being Continued With BJA/CJRI Funds	Plan Developed With CHRI Funds Being Implemented With BJA/CJRI Funds	No CHRI Activities Being Implemented With BJA/CJRI Funds
Texas	X		
Utah	X		
Virginia	X		
Washington	X	X	
Wisconsin			X
Wyoming	X		

*This list includes those States that had their FY 1992 BJA/CJRI plans approved as of March 1994.

This finding is encouraging because it indicates that States used CHRI funds to address systemic reporting problems and to initiate multiyear activities rather than one-time efforts that are, at best, temporary solutions to data quality problems. No doubt this is largely due to the prospect of a stable Federal funding source.

Implementation of Training Programs

Training activities implemented with CHRI funds helped States develop training materials and conduct training courses for local law enforcement agencies, prosecutors, court personnel, and other criminal justice officials. Typically, the training programs consisted of two components. The first was an overview of the criminal history reporting system. Explaining the entire process to contributing agencies was important because personnel at these agencies often did not understand the connection between their actions and the information printed on an offender's rap sheet.

The second component was a discussion of issues specific to a particular reporting agency. For example, training programs for law enforcement agencies typically focused on the offenses for which suspects could be fingerprinted, techniques for improving the readability of fingerprints, and timeliness requirements for fingerprint cards. In many States, central repository officials conducted the training programs; in other States such as Minnesota and Missouri, personnel from a variety of criminal justice agencies led the training sessions. Missouri officials commented that the participation of court personnel in that State's training program greatly increased the program's effectiveness.

Officials from the Arizona central repository felt that training was one of their most successful data quality improvement activities. The major topics covered by their training sessions were:

- How information flowed through the criminal justice system.
- How the central repository processed arrest and disposition reports.
- How a fingerprint card should be filled out.
- How a disposition report should be filled out and who is responsible for submitting it.
- How unusual arrest scenarios, such as an arrest on a failure-to-appear warrant, should be handled.

Trainers found that many reporting problems resulted from a lack of familiarity with reporting procedures. By the end of their CHRI project, the Arizona central repository hoped to have conducted training sessions for every criminal justice agency in the State.

Of course, the impact of training activities was difficult to assess, particularly when other data quality improvement activities were implemented simultaneously. In addition, natural fluctuations in arrest rates made it difficult to account for increases in fingerprint card submissions. However, three observations could be made.

First, central repository officials generally agreed that poor fingerprint card submission rates at some law enforcement agencies were the result of ignorance about fingerprinting rules and regulations. If that is the case, training programs should greatly improve fingerprint card submission and quality.

Second, the increase in reporting rates resulting from training programs may unintentionally increase fingerprint card backlogs at the central repository. Thus, while training activities increase the inflow of fingerprint cards to the central repository, other activities such as electronic arrest reporting may need to be implemented so that the central repository can handle this additional workload.

Substantial progress has been made in the identification of convicted felons, one of the three primary objectives of the CHRI Program.

Third, such training initiatives should not be viewed as one-time efforts. Indeed, in many States personnel who attend fingerprint training programs at local law enforcement agencies are eventually assigned to other units.

Identification of Felons

Substantial progress has been made in the identification of convicted felons, one of the three primary objectives of the CHRI Program. According to recent BJS data quality surveys, the number of States with CCH systems that flag at

least some felony convictions increased from 13 in 1989 to 32 in 1992.[5] As noted in Exhibit 3–2, the CHRI Program made a major contribution in the felony flagging area. Seventeen States used CHRI funds to improve their ability to identify convicted felons. Of these 17, 3 States completed their felony flagging efforts after the most recent survey: Iowa, Michigan, and Tennessee.[6] Thus, some 35 States have CCH systems that flag at least some felony convictions.

Methods

A key goal of the CHRI Program has been to implement systems that can programmatically, and therefore quickly, determine an offender's felony conviction status.

The purpose of the felon identification strategy is to enable States to determine quickly whether an offender has been convicted of a felony. One way to determine the felony status of an offender is to peruse the offender's rap sheet. In Delaware this approach is used in conjunction with the State's point-of-sale firearm eligibility system; State law enforcement personnel taking calls from firearms dealers have been specially trained to determine a purchaser's eligibility on the basis of charges and convictions listed on the potential purchaser's rap sheet. However, a key goal of the CHRI Program has been to implement systems that can programmatically, and therefore quickly, determine an offender's felony conviction status.

The primary tactic States used to meet this objective was to implement a felony flag system. Felony flag-based systems place a felony flag in an offender's identification or conviction segment of the criminal record. When a rap sheet is requested, the system looks at the value in the felony flag field of the offender's record and reports its status on the rap sheet. Two different types of flags appear to be in use:

- For use in Interstate Identification Index (III) records, a single-letter flag in which *F* signifies one or more felony convictions, *M* signifies no felony convictions, and *X* signifies an unknown status.
- A cumulative type of flag in which the identification segment for each offender contains the number of felony convictions and the number of felony arrests for which no disposition has yet been obtained.

An alternative to the felony flag-based system was the analysis-based system, which does not use a felony flag. Rather, when the felony conviction status for an offender is requested, all of the information about the offender residing in the central repository automated records is analyzed; then, based on the analysis, a determination is made on the offender's felony status. The information analyzed could include a reference to a State statute in the offender's conviction segment, an incarceration record indicating that the offender served time in a State prison, or other keywords in the disposition description.

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[5] Note 2 in Chapter 1. See also Note 3 in Chapter 1.

[6] Note 3 in Chapter 1.

Both Maryland and New Jersey implemented this approach to felon identification. Maryland's analysis system determines the State statute under which an offender was convicted and then searches a data base to see whether that statute is a felony or a misdemeanor. If a statute could be either a felony or a misdemeanor, then the system looks in the disposition text fields for certain keywords (such as robbery).

One advantage of the analysis-based system over the felony flag-based system is flexibility. If there is a change in the rules used to determine whether an offender is a felon, States using the analysis-based system can simply modify the algorithm that the analysis system uses, while States using the felony flag-based system should reexamine every felony flag stored in their CCH. On the other hand, an advantage of the felony flag-based system is that it is compatible with the National Felon Identification in Firearm Sales system approach, which uses felony flags in III records.

Success Rates in Determining Felon Status

The question for both the felony flag-based system and the analysis-based system is how successful they are in determining the felony status of offenders already in a State's CCH. Success depended on two factors:

The question for both the felony flag-based system and the analysis-based system is how successful they are in determining the felony status of offenders already in a State's CCH.

- The degree to which disposition data were available on offenders in the CCH. If no disposition was available, the offender's felony status could not be determined.
- Even if disposition data were available, the offender's felony status may not be able to be determined in an automated manner. The felony status of such an offender could be determined manually, by perusing her or his rap sheet, but the States felt it was not practical financially to set felony flags in this manner.

Many of the older CCH's were designed to be storage systems, and little thought was given to how people might use the data. For this reason, the format and precision of the data stored in disposition fields varied widely. In South Dakota and Tennessee, for example, the disposition data in existing records included the actual sentence imposed rather than the sentence that could have been imposed. Nonstandard abbreviations also made it difficult to determine an offender's felony status.

It is, therefore, not surprising that States reported varying degrees of success in programmatically setting felony flags on existing offenders. Some States, including Hawaii, Missouri, Oregon, and Washington, reported that flags for virtually all offenders could be set. Such States typically had conviction-level codes for reported dispositions, so setting flags on the basis of these codes was straightforward. One block of States that included Florida, Illinois, and Utah reported that flags could be set on about half of their offenders. However, another block of States that included Michigan, North Carolina, North Dakota, South Carolina, and South Dakota reported that they did not bother

to examine existing records programmatically because much of the available disposition data were not specific enough to determine an offender's felony status. These and other States have taken a "day-one approach" to identifying felons by not attempting to flag existing records.

Implications for the National System

Irrespective of how a State determines an offender's felony status or how successful the State's approach has been, an issue of concern is the definition of *felony* being used. The National Felon Identification in Firearm Sales system is based on the definition in the Federal Gun Control Act of 1968. Virginia, which completed a pilot test with the FBI and updated its III records with a felony flag, used the Federal definition. However, as noted by BJS,[7] not only do States define *felony* in a variety of ways, but also the term *felony* is not defined at all in seven States. Most important, many States appear to use their own definitions to set felony flags. Interestingly, South Carolina is setting two felony flags: one based on the State definition and one based on the Federal definition of *felony.*

Because repositories receive data from several different agencies, including law enforcement agencies, prosecutors, courts, and corrections agencies . . . statewide use of an arrest tracking number is critical to the achievement of high data quality.

Because each State uses its own definition of a felony, several State central repository officials expressed concern over the reliability and consistency of felony flags that will eventually appear in III records. One State official said he wouldn't trust a flag set by another State and would need to look at the offender's rap sheet before determining the applicant's firearm eligibility.

Implementation of Policies and Procedures

The purpose of this strategy is to implement new procedures as necessary to ensure that arrests and dispositions are submitted in a timely and accurate manner. Critical procedures include those that relate to what forms are used, how data regarding both routine and unusual events are reported, how data fields are interpreted, and in what format computerized data are stored and transmitted. Perhaps the most important activity related to this strategy is implementation of a unique arrest tracking number (ATN). In fact, this was the most common procedure supported with CHRI funds.

Arrest Tracking Number

Because repositories receive data from several different agencies, including law enforcement agencies, prosecutors, courts, and corrections agencies, the State central repository must have a method to link the various pieces of information it receives to the correct case. For this reason, statewide use of an ATN is critical to the achievement of high data quality. States implementing

[7] Bureau of Justice Statistics. 1988. *Felony Laws of the 50 States and the District of Columbia, 1986.* Washington, DC: U.S. Department of Justice, Office of Justice Programs.

ATN's either before the CHRI Program or as part of their CHRI project used several methods, which can be divided into two groups:

- The most common method for implementing ATN's is to have them preprinted on multipart forms that eventually are submitted to the central repository, the prosecutor, and the courts. ATN's can be preprinted on fingerprint cards or on charging documents; they can also be preprinted on labels, which are then affixed to fingerprint cards and charging documents.
- The second method of implementing ATN's is to allow arresting agencies to obtain them from computer systems (such as that of the central repository). For example, in Montana, arresting officers routinely perform a name search of the central repository's master name index when an arrest is made. After the search is conducted, the system generates a unique ATN that the arresting officer records on the fingerprint card and on the charging documents submitted to the prosecutor. In Maryland, booking workstations that are still being developed will internally generate unique ATN's, printing them on all documents and electronically transmitting them to other criminal justice agencies involved in processing offenders.

The ATN method that is best for a State depends in part on the procedures already in place. In Montana, because arresting officers were already querying the central repository data base, it was simpler to have the system generate ATN's. In addition, by having the system generate ATN's, Montana central repository staff could determine which agencies were obtaining ATN's but neglecting to submit fingerprint cards.

Alaska convened a multiagency task force that considered the various options for implementing an ATN and elected to include a preprinted ATN on the charging document filed by arresting officers with the prosecutor. From a data quality perspective, the best method for implementing an ATN is one that does not require any human intervention, such as the method being implemented in Maryland. Data quality is threatened whenever ATN's must be copied manually from one form to another or entered into a computer system.

Recognizing that data quality begins at the local level, CHRI project directors emphasized the need to standardize local agency arrest and disposition reporting practices.

Standardization of Procedures

Recognizing that data quality begins at the local level, CHRI project directors emphasized the need to standardize local agency arrest and disposition reporting practices. Of particular interest in this regard is ongoing work in New York State, where the State's Division of Criminal Justice Services (DCJS) used CHRI funds to improve arrest and disposition reporting by first assessing local reporting practices and then devising and implementing model reporting standards across the State. During its first CHRI project, DCJS personnel identified a wide array of reporting practices of local arresting agencies, prosecutors, and courts that contribute to poor data quality. A major goal of New York's second CHRI project will be to develop a set

of model procedures that will meet the needs of the local agencies as well as the central repository. Such a document was expected to be available in fall 1994.

Automation of Arrest Reporting

The automation of arrest reporting would improve the completeness, accuracy, and timeliness with which arrest information is reported to the central repository and other criminal justice agencies.

The automation of arrest reporting would improve the completeness, accuracy, and timeliness with which arrest information is reported to the central repository and other criminal justice agencies. Arrest information would include fingerprint cards, and other criminal justice agencies would include prosecutors, courts, and other organizations that use such information in their day-to-day work. Because the CHRI Program focuses on improving disposition, not arrest reporting, few States implemented activities under this strategy. Nevertheless, what work is being undertaken is new and innovative and should be of interest to all States.

Live-Scan Systems

Live-scan devices can potentially improve the readability of fingerprints and, depending on how they are configured, reduce the delay in submitting fingerprint cards to the central repository to a matter of minutes. There are three basic live-scan system configurations, all of which were implemented with CHRI funds.

- In Pennsylvania, fingerprint images are printed on cards at the booking sites; the fingerprint cards are then sent via the U.S. mail to the central repository.
- In Minnesota, fingerprint card images are transmitted to the central repository, where each image is printed on a fingerprint card.
- In both Maryland and Minnesota, work is under way to enable fingerprint card images to be directly interfaced with an automated fingerprint identification system (AFIS).

The full benefits of live-scan technology are only realized through the third configuration listed above; the first two configurations should, at best, be considered interim solutions.

Implementation Considerations: Maryland's Experience

Maryland's efforts to interface live-scan devices with its AFIS is one component of an ongoing initiative to completely automate the arrest, booking, and reporting processes in the State. Arrest/booking workstations are scheduled to be installed in Baltimore and in four or five other law enforcement agencies in 1995. (State funds are supporting installation of the Baltimore system, while CHRI funds are supporting installation at the other sites.) The plan is for these workstations to be placed in all arresting agencies in the State. Statewide implementation of the workstation approach will be possible because the

State will own the software; local agencies wishing to install the system need only purchase the hardware, which could consist of a single PC for smaller agencies.

The workstation-based system supports the principle that data entry should be at the origination point: at booking. Major features of the system include:

- A Windows©-based user interface.
- Data entry screens for arrestee and arrest event information.
- System-generated ATN's.
- Barcoding technologies to track offenders entering a jail facility.
- Live-scan fingerprinting workstations that will be linked to a State's AFIS.
- An interface to the State's CCH so that arrest event information can be posted immediately to the offender's record.
- An interface to the State's judicial information system.
- An interface to the information system of the State's pretrial services agency.

In terms of impact, perhaps the major goal of the booking workstations is to reduce the elapsed time from fingerprinting to positive identification to posting of the arrest to the offender's criminal history record. The goal would be to identify 95 percent of offenders within 30 minutes of booking.

In addition, the booking workstation effort addresses what the most recent audit of the Maryland criminal history system found to be its major weakness: the failure to assign and use State identification numbers and ATN's uniformly and reliably throughout the criminal history reporting system. The percentage of arrests that can be linked to dispositions should improve because ATN's are system generated and electronically passed to both the central repository and the judicial information system.

Forty-six of 53 States used CHRI funds to improve automation of their central repository. In particular, States developed new systems or upgraded existing systems at the central repository, processed backlogged records, and automated manual criminal history records.

Automation of the Central Repository

As noted in Exhibit 3–3, 46 of 53 States used CHRI funds to improve automation of their central repository. In particular, States developed new systems or upgraded existing systems at the central repository, processed backlogged records, and automated manual criminal history records.

CCH Development

Of great significance is the fact that the CHRI Program supported development of a CCH in those States that did not have such a system. American Samoa, the District of Columbia, Maine, New Mexico, Tennessee, Vermont, and West Virginia all used manual systems prior to the CHRI Program. They are now developing and installing CCH's with CHRI funds. At the same time, 11 States used CHRI funds to upgrade or rewrite their CCH's.

In light of the staggering advances in computer technology in recent years—many of the CCH's being replaced have been in use for two decades—a new CCH based on modern technology can make an enormous impact. New hardware can increase the speed, reliability, and capacity of the CCH. New software can reduce data entry time and costs, ease system maintenance, and enhance other system capabilities and features. In terms of the CHRI Program, these rewrites are typically a required step before a State can develop procedures for quickly identifying convicted felons. As previously mentioned, this is because older CCH's were viewed simply as data storage systems and usually were not designed with analysis capabilities in mind. Therefore, disposition information in these systems typically is stored in a text field with no standards governing the format or content of the text. In redesigning the CCH, States have included a felony flag field in either the offender's identification segment or conviction segment. In addition, an upgrading of the CCH is often required before the State can implement electronic interfaces with other agency computer systems.

Data Entry and Data Conversion Efforts

Data entry and data conversion efforts aimed to accomplish one of three goals: (1) obtain and enter in the central repository data base arrest or disposition records that were never reported to the central repository; (2) enter records that were reported to, but never processed by, the central repository because of a backlog; or (3) automate manual criminal history records. All of these activities aimed to increase the number of records in the criminal history data bases. Backlog reduction activities had the additional objective of reducing the delay between the time a record was received and when it was posted to the central repository data base.

As of April 1994, States had obtained 430,000 unreported felony dispositions from various contributing agencies and entered them in central repository data bases.

For the backlog reduction activities, States either hired temporary personnel or paid central repository personnel overtime. Both approaches had drawbacks. States hiring temporary personnel experienced delays in hiring, screening, and training, while States asking staff to work overtime found employee burnout to be a problem. To obtain dispositions previously not reported to the central repository, States typically obtained a computer tape of unlinked arrests and attempted to match those records to computerized records on another agency's system. Taken together, these activities significantly increased the completeness of the central repository data bases. As of April 1994, States had:

- Obtained 430,000 unreported felony dispositions from various contributing agencies and entered them in central repository data bases.
- Entered 1.2 million dispositions that had been backlogged at repositories into central repository data bases.
- Entered 340,000 fingerprint cards that had been backlogged at repositories into central repository data bases.
- Automated 650,000 manual criminal history records.

Because many of the States are still working on these activities (see Exhibit 3–2), these figures will increase before the end of the CHRI Program. In addition, backlog reduction activities have resulted in significant improvements in the timeliness with which records are posted to the CCH. Of the States reducing backlogs, Georgia merits special recognition for the magnitude of its improvement in update timeliness: the elapsed time from receipt of fingerprint cards and entry of the arrest data in the CCH has been reduced from 14 months to less than 24 hours; and the elapsed time from receipt of disposition reports to entry of the disposition data in the CCH has been reduced from 36 months to 3 months.

Although these activities improved data base completeness and reduced delays in posting records to the CCH, these activities by themselves do not solve systemic reporting problems. They do not affect the completeness, accuracy, or timeliness of records reported to the central repository in the future. Many State officials noted these concerns, commenting that future efforts to improve data quality should focus on the quality of future records rather than the quality of old records. Fortunately, many States such as Iowa, Minnesota, New Jersey, Ohio, Oregon, and South Carolina that implemented backlog reduction activities also used CHRI funds to implement automated disposition reporting.

Automation of Disposition Reporting

The primary objective of the CHRI Program has been to improve disposition reporting to the central repository. Clearly one of the most effective strategies for improving disposition reporting is to automate the reporting process by implementing electronic interfaces between the CCH and the agencies responsible for reporting dispositions. Indeed, these interfaces can solve systemic reporting problems.

A properly implemented electronic interface between a CCH and a court or prosecutor information system can increase the percentage of dispositions reported to the central repository, improve the timeliness of disposition reporting, and improve the accuracy and completeness of the disposition records.

A properly implemented electronic interface between a CCH and a court or prosecutor information system can increase the percentage of dispositions reported to the central repository, improve the timeliness of disposition reporting, and improve the accuracy and completeness of the disposition records. The interfaces can also reduce the workload and improve the efficiency of agencies involved in the exchange of data. For example, in the case of a court-central repository interface, court personnel are relieved of the burden of submitting paper forms to the central repository, and central repository personnel no longer have to enter disposition data manually. Finally, recent advances in computer technology, particularly in the networking area, have made linking computers a much easier task.

Aggregate Accomplishments

As indicated in Exhibit 3–2, 22 States used CHRI funds to design or implement electronic interfaces between the courts and the CCH. It should be noted that 18 of the 22 States had no automated disposition reporting prior

to the CHRI Program, the exceptions being California, Delaware, Hawaii, and Massachusetts.

The degree to which dispositions in these 22 States will be reported electronically at the end of their CHRI projects varies:

- Five States (Idaho, Nebraska, Rhode Island, Washington, and Wyoming) will have completed design work with CHRI funds and will pursue implementation of the interfaces with other Federal and State funds.
- Eight States (Arizona, California, Georgia, Michigan, New Jersey, Ohio, South Carolina, and Texas) will receive dispositions electronically from some, but not all, counties in their State.
- Nine States (Connecticut, Delaware, Hawaii, Iowa, Massachusetts, Minnesota, Oregon, South Dakota, and Utah) should receive the vast majority of their dispositions electronically.

Implementation Considerations: Interface Characteristics

The court-central repository interfaces that were developed with CHRI funds differ in at least two respects. The first difference concerns the path traveled by the data. As noted earlier, States such as Texas and California are implementing systems one county at a time, so the data travel from the counties directly to the central repository. On the other hand, in States with centralized court information systems, the data travel from the county court to the central court information system and then to the central repository. Oregon and South Dakota, for example, have unified court systems, and courts throughout both States are linked to the central court information system. This setup clearly facilitated obtaining dispositions electronically. When asked to give advice to other States that wanted to implement automated disposition reporting, Oregon officials said, "Get a unified court system."

The second difference in court-central repository interfaces concerns the method by which data are transmitted. Again, from a technological perspective, some methods are easier to implement than others. The simplest—what might be called a semiautomated electronic interface—involves having court personnel transfer disposition records to a diskette or tape and deliver it (by courier, for example) to the central repository. A more technologically sophisticated approach—what might be called a fully automated electronic interface—is an online data transfer wherein data are transmitted directly from a court case management system (for example), over a leased telephone line or modem, directly to the central repository computer system.

From a data quality perspective, the less human intervention, the higher the data quality. Reporting should be a byproduct of normal day-to-day activities. Thus, if possible, preference should be given to online data transfers. In addition, a common feature of the most successful systems is two-way data transfer. In these systems, offender identification information such as the State

identification (SID) number is transmitted back to the court system after the central repository processes the offender's fingerprint card. Having both the courts and the central repository jointly develop and benefit from a system can greatly enhance interagency cooperation.

A common feature of the most successful systems is two-way data transfer.

Implementation Considerations: Delaware's Experience

Delaware used CHRI funds to implement a two-way interface between the two main State criminal justice-related information systems: the Criminal Justice Information System (CJIS) and the Judicial Information Center (JIC) system. CJIS users include law enforcement agencies, the State Bureau of Identification (SBI), the attorney general, and the arraignment courts (or Justice of the Peace Courts), while the upper courts (or the Court of Common Pleas and Superior Court) use the JIC system. CJIS and the JIC system were independently designed and operated by two different State agencies. Initially, little thought was given to sharing data with the other system. Having two independent systems affected data quality and data accessibility in a number of ways:

- Data entry was duplicated because each agency entered data in its own system. Sometimes paper notification was made to agencies using the other system. However, court clerks routinely entered dispositions in the JIC system without entering them in CJIS. As a result, dispositions were frequently never posted to the offender's criminal history record. In addition, data common to both systems—in particular, the offender's charges—often were not synchronized.
- Linking arrests to dispositions was an equally serious problem. A temporary SBI number, based on a name index search, was recorded on both the arrest fingerprint card and on paperwork sent by law enforcement agencies to the courts. If, after performing a technical fingerprint search, SBI personnel changed the temporary SBI number, the new SBI number would be posted to the CJIS system; although court officials had access to CJIS, the courts would often not be formally notified of the new SBI number.
- Users had to understand how to use two different systems, know which system had the desired data, and understand the limitations of both systems.

Integration of the CJIS and JIC system had a major impact on the flow of information from agency to agency:

- After the SBI processes arrest fingerprint cards, the correct SBI number is posted to CJIS and then electronically posted to the offender's case record in the JIC system.
- If the attorney general adds, drops, or modifies the arrest charges, the new charges are electronically posted to both CJIS and JIC. In addition, if the attorney general declines to prosecute the case, this decision is electronically recorded in both systems.

- When cases are bound over from an arraignment court to the upper courts, the arraignment court enters this disposition in CJIS. The disposition and the accompanying case data are then electronically transmitted to the JIC system.
- When a case is disposed in the upper courts, clerks record the disposition in the JIC system. The disposition is then electronically transmitted to CJIS.

In sum, when information is entered in either CJIS or the JIC system, a subset of that information is electronically transmitted to the other system.

These efforts will have a major impact on all aspects of Delaware's data quality, especially the percentage of dispositions submitted to the central repository, the timeliness with which they are submitted, and the ability to link arrests to dispositions. In addition, the savings in data entry work will be significant. As one JIC official said, "We are now out of the data entry business."

Implementation Considerations: South Carolina's Experience

South Carolina implemented automated disposition reporting on a county-by-county basis. Prior to the CHRI Program, the South Carolina disposition reporting system was entirely paper based. Court clerks in the 46 counties forwarded paper disposition forms to the central South Carolina Court Administration (SCCA) office, where seven data entry clerks entered the data in the SCCA data base. In addition, SCCA forwarded paper disposition forms to the State's central repository (SLED), where personnel posted the disposition to the CCH. A combination of State and CHRI funds supported development of a central SCCA computer system that could receive dispositions electronically from county clerk offices, as well as development of an electronic interface between the new SCCA system and SLED's CCH.

Prior to the CHRI Program, the South Carolina disposition reporting system was entirely paper based.

Two important points should be made about the approach South Carolina took in these efforts. First, 19 counties in the State, including the most populous counties, already had court information systems; a requirement of the new reporting system was that the new SCCA system be able to accept data from these systems, which were on a variety of hardware and software platforms with their own particular data formats and conventions. Second, in the 27 counties without any automation, CHRI funds were used to develop an inexpensive PC-based court case management system that county court clerks could use to manage their cases and assist with scheduling and calendaring. The package included a module for reporting electronically to the new SCCA system. Dispositions are transmitted in batch mode, posted to the SCCA data base, and then reformatted and transmitted to the SLED CCH.

As of February 1994, 32 of the 46 counties had discontinued submitting paper disposition forms and were only reporting electronically. The other 14 counties were expected to be reporting electronically later in the year.

Countywide Automation

The final group of data quality improvement efforts concerns efforts to electronically link the key criminal justice agencies within a single county to each other and to the State criminal justice agencies. In terms of the classification scheme presented in Exhibit 3–1, such efforts represent several activities under the "automate arrest reporting" and "automate disposition reporting" strategies. The ultimate goal of these efforts is significant: they attempt to create a single-point-of-entry or paperless reporting system within a county. Below, efforts toward this goal in Utah, Missouri, and Delaware are discussed.

The ultimate goal of countywide automation is to create a single-point-of-entry or paperless reporting system within a county.

Implementation Considerations: Utah's Experience

In Utah, CHRI funds were used to electronically link State-level criminal justice agencies and criminal justice agencies responsible for reporting criminal history information in Salt Lake County, the largest county in the State. The agencies being linked included county agencies (the Salt Lake County sheriff and Salt Lake County prosecutor) and State agencies (corrections, courts, and central repository). As is the case in many States, all of these agencies developed independent computer systems with little thought given to sharing data with other agencies. Once completed, the project will become a model for other counties in the State.

CHRI funds supported partial implementation of the interfaces. The interface between the jail systems and the Salt Lake County prosecutor system was completed, and the prosecutor now receives immediate electronic notification of new cases. The interface between the prosecutor system and the courts was also completed. This interface is two way: basic case information is electronically transmitted from the prosecutor to the courts at the time of case filing, and prosecutors are able to access the court calendar electronically. Finally, court-repository interface was completed. The countywide efforts will be continued with BJA/CJRI funds.

Implementation Considerations: Missouri's Experience

Missouri's long-term automation plan involved placing the information systems of the county sheriff, the prosecutor, and the court on a single computer network. This network will in turn be one node on a larger statewide network that will include the central repository, other counties, and gateways to national criminal justice telecommunications systems such as the National Crime Information Center and the National Law Enforcement Telecommunications System, Inc. Pilot projects to test this automation approach were under way in Osage and Randolph counties.

The centerpiece of these networks is the Missouri Prosecutors Integrated Case Management System (MOPICS). With CHRI funds, the Missouri State Highway Patrol developed MOPICS/2 and implemented it in nine counties. Development of MOPICS/2 was crucial for implementation of the countywide

systems because it is capable of supporting online two-way communication with the central repository data base. This communication allows not only for real-time disposition reporting but also for online querying of the central repository data base by prosecutor offices. The system runs on a variety of hardware platforms, including PC-based local area networks.

Implementation Considerations: Delaware's Experience

In Delaware, CHRI funds were used to develop two key missing pieces to a statewide single-point-of-entry system: case management systems for the courts and integration of the two main State criminal justice-related information systems.

In Delaware, CHRI funds were used to develop two key missing pieces to a statewide single-point-of-entry system: case management systems for the courts and integration of the two main State criminal justice-related information systems—the Criminal Justice Information System (CJIS) and the Judicial Information Center (JIC) system. Delaware has a major advantage over other States in development of a single-point-of-entry system because all of the criminal justice information systems were at the State level.

With State funds and the first-year CHRI award, a court case management system was created and installed in the arraignment courts. In addition to automating the process for producing court forms, the case management system included a reporting module that automatically transmitted dispositions to the CJIS system. A similar case management system was being developed for the upper courts with State and BJA/CJRI funds.

These efforts appear to have had a profound organizational impact in the State. Prior to these efforts, each agency had a narrow mentality based on its own system, and agency staff gave little thought to how their actions would affect other criminal justice agencies. With the development of the single-point-of-entry system, criminal justice agencies in Delaware seem to understand better that their actions affect other agencies and that they are part of a single criminal justice system.

Program Findings and Recommendations

This chapter builds on the experiences of the CHRI Program and considers possible future directions for efforts to improve criminal history record data quality. Such considerations are particularly relevant at this time because recent Federal legislation, including the Brady Act and the Child Protection Law, has reaffirmed that improving the quality of criminal history records will continue to be a priority for Federal, State, and local criminal justice agencies.

The CHRI Program has made a significant contribution to the long-term struggle to improve the quality of criminal history records.

This discussion draws, naturally, on the overview and analysis of the CHRI Program already presented earlier in this report, as well as on a survey of central repository personnel in 39 States as detailed in Appendix C. It also takes into account the characteristics of an ideal criminal history information system.

Program Findings

The CHRI Program was created in FY 1990 to improve each State's ability to accurately identify felons who attempt to purchase firearms. The Program was limited in scope: a 3-year funding period, a total of $27.6 million in funds, and a focus on improving felony conviction reporting to State central repositories. The CHRI Program has made a significant contribution to the long-term struggle to improve the quality of criminal history records. Findings of the evaluation can be summarized as follows.

Program Awards

Benefits from the CHRI Program were achieved for every State:

- All 50 States plus American Samoa, the District of Columbia, and the Northern Mariana Islands obtained CHRI funding. In all, 81 awards were made, and 28 jurisdictions received 2 awards.
- The award amounts ranged from a low of $112,842 to a high of $921,669. The average award was $521,227.
- States were able to leverage other State and Federal money to expand the scope of their CHRI projects. For example, CHRI funds accelerated implementation of data quality improvement efforts begun before the CHRI

Program; similarly, CHRI funds provided the basis for effectively using BJA/CJRI and other Federal and State funds to improve data quality even more.

Data Quality Improvement Strategies

For the CHRI evaluation, 12 data quality improvement strategies were identified. The most common CHRI-supported strategy was to improve automation of the central repository.

For the CHRI evaluation, 12 data quality improvement strategies were identified. The strategies underscore the long-term goals of a high-quality criminal history records system. The degree to which States carried out these strategies is consistent with CHRI Program goals:

- The most common CHRI-supported strategy was to improve automation of the central repository: 46 of 53 jurisdictions used CHRI funds for this purpose.
- The only other strategy addressed by more than half of the States (29) was automation of disposition reporting.

Program Activities

In addition, 46 different activities that supported the 12 strategies were identified. Each State implemented from 1 to 10 activities, with an average of 4 per State for a total of 213 data quality improvement activities. CHRI funds only were used to support two-thirds of the 213 activities, while State and BJA/CJRI funds complemented CHRI support of the other one-third of activities. In 10 or more States, 8 different activities were supported by CHRI funds, as discussed below:

- **Electronic interface.** Electronic interfaces between the courts and the central repository data base were designed or implemented in 22 States. Of these, 18 States had no automated disposition reporting prior to the CHRI Program. The percentage of dispositions submitted electronically in these 22 States varied: 9 States received the vast majority of dispositions electronically; 8 States received dispositions from some but not all of the counties in the State; and 5 States completed design work and will pursue implementation with other non-CHRI funds.
- **Baseline audits.** Baseline audits of criminal history record systems were conducted by 17 States. Given that only 11 States had conducted audits before the CHRI Program was established, increasing the knowledge about the Nation's criminal history systems is a major achievement of the CHRI Program. Audit results concur with results of the BJS data quality survey and underscore the urgent need for continued efforts to improve data quality.
- **Felony flags.** Felony flagging systems were developed by 17 States to determine quickly whether an offender has been convicted of a felony. The ability of States to flag the records of offenders already contained in their data bases varied widely, depending on the availability of conviction

data and the form in which the data were stored. The use of State-specific felony definitions raised questions about the feasibility of a national felony flag system.

- **Disposition backlogs.** Disposition backlogs were processed by 15 States. As of April 1994, these States added 1.2 million dispositions to central repository data bases.
- **Long-term plans.** Long-term data quality improvement plans were developed by 12 States. These plans became the basis for a second CHRI award and/or implementation of the BJA/CJRI Program. The common theme of the plans was that activities supported with CHRI funds were to be continued with BJA/CJRI funds.
- **Revised CCH's.** CCH's were rewritten by 11 States. Such activities typically increased the speed, reliability, and capacity of the CCH; reduced data entry time and cost; eased system maintenance; enabled States to develop procedures for quickly identifying convicted felons; and enabled interfaces between the CCH and other criminal justice information systems.
- **Automated records.** Manual criminal history records were automated by 11 States. As of April 1994, these States added 650,000 automated records to central repository data bases.
- **Unreported dispositions.** Unreported dispositions were obtained by 10 States from other criminal justice agencies. As of April 1994, these States had added 430,000 dispositions to central repository data bases.

Achievement of Related Goals

In addition to helping States to (1) enhance criminal history records for accurate identification of convicted felons, (2) meet the FBI/BJS Voluntary Reporting Standards, and (3) improve the quality and timeliness of criminal history information, the CHRI Program has accomplished three important missions:

- **Improvement of the national criminal history system.** CHRI funds have increased participation in the Interstate Identification Index (III). Five additional States have become III participants, and four others hope to become participants by the end of their CHRI projects. An increase in the level of automated disposition reporting to the FBI and an increase in participation in the Felon Identification in Firearm Sales Program have also resulted.
- **Improvement of interagency cooperation.** Enhanced cooperation among agencies was a byproduct of CHRI-supported activities such as the planning, auditing, and electronic interface activities. This cooperation is essential because coordinated multiagency efforts are necessary to make systemic improvements to data quality.

- **Heightened awareness of the importance of criminal history record information.** One CHRI project leader commented that the mere existence of a Federal criminal history records improvement program sent a strong message to State legislatures that "the quality of criminal history records is a priority." Increased awareness of the importance of criminal history records will inevitably lead to improved reporting.

CHRI Program in Perspective

Although the accomplishments of the CHRI Program are significant, it is important to view the program in the context of the long-term effort to improve data quality and to bring all States into compliance with State and Federal standards.

Much of the impact of the CHRI Program has yet to be realized. More important, in most States the same data quality improvement activities supported with CHRI funds were being continued with BJA/CJRI funds. In fact, most States viewed the BJA/CJRI Program as an extension of the CHRI Program. This finding is significant because, as noted earlier, States used CHRI funds appropriately to address systemic reporting problems and to initiate multiyear activities.

Although the accomplishments of the CHRI Program are significant, it is important to view the program in the context of the long-term effort to improve data quality and to bring all States into compliance with State and Federal standards. It is impossible to predict when States will be in compliance with these standards because it depends on a number of factors: the level of State and Federal funding, which (and how well) data quality improvement activities are implemented, and how important the quality of data is considered to be by the thousands of criminal justice personnel involved in reporting criminal record information.

However, on the basis of experiences in the CHRI Program, a few observations on the level of effort still required can be made. First, the CHRI Program has enabled each State to implement only a fraction of all the activities needed for data quality improvement. Second, an activity is never really completed in the sense that no resources need ever be directed to it again. For example, the FBI/BJS voluntary reporting standards suggest that baseline audits be performed annually. In addition, the lifetime of any computer system is limited, typically about 5 years. Third, CHRI-supported data quality audit results, observations from the States included in this evaluation, and the BJS data quality survey results underscore the urgent need for continued emphasis on improving data quality. Fortunately, as the CHRI Program ends, other Federal money is available for criminal history records improvement. Finally, it is essential that evaluation efforts be continued: not only to ensure that funds have been appropriately spent and have achieved a significant degree of impact, but also to share best practices and minimize the potential for reinventing the wheel.

This evaluation study provides officials in the Department of Justice with an assessment of how effectively Federal funds were spent on the CHRI Program and provides State and local officials with insight into a range of criminal

history record improvement strategies and activities. However, another key purpose of evaluations is to help guide future policies in the area of concern.

Ideal System Considerations

The ideal criminal history information system is one that provides useful data to those who need such information.

One way of determining the future direction of criminal history record improvement activities is to consider the ideal criminal history information system. Put simply, the ideal criminal history information system is one that provides useful data to those who need such information. This statement follows directly from the data quality framework discussed in Chapter 2. In that framework, the outcome measures—those measures that reflect the ultimate objectives of a system—focus on the usefulness of criminal history data, including the availability of those data to authorized agencies; the time lapse between record request and information receipt; and the relevance of the information provided to the needs of the requestor.

It also follows that to be useful, data must be complete, accurate, and timely. For an ideal criminal history record system, the data should comply with Federal and State data quality standards: in this case, the FBI/BJS Voluntary Reporting Standards and the BJA waiver criteria. The data quality standard most often referenced is that a State central repository must have dispositions for 80 percent of felony arrests occurring in the last 5 years. Achieving this standard would result in significant upgrades in many States' record systems.

However, the concern here is not what standards must be met but how a State achieves whatever standards are established. Although a step-by-step guide for meeting standards and improving data quality, while a laudable goal, is beyond the scope of this report, two points should be made. First, on the basis of evaluation findings and conversations with CHRI project officials, it seems clear that there exists a set of baseline data quality improvement activities that must be implemented if an acceptable level of data quality is to be achieved. That acceptable level may or may not bring a State into compliance with established data quality standards. Baseline data quality improvement activities might include convening a multiagency task force, conducting a baseline audit, enacting legislation specifying both reportable events and those agencies responsible for reporting, establishing a fingerprint-supported CCH, providing online name query capability to contributing agencies, and implementing a unique number tracking system. Clearly, future funding efforts should focus on ensuring that all States have addressed these baseline activities.

Second, to achieve the highest possible levels of completeness, accuracy, and timeliness, States should work toward a single-point-of-entry or paperless system in which particular data elements are entered into an automated system once and are subsequently transmitted electronically to other agencies that require the data element. Efforts toward that goal in Delaware, Missouri, and Utah were discussed previously in this report.

The single-point-of-entry system is essential because of the inherent threats to accuracy, completeness, and timeliness in the manual handling of the data by multiple parties. As illustrated in Exhibit 4–1, the flow of paperwork related to a single arrest involves several agencies. For the maintenance of complete, accurate, and timely records, each link in the data quality chain must be strong. Among the most vulnerable links are the interfaces between two different agencies. There are three basic types of interfaces: manual, semiautomated electronic, and fully automated electronic. The CHRI Program supported development of semiautomated and fully automated electronic interfaces in a number of States. Exhibit 4–2 summarizes the levels of risk for each of the three types of interfaces, first, if the sending agency fails to submit or delays submitting data, and, second, if the receiving agency delays processing the received data or makes errors in processing the data. The fully automated electronic interface clearly poses the least threat to data quality.

Exhibit 4–3 further illustrates the advantages of fully automated electronic interfaces by estimating how many times basic data on offenders must be either handwritten or keyed into a computer system for two kinds of criminal history reporting systems: one composed exclusively of manual interfaces and one composed exclusively of fully automated electronic interfaces. In the fully automated system, the data are entered only once: when the offender is booked or when an arrest warrant is obtained. In the completely manual system, data are entered a minimum of 16 times; the potential for data entry errors and delays in such a system is obvious.

In formulating their approaches to automation and to achieving a paperless system, States must prioritize implementation of electronic interfaces between agencies . . .

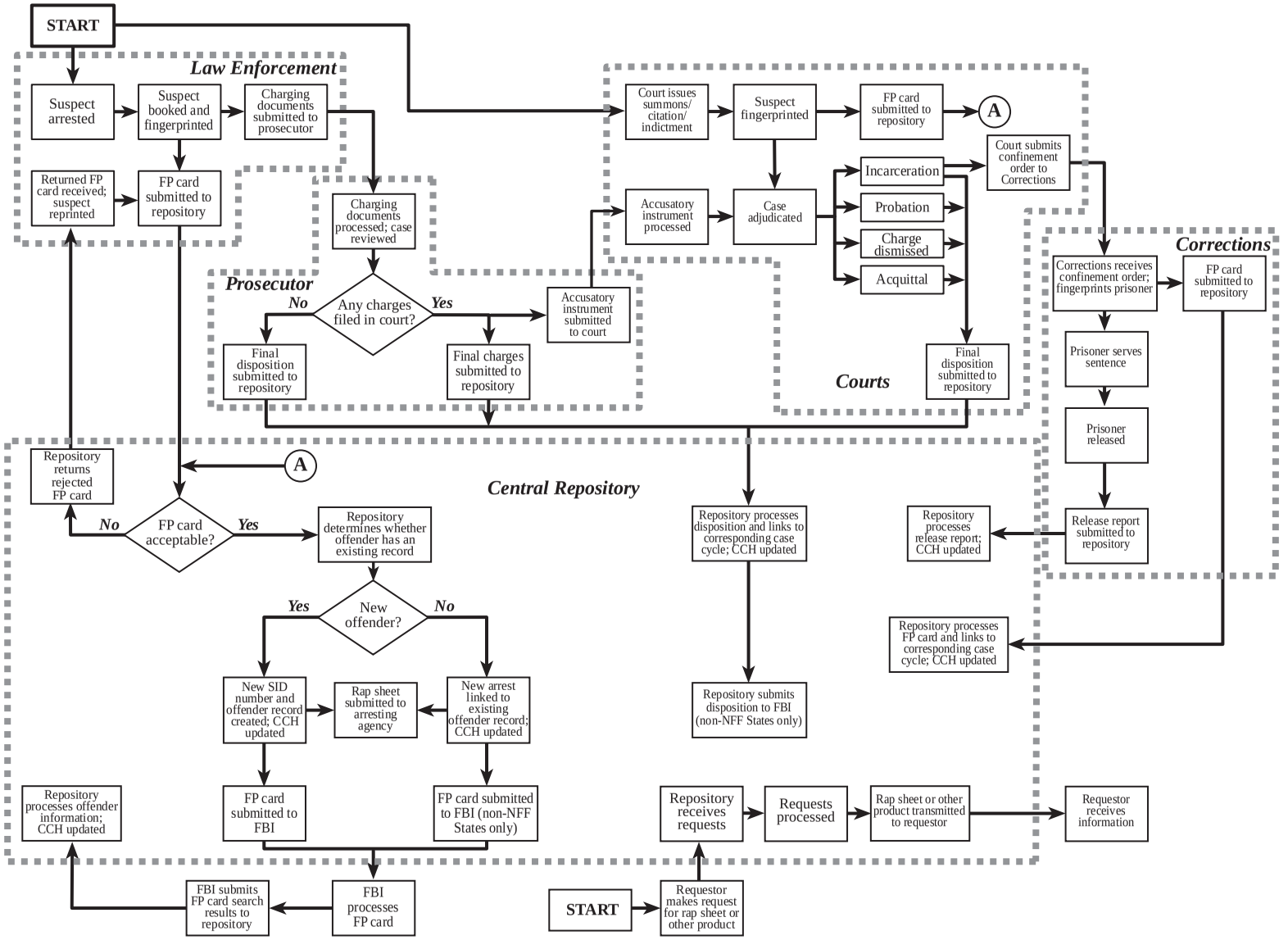
Although court-repository electronic interfaces were emphasized in the CHRI Program, States used CHRI funds to support electronic interfaces between other pairs of agencies. In formulating their approaches to automation and to achieving a paperless system, States must prioritize implementation of electronic interfaces between agencies, considering, for example, implementation costs, the volume of data transmitted between two agencies, and the goals and constraints of available funding programs.

Recommendations

Keeping in mind the ultimate objectives of the ideal criminal history system and the lessons and experiences of the CHRI Program, the States' views of data quality problems and activities to improve data quality, and the status of related grant programs, five recommendations for future criminal history records improvement efforts can be made. Three recommendations for research and evaluation actions can also be made. Each builds on and extends the findings contained in this report.

- **Continuation of funding of records improvement initiatives.** Recurring uncertainty about funding for the BJA/CJRI Program, the newer Brady Handgun Violence Prevention Act, and the National Child Protection Act grant programs continues to inhibit this overall effort. Given the current status of criminal history records, the increasing importance of higher

Exhibit 4–1 Criminal History Case Cycle Flow



(A) Represents the Central Repository

Exhibit 4–2 Criminal History Record Reporting Systems: Threats to Data Quality

Method of Transmitting Data From Agency A to Agency B	Additional Processing Work for Agency A	Risk of Delayed or No Submission to Agency B	Required Processing Work for Agency B	Risk of Delays or Errors in Agency B Data Base Update
Manual Interface Agency A mails/faxes a paper form to Agency B.	Moderate	Significant	Manual data entry	Significant
Semiautomated Electronic Interface Agency A dumps records from its information system to a printer and mails printed version to Agency B.	Minimal	Moderate	Manual data entry	Significant
Agency A uses terminal to Agency B's information system to enter record.	Significant	Significant	None	None
Agency A dumps records from its information system to a tape or diskette and mails to Agency B.	Minimal	Moderate	Load tape or diskette	Minimal
Fully Automated Electronic Interface Online electronic transmission of online records from Agency A to Agency B.	None	Minimal (none if automatic)	None	None

quality criminal history records, and the need for States to continue activities initiated with CHRI funds, all three programs should be funded. A stable funding stream is essential if States are to address their systemic reporting problems in a purposeful manner.

- **Continuation of the requirement to establish multiagency task forces.** Convening a multiagency task force is an important first step toward having each agency understand that its actions affect other agencies and that each agency is part of a single criminal justice system. This requirement should be a part of every records improvement initiative.
- **Funding of baseline activities.** Funding priority should be given to States that have not implemented baseline data quality improvement activities needed for achievement of higher data quality. Examples of these activities include establishing a system to measure data quality on an ongoing basis, enacting legislation specifying both reportable events and agencies responsible for reporting, having a fingerprint-supported CCH, providing online name query capability to contributing agencies, and implementing a unique number tracking system.

Exhibit 4–3 Recording Frequency of Basic Offender Data: Manual Versus Fully Automated Systems

Agency	All Manual Interfaces		All Fully Automated Electronic Interfaces	
	# Times Recorded	Purpose	# Times Recorded	Purpose
Arresting Agency	1 1 1 ≥1 ≥1	Local fingerprint card State fingerprint card FBI fingerprint card Forms for prosecutor Local booking forms	1	Enters data once in online booking system
Prosecutor	≥1 ≥1 1	Internal prosecutor forms Forms for court Disposition forms for repository	0	Online booking system transmits data to prosecutor case management system, which can in turn transmit data to court system and repository
Court	≥1 ≥1 1	Internal court forms Forms for corrections/ probation/etc. Disposition forms for repository	0	Receives case data electronically from prosecutor; transmits data to corrections/probation and repository electronically
Corrections	1 ≥1 1	State fingerprint card Internal court forms Release form for repository	0	Receives offender data electronically from courts; transmits data to repository electronically
Central Repository	≥1 ≥1	Upon receipt of fingerprint card Upon receipt of disposition report	0	Receives offender data electronically from all contributing agencies
TOTAL	**≥16**		**1**	

- **Continuation of emphasis on automation.** The importance of automation in improving data quality cannot be overstated. The CHRI Program emphasized improving automation of the central repository. Other funding initiatives should consider automation not only of the central repository but also of the local, county, and State criminal justice agencies that are responsible for reporting criminal records. Complete, accurate, and timely records require all links in the data quality chain to be strong.
- **Paperless reporting systems.** Each State should develop a strategy for implementing reporting systems that are county-based or State-based and single-point-of-entry or paperless. Any proposed automation effort should be approved for funding only if it has explicitly accounted for electronic interfaces to other criminal justice agencies.

- **Continuation of evaluation of activities similar to CHRI.** CHRI-supported efforts were still under way in 22 States when this evaluation was completed. Therefore, a full accounting of the impact of the CHRI Program has not been made. A full evaluation is essential not only for the CHRI Program but also for similar efforts, given the level of funding of the BJA/CJRI Program, the anticipated funding through the Brady Handgun Violence Prevention Act and Child Protection Act programs, and the overlap in their goals. Such an evaluation is warranted not only because of the amount of Federal moneys involved; it is important also to determine the benefits that the States derive from these programs. In addition, an activity-based evaluation would complement the snapshot-based BJS-sponsored data quality surveys.
- **Development and publication of a guide for improving data quality.** The development and publishing of a guide to improving data quality would expand and pilot test the guide-related ideas promulgated here, including such concepts as the data quality chain and the data quality index. For example, the development of an index that could continually measure and assess data quality would not only provide a consistent basis for assessing changes in quality before and after implementation of improvement activities, but also would assist States in selecting activities that yield the largest increase in their data quality indexes.
- **Assessment of the usefulness of criminal history records.** Although States are focusing on the complete, accurate, and timely aspects of data quality emphasized in FBI/BJS standards and BJA criteria, in coming years the emphasis is likely to shift to activities that improve the accessibility and utility of criminal history records. Such activities might include the provision of more sophisticated query capabilities to users and development of decision-support modules that can produce pertinent information for criminal justice officials at both the operating and the administrative levels.

Reliable, constant sources of funding . . . will eventually lead to achieving the initial goals of the CHRI Program and its related programs: accurate, timely, complete, automated criminal history records.

These recommendations represent modest and realistic goals that together form a framework for making and assessing progress in this complex area. Reliable, constant sources of funding coupled with cooperative guidance stressing improvements in basic system components will eventually lead to achieving the initial goals of the CHRI Program and its related programs: accurate, timely, complete, automated criminal history records. Ongoing evaluation will allow for midcourse correction and document longer-term successes, leading to renewed efforts that will further enhance the basic system. Eventually, the now-ideal goals of a paperless, interconnected, user-friendly system will emerge.

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Glossary

AFIS	Automated Fingerprint Identification System: An automated system for classifying, searching, and maintaining fingerprints.
ATN	Arrest Tracking Number: A unique identification number that is assigned manually by the arresting officer or automatically by the computer system when an arrest is made. The number is entered into a State's central repository for use by law enforcement agencies, prosecutors, courts, and corrections agencies to track individual cases.
BJA	Bureau of Justice Assistance: The U.S. Department of Justice agency that funded the CHRI evaluation study and administers the BJA/CJRI Program.
BJS	Bureau of Justice Statistics: The U.S. Department of Justice agency that funded and administered the CHRI Program.
CCH	Computerized Criminal History: An automated system used to maintain records on the criminal activities of offenders.
CHRI	Criminal History Records Improvement: A $27-million program focused on improving the quality of the Nation's criminal history records. (In other publications, CHRI sometimes refers to criminal history record information.)
CRIMS	Criminal Records Information Management System: The New York State Office of Court Administration's (OCA's) mainframe management information system that is used to forward criminal and superior court dispositions to OCA, provide an interface with the Division of Criminal Justice Services, and transfer dispositions electronically to the central repository.
CJRI	Criminal Justice Records Improvement: A continuing mandate attached to the BJA Formula Grant Program requiring each State to apply 5 percent of its funds to criminal justice records reporting, beginning in FY 1992 (called the BJA/CJRI Program).

III	Interstate Identification Index (Triple "I"): A data base system maintained by the FBI that contains personal identifiers of offenders and "pointers" to States maintaining criminal history records on these offenders.
MNI	Master Name Index: A data base, either manual or automated, containing personal identifiers of offenders with criminal history records.
NCIC	National Crime Information Center: A cooperative venture between the FBI and State and local law enforcement agencies that provides computerized access to documented criminal justice information on wanted persons, stolen property, violent felons, etc.
NLETS	National Law Enforcement Telecommunications System: A computer-controlled, message-switching network linking local, State, and Federal law enforcement agencies for the purpose of information exchange.

State Summary

This appendix contains a description of activities supported by the Criminal History Records Improvement (CHRI) Program in each State. In addition, the following summary information is also given:

- **Data quality improvement activities.** All activities, whether fully or partially supported by CHRI funds, are identified. Some of the activities are general (for example, automate manual records) while others are specific (for example, set felony flag in existing records), but the focus is on activities that are of interest to Federal and State officials.
- **CHRI project status.** The status of each CHRI-supported activity is noted as either ongoing or completed. "Completed" means that all work performed on the activity *with CHRI funds* is completed. It does not mean that a State has completed all work on this activity. Indeed, as previously noted, many States are continuing CHRI-supported activities with other Federal or State funds.
- **Funding sources.** The funding sources for each activity are based on self-reported information from the States; no financial audits were undertaken as part of the evaluation. Activities supported by a State's first CHRI award list the funding source as "CHRI I"; those supported with a second CHRI award list the funding source as "CHRI II." CHRI-supported activities may also be supported by other funding sources, including the Bureau of Justice Assistance Criminal Justice Records Improvement (BJA/CJRI) Program, earlier BJA formula grants, or major State grants.

Finally, 22 States were continuing to work on their CHRI projects at the time this report was completed.

Alabama

Data Quality Improvement Activities	CHRI Project Status	Funding Sources
Obtain unreported dispositions	Completed	CHRI I & II, 5%
Install court information system	Completed	State, CHRI I & II, 5%

Alabama's CHRI project emphasized increasing the percentage of recent felony arrests with dispositions.

Alabama's CHRI project emphasized increasing the percentage of recent felony arrests with dispositions. The State estimated that only about 50 percent of the felony arrests made prior to 1990 and recorded in its

computerized criminal history (CCH) had dispositions. Consequently, the central repository hired temporary personnel to go to the county courts and retrieve unreported felony dispositions. Some 37,000 felony dispositions were obtained and entered in the CCH. As a result of these efforts, approximately 90 percent of the felony arrests that occurred in 1988 and 1989 now have disposition records in the central repository data base. The State planned to use BJA/CJRI funds to target those felony arrests that occurred in 1987 that were missing dispositions.

New disposition reporting procedures instituted in 1990 should ensure high disposition reporting rates in the future. A key component of these procedures was a monthly tape transfer of dispositions from the central court to the central repository. To increase the percentage of dispositions reported electronically, the State installed case management systems in the county-level courts to enable them to report dispositions electronically to the central court. Prior to the CHRI project, 15 county courts were automated. With CHRI funds, an additional 10 counties were automated. The State planned to continue the automation project with BJA/CJRI funds.

Alaska

Data Quality Improvement Activities	CHRI Project Status	Funding Sources
Set felony flags in existing records	Completed	CHRI I
Participate in III	Completed	CHRI I
Implement unique tracking number	Ongoing	CHRI I & II
Conduct audit	Completed	CHRI II
Interface prosecutor and CCH	Ongoing	CHRI II, 5%

Recognizing the importance of having a reliable method to link arrest information to disposition information, Alaska implemented an arrest tracking number (ATN).

Alaska's CHRI I project focused on three activities. First, the State set felony flags on all existing offenders in its criminal history system. In carrying out this activity, Department of Public Safety (DPS) personnel developed software that examined each offender's record and determined the offender's felony status based on the conviction charge, sentence length, and court of conviction (a conviction in superior court rather than district or municipal court implied a felony). Second, DPS personnel worked with a private contractor and with the FBI to develop the necessary software and supporting procedures so that the State could participate in the Interstate Identification Index (III). On August 4, 1991, Alaska became the 22d State to participate in III.

Recognizing the importance of having a reliable method to link arrest information to disposition information, Alaska selected for one of its CHRI activities the implementation of an arrest tracking number (ATN). The State hired a local consultant to head this effort. The consultant worked closely with a multiagency working group that included representatives of those agencies most affected by the changes necessitated by the new ATN. The approach

the State elected to take was to include a preprinted ATN on the criminal case intake and disposition (CCID) form, the charging document submitted by the arresting officer to the prosecutor. The prosecutor then recorded on the CCID the charges to be filed in court, forwarded a copy of the updated CCID to both the arresting agency and DPS, and recorded the ATN on the complaint filed with the court clerk. The court clerk subsequently entered the ATN and other relevant case information into the court's information system.

Project personnel reported that the most important factor in the successful implementation of the ATN was the commitment to long-term followup and monitoring of the activity. The consultant in charge of the project held several training sessions on proper use of the ATN, conducted mini-audits to assess the degree to which procedures were being followed, made site visits to agencies, and was available by telephone to answer questions from local agency personnel. A professional-quality video that explained the importance of the ATN and the procedures to be followed was also produced. In terms of impact, project personnel noted that for the first time the State routinely obtained prosecutor declinations. The ATN also enabled the State to conduct effective audits of the CCH data base by determining precisely which dispositions were associated with what charge. However, the impact on the percentage of arrests that could be linked to dispositions was not known. Work on this activity was continuing with CHRI II funds, and implementation of the ATN continued to be monitored. A number of changes were being considered, most notably the addition of a check-digit to the ATN.

The State hired another private contractor to conduct a baseline assessment of the criminal history reporting system. Completed in spring 1993, the assessment examined data completeness, timeliness, and accuracy and determined the degree to which the State was in compliance with FBI/BJS reporting standards. Recommendations were also made in the areas of management, CCH structure, and the relationship between the CCH and other State computerized information systems. As a result of this study, the State elected to use CHRI II and BJA/CJRI funds to develop a prosecutor-repository interface, which was expected to be completed by the end of 1994.

American Samoa

Data Quality Improvement Activities	CHRI Project Status	Funding Sources
Install CCH	Ongoing	CHRI I
Automate manual records	Ongoing	CHRI I

American Samoa installed a baseline CCH system.

Prior to the CHRI Program, the American Samoa Department of Public Safety had a manual records system. CHRI funds were used to install a baseline CCH system and to automate records of felony arrests made in the past 3 years. Both activities were ongoing, and CHRI project personnel projected that CCH would be ready by the end of the grant period and that 1,000 felony arrest records from the past 3 years would be automated.

Arizona

Data Quality Improvement Activities	CHRI Project Status	Funding Sources
Conduct audit	Completed	CHRI I
Develop data quality improvement plan	Completed	CHRI I
Process disposition report backlog	Completed	CHRI I
Conduct training at local agencies	Ongoing	CHRI II
Interface courts and CCH	Ongoing	CHRI I & II
Interface corrections and CCH	Ongoing	CHRI II
Upgrade CCH	Completed	CHRI II

With CHRI I funds, Arizona hired a private contractor to conduct a baseline data quality audit and to develop a data quality improvement plan. This plan became the basis for both the State's CHRI II proposal and the BJA/CJRI plan.

With CHRI I funds, Arizona hired a private contractor to conduct a baseline data quality audit and to develop a data quality improvement plan.

The four key activities implemented with CHRI II funds were all recommended in the data quality improvement plan. One recommendation called for a renewed emphasis on local agency training, which central repository personnel felt was their greatest success. The major topics covered by the training sessions were:

- How information flowed through the criminal justice system.
- How the central repository processed arrest and disposition reports.
- How a fingerprint card should be filled out.
- How a disposition report should be filled out and who is responsible for submitting it.
- How unusual arrest scenarios such as arrests on failure-to-appear warrants should be handled.

The trainers found that many reporting problems were due to lack of familiarity with reporting procedures. By the end of the CHRI project, the central repository hoped to have conducted training sessions for every criminal justice agency in the State.

The Arizona central repository does not yet receive any arrest or disposition reports electronically, and both central repository staff and the State's plan stress that electronic reporting is essential if the central repository is to keep up with its workload and improve data quality. With CHRI I funds, the central repository assessed the feasibility of implementing electronic disposition reporting with Maricopa County, the largest county in the State. Unfortunately, the assessment concluded that electronic reporting was not feasible until the county system was upgraded, and this project had to be postponed for 2 to 3 years.

The central repository-corrections interface was in the process of being upgraded. The current procedure is for corrections to send a tape once a month to the central repository; however, the State identification (SID) number was not consistently included in the records, so posting the records to the CCH was a time-consuming process. In the future, tapes will be sent weekly, and because new procedures will go into effect requiring that the SID number be entered into the corrections system, records should be more easily posted to the proper offender record.

Finally, 95,000 backlogged felony disposition reports were entered into the CCH, improving the completeness of the data base and the State's ability to identify convicted felons.

Arkansas

Data Quality Improvement Activities	CHRI Project Status	Funding Sources
Obtain unreported dispositions	Completed	CHRI I & II

Arkansas used CHRI funds to obtain and enter unreported dispositions associated with felony or serious misdemeanor arrests . . .

Arkansas used CHRI funds to obtain and enter unreported dispositions associated with felony or serious misdemeanor arrests made from 1985 to 1990. The Arkansas Crime Information Center (ACIC) estimated that it did not have dispositions for 77,280 of 120,000 such arrests (64 percent). In 1990 Arkansas implemented a new arrest and disposition reporting system, which featured a new fingerprint card with a unique tracking number and a change in responsibility for reporting dispositions from law enforcement to the courts. The State felt that the new system greatly improved arrest and disposition reporting.

ACIC completed the field work of going to the various criminal justice agencies to physically obtain the unreported arrests and dispositions and entered approximately 126,000 records with CHRI funds. The offender felony conviction status was updated in this process. An additional 17,000 records have been obtained but not yet automated. ACIC is seeking funds from other sources to automate these manual records.

California

Data Quality Improvement Activities	CHRI Project Status	Funding Sources
Develop data quality improvement plan	Completed	CHRI I
Process disposition report backlog	Ongoing	CHRI I & II
Automate disposition reporting to FBI	Ongoing	CHRI II
Interface courts and CCH	Ongoing	CHRI II

California's CHRI I project focused on an assessment of the criminal history reporting system and development of a long-term data quality improvement plan.

California's CHRI I project focused on an assessment of the criminal history reporting system and development of a long-term data quality improvement plan. The State's Department of Justice hired a private contractor for this task. The primary conclusions of the study were that "lack of automation was a significant barrier to more complete, timely, and accurate" reporting; that "more frequent and targeted training at the local agency level was needed"; and that "low priority, lack of incentives, and lack of accountability were barriers to improved reporting." The recommendations of the study later became the basis for the State's BJA/CJRI plan.

The State used CHRI funds to reduce a significant backlog of "no arrest online" dispositions—that is, dispositions received for which no corresponding arrests were in the CCH. During the CHRI I project period, approximately 140,000 such dispositions were entered. An additional 70,000 were expected to be entered during the CHRI II project period. Although not fingerprint supported, these dispositions can be the basis for initial denial of a firearm purchase.

California's CHRI II project focused on automated disposition reporting, both from the counties to the central repository and from the central repository to the FBI. Like other States, California has experienced increased workloads and reduced staffing in its county and State criminal justice agencies. CHRI project officials saw automated disposition reporting as a way to do more work with fewer staff. Prior to this project, two counties were reporting dispositions electronically, so the concept already had been shown to be feasible. By August 1993 the State Department of Justice had issued subgrants to 12 counties to help them report dispositions electronically. To facilitate this process, the State Department of Justice issued guidelines for electronic reporting. CHRI project officials expected that all 12 counties, which accounted for nearly half of all dispositions submitted to the central repository, would be reporting electronically by fall 1994. The major impact of this activity will be to increase timeliness of dispositions; at the end of 1993, there was a 60- to 70-day delay from time of receipt by the central repository to processing of the disposition.

Finally, CHRI funds were used to automate disposition reporting to the FBI. This activity was particularly important because California's dispositions accounted for one-quarter of all dispositions submitted to the FBI. Once automation was completed, tapes were to be forwarded monthly to the FBI. In addition, the State planned to send tapes containing all dispositions submitted by the State to the FBI since 1984, enabling them to be downloaded directly to reduce the backlog at the FBI.

Colorado

Data Quality Improvement Activities	CHRI Project Status	Funding Sources
Conduct audit	Completed	CHRI I & II, State
Conduct training at local agencies	Completed	CHRI I & II, State

The Colorado Bureau of Investigation (CBI) used CHRI funds to establish a team of auditors to make site visits to more than 300 reporting agencies throughout the State . . .

The Colorado Bureau of Investigation (CBI) used CHRI funds to establish a team of auditors to make site visits to more than 300 reporting agencies throughout the State and to assess the degree of participation by each agency in the criminal history reporting system. The audit team found that although systems, including electronic interfaces to the CBI, were in place to provide for complete, accurate, and timely reporting, agency personnel were not following established reporting procedures consistently. The most pressing problem was that the arrest tracking number was not being passed from the arresting agency to the prosecutor and then on to the courts. As a result, dispositions reported by the courts could not be linked to arrests. The auditors believed that confusion was the primary reason for this problem. Following established reporting guidelines never had been a priority in the State, at least until the CHRI project.

The State's major activity for improving adherence to reporting guidelines was local agency training programs. The auditors planned to visit local reporting agencies again; however, instead of conducting audits, they planned to conduct training sessions for local agency personnel. CBI hoped to continue this program with State funds. CBI also planned to publish reporting statistics by agency each quarter to spotlight those agencies that were not following guidelines. CBI was optimistic for the future because for the first time, the leadership of the prosecutorial agencies and the courts was solidly behind CBI's efforts to improve reporting.

Connecticut

Data Quality Improvement Activities	CHRI Project Status	Funding Sources
Conduct audit	Completed	CHRI I
Develop data quality improvement plan	Ongoing	CHRI I
Implement unique tracking number	Completed	CHRI I
Interface courts and CCH	Ongoing	CHRI I

Using CHRI funds, Connecticut completed its baseline data quality audit and was in the process of completing three other activities that will facilitate long-term planning for improving data quality.

Connecticut completed its baseline data quality audit and was in the process of completing three other activities that will facilitate long-term planning for improving data quality: a 1988 study of the State's Criminal Justice Information System was being reviewed and updated, the State's telecommunications network was being assessed, and a systemwide data reference document was being produced to guide future automation projects. All three activities were expected to be completed by the end of 1994.

The State also used CHRI funds to implement a new arrest fingerprint card with a unique tracking number. CHRI project personnel reported that implementation of the new card proceeded very smoothly because most reporting agencies saw the need for the new card as well as for the tracking number. The new fingerprint card replaced two older forms, thus reducing the amount of paperwork for law enforcement agencies.

Finally, the State tested an interface between the State Police's CCH system and the State's judicial information system. Once testing is completed, the interface will allow batch transfer of dispositions to the CCH system. With other Federal funding, the State is upgrading the CCH; once this update is completed, dispositions will be transmitted from the judicial information system to the CCH in real time.

Delaware

Data Quality Improvement Activities	CHRI Project Status	Funding Sources
Automate manual records	Completed	CHRI I
Obtain unreported dispositions	Completed	CHRI I
Upgrade court information system	Completed	CHRI I, State, 5%

Delaware used CHRI funds both to improve the completeness of existing criminal history records and to implement electronic interfaces to ensure the completeness, timeliness, and accuracy of records reported in the future.

Two data entry and data conversion activities improved the completeness of existing criminal history records. First, temporary personnel were hired to enter in the State Bureau of Investigation's (SBI's) automated master name

index arrest data contained in the manual fingerprint card file. By the end of the State's first CHRI award, data on all 175,000 manual records had been automated. Second, the SBI attempted to increase the number of felony arrest charges that had dispositions. Two strategies were used for this activity. Temporary personnel were stationed at courts throughout the State to research court files for missing dispositions, and the SBI attempted a programmatic match of computerized records on its CCH with records on the State's Judicial Information Center (JIC) system. As a result, some 56,000 felony dispositions were added to the CCH. From 1985 to 1989, the percentage of felony arrests with final dispositions increased from 35 to 64 percent.

Delaware's CHRI projects, however, focused primarily on development of automated systems for processing and reporting criminal justice records. In 1984 the State developed a master plan for automating the State's criminal justice agencies. The primary objective of that plan was development of a single-point-of-entry system, wherein all data elements would be entered only once. (It should be noted that Delaware has a major advantage over other States in the development of a single-point-of-entry system because all criminal justice information systems are at the State level.) The first major step in that direction occurred in 1989, when a statewide Automated Warrants System (AWS) was implemented. It is significant that this system was developed first because the application for a warrant is usually the first step in a case cycle. The information in AWS could eventually feed data to succeeding case processing steps.

Delaware's CHRI projects focused primarily on development of automated systems for processing and reporting criminal justice records.

CHRI funds were used to develop the two key missing pieces to the single-point-of-entry system: case management systems for the courts; and integration of the Criminal Justice Information System (CJIS) and the JIC system, which are the two main State criminal justice-related information systems. CJIS users included law enforcement agencies, the SBI, the attorney general, and the arraignment courts (that is, Justice of the Peace courts); the upper courts (that is, the Court of Common Pleas and the Superior Court) used the JIC system. CJIS and JIC were independently designed and operated by two different State agencies. Initially, little thought was given to sharing data with the other system. Having two independent systems affected data quality and data accessibility in a number of ways, as detailed below:

- Data entry was duplicated because each agency entered data in its system, be it CJIS or JIC. Sometimes paper notification was made to agencies using the other system. However, court clerks routinely entered dispositions in the JIC system but seldom entered them in CJIS. As a result, dispositions frequently were never posted to the offender's criminal history record. In addition, data common to both systems—particularly the charges against an offender—often were not correlated.
- Linking arrests to dispositions was an equally serious problem. A temporary SBI number based on a name index search was recorded on both the arrest fingerprint card and on paperwork sent by law enforcement agencies

to the courts. If, after having performed a technical fingerprint search, SBI personnel changed the temporary SBI number, the new SBI number would be posted to CJIS. Although court officials had access to CJIS, the courts often were not formally notified of the new SBI number.

- Users had to understand how to use two different systems, know which system had the desired data, and understand the limitations of both systems.

With State funds and the State's first-year CHRI award, a court case management system was created and installed in the arraignment courts. In addition to automating the court's forms production process, the case management system included a reporting module that automatically transmitted dispositions to the CJIS. A similar case management system was being developed for the upper courts with State and BJA/CJRI funds.

The second and more ambitious activity was integration of the CJIS and the JIC system. Design work was completed with first-year CHRI funds, and development and installation work was completed in April 1994 with second-year CHRI funds. Integration of these two systems had a major impact on the flow of information between agencies, as detailed below:

- After the SBI processes arrest fingerprint cards, the correct SBI number is posted to CJIS and then electronically posted to the offender's case record in JIC.
- If the attorney general adds, drops, or modifies the arrest charges, the new charges are electronically posted to both CJIS and JIC. In addition, if the attorney general declines to prosecute the case, this fact is electronically recorded in both CJIS and JIC.
- When cases are bound over from the arraignment courts to the upper courts, the arraignment court enters the disposition in CJIS. The disposition and the accompanying case data are then electronically transmitted to JIC.
- When a case is disposed in the upper courts, clerks record the disposition in JIC. The disposition is then electronically transmitted to CJIS.

In sum, when information is entered in either JIC or CJIS, a subset of that information is electronically transmitted to the other system.

Delaware's efforts will have a major impact on all aspects of data quality, especially the percentage of dispositions submitted to the central repository, the timeliness with which they are submitted, and the ability to link arrests to dispositions. In addition, the savings in data entry work will be significant. As one JIC official said, "We are now out of the data entry business." Finally, these CHRI-supported activities appear to have had a profound organizational impact. Prior to these efforts, each agency had a narrow mentality based on its own system, and agency staff gave little thought to how their actions affected other criminal justice agencies. With the development of the single-point-of-entry system, criminal justice agencies in Delaware seemed to

understand better that their actions affect other agencies and that they are part of a single criminal justice system.

District of Columbia

Data Quality Improvement Activities	CHRI Project Status	Funding Sources
Install CCH	Ongoing	CHRI I, State, 5%
Automate manual records	Ongoing	CHRI I, State, 5%

In 1988 the Criminal Justice Information System Task Force developed a master plan for criminal records improvement in the District of Columbia. The task force's major recommendation was development and implementation of a CJIS. At that time, the six key criminal justice agencies (Metropolitan Police Department, U.S. Attorney's Office, Pretrial Services Agency, District of Columbia Courts, Department of Corrections, and Board of Parole) all had separate information systems, each with its own indexing scheme and tracking number. In essence, the District had no central repository. Users of criminal history information had to query each of these systems separately to obtain an offender's complete criminal history. Under the CJIS concept, all data were to reside in a central CJIS data base. CHRI funds were used to accelerate CJIS development and to expand the system's scope.

In 1988 the Criminal Justice Information System Task Force developed a master plan for criminal records improvement in the District of Columbia.

CHRI funds were used to complete two important components of the CJIS. First, existing criminal history records were consolidated and entered into the CJIS data base. As the guidelines of the CHRI program suggested, CHRI project personnel focused on offenders arrested during the past 5 years. Second, software was developed so that data could be passed in real time among the six criminal justice agencies in the District and the CJIS. CHRI project staff expected that both activities would extend beyond the end of the CHRI project and be continued with BJA/CJRI funds.

Florida

Data Quality Improvement Activities	CHRI Project Status	Funding Sources
Obtain unreported dispositions	Completed	CHRI I, 5%
Set felony flags in existing records	Completed	CHRI I, 5%
Interface booking system and courts	Completed	County, CHRI I
Upgrade court information system	Completed	CHRI II

Florida's first CHRI award was administered by the Florida Department of Law Enforcement (FDLE), the agency that operates the State's central repository. Three activities were implemented in the first year of funding. First, FDLE obtained unreported dispositions for felony arrests made between 1983

and 1987, the 5-year period prior to implementation of the State's Offender-Based Transaction System (OBTS). Prior to 1988, law enforcement agencies, rather than the courts, were responsible for reporting dispositions; only about half of felony arrests made between 1983 and 1987 had final dispositions. The approach FDLE elected to take to improve data base completeness was to obtain unreported dispositions from court clerk offices in the 15 largest counties, which accounted for 75 percent of arrests in the State. At the completion of the activity, CHRI project personnel obtained and entered 90,000 felony dispositions, increasing the percentage of felony arrests with dispositions during the 5-year period to 71 percent.

Second, FDLE personnel embarked on an effort to determine which offenders already in the State's CCH were convicted felons. This involved first determining whether each charge in the State's charge code library was a felony or a misdemeanor. Offender records were then updated on the basis of arrest and conviction charges. FDLE personnel reported that the felony status of 54 percent of disposition records in the CCH could be determined; the remaining 46 percent could not be set because of ambiguity concerning the charge: Was it a felony or a misdemeanor? Flags were also set programmatically on an ongoing basis as arrests and dispositions were posted to the CCH.

Florida CHRI project personnel obtained and entered 90,000 felony dispositions, increasing the percentage of felony arrests with dispositions during a 5-year period to 71 percent.

Third, FDLE subcontracted with the Office of the State Court Administrator (OSCA) to develop an interface between county-based booking centers and the court's OBTS. Prior to this effort, jail personnel entered arrest-related information into their jail management system and then forwarded a paper copy of the arrest information to the court clerk, who entered the data into the OBTS. Now the arrest information entered into the jail management system is electronically transmitted to the OBTS. CHRI project personnel reported that this new system improved the accuracy of the OBTS data, reduced the delay in reporting arrests to the courts from 48 hours to seconds, reduced the workload of the court clerks, and improved cooperation between law enforcement agencies and the courts. Using a combination of CHRI funds and county funds, this interface was installed in four counties.

Florida's second CHRI award was likewise implemented by OSCA and had one objective: to upgrade the OBTS so that it conformed to legislative changes in criminal sentencing reporting requirements. Software enhancements were made to systems in 27 counties. The remaining counties had inhouse programming staff who could accomplish the work themselves.

Georgia

Data Quality Improvement Activities	CHRI Project Status	Funding Sources
Process disposition report backlog	Completed	CHRI I, 5%
Process fingerprint card backlog	Completed	CHRI I
Install court information system	Completed	CHRI II, 5%, State
Interface courts and CCH	Completed	CHRI II, 5%, State

Georgia's first CHRI award . . . focused on reducing fingerprint card and disposition report backlogs.

Georgia's first CHRI award, which was administered by the Georgia Crime Information Center (GCIC), focused on reducing fingerprint card and disposition report backlogs. The State's second CHRI award, which was administered by the Georgia Administrative Office of the Courts (AOC), involved implementing a court-repository interface for disposition reporting.

At the start of the first CHRI project, GCIC had sizable backlogs: 320,000 fingerprint cards and 550,000 disposition reports. These backlogs were the result of a variety of factors, including the success of audit programs in the mid-1980's (from 1984 to 1989, the State experienced a 53-percent increase in fingerprint card submissions and a 90-percent increase in disposition report submissions), a lack of staffing increases, and delays in implementation of the State's automated fingerprint identification system (AFIS). GCIC contracted with a temporary employment agency to reduce the backlogs. By the end of the first CHRI project, the delay from receipt to processing of fingerprint cards was reduced from 14 months to less than 24 hours, and the delay from receipt to processing of disposition reports was reduced from 36 months to less than 24 hours.

No doubt the State recognized that the long-term solution to disposition report backlogs was automated disposition reporting; AOC therefore embarked on such an effort with CHRI II funds. However, implementation of a court-repository interface had been more difficult in Georgia than in other States for several reasons. First, Georgia did not have a unified court system, and there was a strong tradition of county-level judicial autonomy in the State. Second, the State had a large number of counties: 159. Third, AOC had traditionally obtained, basically, only summary case data from the counties.

Ultimately, AOC sees dispositions being reported in electronic format to GCIC in three ways:

- The smallest counties will transmit records to GCIC via a terminal connected to the GCIC system. Programming for this reporting system was initiated with CHRI funds, and electronic reporting of individual cases was implemented in more than a dozen counties by the end of 1993.
- Medium-sized counties will use a generic case management software package to manage their day-to-day work and to report dispositions. With

CHRI funds, a statewide license for a case management system was purchased; by fall 1993 AOC had installed the software in Superior Courts in two judicial circuits. This case management software established a standard for automated disposition reporting that will guide the State in the future.

- The largest counties that have developed their own case management software will make their own arrangements to report dispositions electronically to GCIC. No CHRI funds were expended in this area.

AOC hoped to continue electronic reporting efforts with BJA/CJRI funds.

Hawaii

Data Quality Improvement Activities	CHRI Project Status	Funding Sources
Conduct audit	Completed	CHRI I
Set felony flags in existing records	Completed	CHRI I
Obtain unreported dispositions	Completed	CHRI I, State
Interface courts and CCH	Completed	CHRI I, State

Activities that Hawaii selected for its CHRI project were based on the recommendations of a 1988 strategic plan, which was developed with the assistance of a multiagency task force. Thus, the CHRI Program was able to accelerate projects that had been envisioned or started with State funds.

Hawaii's CHRI project improved the quality of disposition reporting by upgrading an existing interface and implementing a new one.

The quality of disposition reporting was improved by upgrading the existing interface between the central repository and the circuit courts and by implementing a new interface between the central repository and the district courts. Implemented in 1985, the central repository-circuit court interface consisted of a batch transfer via tape of dispositions every 2 weeks. Although disposition submission extent and timeliness were good, it was felt that record linkage (that is, the ability to match a disposition with the corresponding arrest) could be improved. CHRI funds were used to make the interface a two-way interface, so the central repository was given the ability to update and correct the key matching fields on the court system. This updating occurs after the dispositions have been passed to the central repository; as central repository staff research "unmatched" dispositions to determine a proper State identification number or date of birth, they update the corresponding offender record on the court system. Over time, as the offender information on the court system becomes more accurate, the matching rate will improve. An interface was also implemented between the district courts and the central repository. Dispositions from these courts are now reported to the central repository via tape every 2 weeks rather than via paper forms.

Three other activities were implemented with CHRI funds. First, the State set a felony flag on existing offenders in the CCH, a straightforward task because all dispositions in the CCH had a charge severity code. Second, data base completeness was improved by locating and entering more than 50,000

unreported felony and misdemeanor dispositions. For this activity the central repository enlisted the help of the local courts, which generated and forwarded missing disposition lists to the appropriate court. Repository officials believed that the courts were willing to help out in this effort because users of criminal history information came to see the value of complete and accurate rap sheets. Third, the State hired a private contractor to conduct a baseline data quality audit. Since the audit was completed, the central repository has formed a data quality assurance unit to carry out the audit recommendations.

Idaho

Data Quality Improvement Activities	CHRI Project Status	Funding Sources
Conduct audit	Completed	CHRI I
Process fingerprint card backlog	Ongoing	CHRI I, 5%
Process disposition report backlog	Ongoing	CHRI I, 5%
Interface courts and CCH	Ongoing	CHRI I

The Idaho Bureau of Criminal Identification (BCI) used CHRI funds to address what it saw in 1990 as its two most pressing problems: the backlog of fingerprint cards and disposition reports. At BCI incoming fingerprint cards and disposition reports were separated into two queues: first-time arrest fingerprint cards and second-time or later fingerprint cards and disposition reports. Since BCI's workload was reduced because of a policy change on misdemeanor driving-while-intoxicated cases, BCI staff have been able to handle the inflow of fingerprint cards and disposition reports. Temporary workers were hired with CHRI funds to process the backlog of second-time or later fingerprint cards and disposition reports. As of November 1993, there were 9,600 such fingerprint cards and 14,600 disposition reports in the backlog. BCI expected this backlog to be eliminated by December 1994, and BCI planned to use BJA/CJRI funds to pay for the temporary positions. CHRI funds were used through the end of February 1994 to help process the backlogs.

The Idaho Bureau of Criminal Identification (BCI) used CHRI funds to address what it saw in 1990 as its two most pressing problems: the backlog of fingerprint cards and disposition reports.

BCI recognized that the long-term solution to the backlog problem was electronic disposition reporting. CHRI funds were used to begin development of a court-repository interface, which was viewed in 1990 as the State's second highest data quality priority. The feasibility of electronic disposition reporting was tested in one county, which was to submit a diskette containing dispositions to the central repository each week. The court in this county was also required to transcribe the arrest tracking number from the charging documents onto the court computer system. In the end the feasibility study highlighted incompatibilities between the way the court system structured its case cycles and the way the central repository system structured its arrest cycles. Because the diskette containing the dispositions could not be read into the central repository system, BCI hired a private contractor to study the problem and make recommendations. This study was expected to be completed by February 1994.

Finally, BCI used CHRI funds to hire a private contractor to conduct a baseline audit, which was completed in March 1993. The major findings of the audit were that the State lacked the statutory mandates it needed to authorize the central repository to record and maintain criminal history information and that the State did not have documented reporting procedures for local agencies. The audit's findings and recommendations formed the basis of the State's data quality improvement plan. This plan was approved in December 1993, and an expenditure of BJA/CJRI funds was authorized.

Illinois

Data Quality Improvement Activities	CHRI Project Status	Funding Sources
Develop data quality improvement plan	Completed	CHRI I
Set felony flags in existing records	Completed	CHRI I
Obtain unreported arrests	Ongoing	CHRI I
Participate in III	Completed	CHRI I
Obtain unreported dispositions	Ongoing	CHRI I

The Illinois CHRI project was composed of several activities aimed at improving data quality. First, Illinois State Police (ISP) staff modified the criminal history system software so that the State could become a participant in the III. The State became a participant on August 8, 1993, thus becoming "the last big State" to join III.

The Illinois CHRI project was aimed at improving data quality.

Second, ISP staff developed software programs to determine whether offenders in the CCH were convicted felons. A three-step algorithm was developed that examined the class of felony field, checked for the existence of a State corrections record, and checked the conviction status field. Using this algorithm, felony flags were set in the ISP's 2 million "ident" (identification) segments. Using the same definition of a felony as that contained in the Federal Gun Control Act of 1968, 25 percent of offenders were flagged as felons, 25 percent were flagged as nonfelons, and 50 percent were flagged as unknown. Finally, ISP uploaded its felony flags to the State's III records.

Two data collection activities were expected to be completed by the end of 1994. First, ISP obtained unreported arrest fingerprint cards from the Chicago Police Department (CPD). ISP estimated that CPD did not report some 614,000 arrests made from 1985 through 1989. Of those unreported arrests, ISP targeted 62,000 for this CHRI activity. As of December 1993, all but 14,000 fingerprint cards had been collected, and procedures were changed in CPD to ensure that future fingerprint cards were submitted to ISP. In fact, CPD installed live-scan devices at all of their arrest booking facilities, and fingerprint images were transmitted to ISP within 4 hours of an arrest. The second data collection activity was to obtain unreported dispositions

from the State attorney's offices. ISP hoped to obtain 140,000 unreported dispositions from these offices.

Finally, acting on a recommendation of a recent data quality audit, the State convened a multiagency task force to address the problem of disposition reporting. The task force was charged with developing both short- and long-term solutions to the problem. Among the interim findings of the task force were the needs for increased training, automated disposition reporting, direct electronic fingerprinting, and an expanded State audit program. The State hoped to implement many of these activities with BJA/CJRI funds.

Indiana

Data Quality Improvement Activities	CHRI Project Status	Funding Sources
Conduct audit	Completed	CHRI I
Process fingerprint card backlog	Completed	CHRI I

Like many States, Indiana elected to use CHRI funds to conduct a baseline data quality audit and to develop a multiyear plan for improving data quality. A private contractor was hired for this effort, which was completed in September 1993. The audit found that one of the biggest problems in the State was that personnel at contributing agencies—in particular, those responsible for fingerprinting—did not understand the connection between what they reported and what eventually appeared on rap sheets. Accordingly, a key recommendation was that education and training programs be expanded. Another major problem was that prosecutor declinations were rarely reported. To address this issue, the audit recommended redesigning the arrest and disposition reporting form to include a section for prosecutors to indicate their actions on the case. To address the low disposition reporting rate, the audit recommended implementing automated disposition reporting systems in the courts. Finally, the audit recommended a redesign of the existing CCH. These and other recommendations were included in the State's BJA/CJRI plan.

Indiana elected to use CHRI funds to conduct a baseline data quality audit and to develop a multiyear plan for improving data quality.

The State also used CHRI funds to hire 10 additional temporary employees to process a backlog of fingerprint cards. By the end of the CHRI project, the Indiana State Police had a backlog of only 9,800 fingerprint cards.

Iowa

Data Quality Improvement Activities	CHRI Project Status	Funding Sources
Conduct audit	Completed	CHRI I
Conduct user needs assessment	Completed	CHRI I
Process disposition report backlog	Completed	CHRI I, 5%
Set felony flags in existing records	Completed	CHRI I & II
Implement unique tracking number	Completed	CHRI I & II
Interface courts and CCH	Ongoing	CHRI I & II, 5%
Interface corrections and CCH	Ongoing	CHRI I & II, 5%

Coordinated by DPS, Iowa's CHRI project was the first multiagency effort to improve criminal history information in the State.

Iowa's CHRI project was a joint effort of four State agencies: the Department of Corrections, the Department of Human Rights (DHR), the Department of Public Safety (DPS), and the State Court Administrator. Coordinated by DPS, the CHRI project was the first multiagency effort to improve criminal history information in the State.

Three activities were completed with first-year CHRI funding. DHR conducted the first audit of the criminal history reporting system. Among the findings of the audit were that reporting laws were "outdated, ambiguous, and fragmented"; there were no procedures for ongoing monitoring of fingerprint card and disposition submissions, especially those returned to the submitting agencies; and reporting procedures followed by agencies across the State varied widely. The audit recommendations included implementation of a unique tracking number, an overhaul of the reporting laws, and formulation of procedures to ensure that persons issued citations were fingerprinted. New reporting laws subsequently were enacted by the State legislature, and additional staff were hired to conduct ongoing auditing and monitoring of data quality.

Second, DHR conducted a survey of users of criminal history information. Of 396 respondents, 80 percent felt that the completeness and accuracy of criminal history information was good or excellent. Suggestions were to clarify and add to the information on the rap sheets.

Third, DPS hired 4 temporary employees to process 80,000 backlogged dispositions. This activity was continued with BJA/CJRI funding.

Systemic improvements to criminal history information in Iowa will be realized when both court-repository and corrections-repository interfaces are completed. For both activities, the design work was finished with first-year CHRI funding. The corrections-repository interface was completed in early 1994, and records of inmate admissions and releases were being transmitted electronically from the corrections information system to the courts. Corrections

also receives notification of admissions electronically from the courts. The interface between corrections and the central repository was scheduled to be tested in April 1994.

Iowa's court-repository interface is different from those in other States in that it is a two-way interface. In addition to disposition information being electronically transmitted from the courts to the central repository on a daily or weekly basis, each day the central repository will transmit defendant identification information on all defendants identified during the previous day to the central State court system, which will pass the information along to the appropriate county court. (The State was already in the midst of a multiyear court automation project to link county courts to the central State court computer system.) Because both the courts and the central repository will benefit from this system, both agencies were eager to cooperate in the implementation. The first county was scheduled to test the interface in April 1994, and the State hoped to bring additional counties into the system by the end of the CHRI project in June 1994. After that, the State will use BJA/CJRI funds to continue to bring counties into the system one at a time.

Iowa's ability to link dispositions with arrests will be improved because of a unique tracking number implemented in early 1993 with CHRI funds. The system uses preprinted tracking numbers on disposition reporting forms. Arresting agencies are responsible for handwriting the tracking number on the fingerprint card and submitting the disposition reporting form to the prosecutor, who is responsible for ensuring that the tracking number appears on documents submitted to the court. The State reports that implementation of the tracking number went very smoothly, with minimal confusion and a high degree of cooperation from law enforcement personnel, prosecutors, and court officials.

Finally, Iowa implemented a felony flagging system by adding a felony flag to the central repository master name index (MNI) and the court information system. Dispositions reported to the central repository now have a felony flag indicator; and by March 1994, 15,000 arrest records had been flagged with felony convictions.

Kansas

Data Quality Improvement Activities	CHRI Project Status	Funding Sources
Automate manual records	Ongoing	CHRI I, State
Participate in III	Ongoing	CHRI I, State
Interface corrections and CCH	Ongoing	CHRI I, SAC (BJS)

The Kansas CHRI project focused on improving the completeness of its automated criminal history files.

The Kansas CHRI project focused on improving the completeness of its automated criminal history files. Before 1988 Kansas had an automated MNI but no automated criminal history records. Records pertaining to an individual offender were located in as many as seven different manual files: the

master fingerprint card file, the second and subsequent fingerprint card file, the offender photograph file, the FBI rap sheet file, the court disposition file, the court diversion file, and a miscellaneous file. These paper files were all indexed in different ways. Moreover, the MNI contained persons other than offenders, including witnesses, victims, and persons under investigation. In May 1991 the central repository embarked on an effort to consolidate and automate these paper files for all offenders arrested in the past 7 years. Also, incoming dispositions were thereafter entered into automated CCH files. To consolidate and automate some 280,000 offender files, 12 temporary workers were hired. CHRI project personnel expected to complete this activity by fall 1993.

Kansas also used CHRI funds to develop electronic interfaces to the CCH. The State was in the process of interfacing the CCH to its law enforcement telecommunications system; this was an important step toward the State goal of participating in III, which it had hoped to do by fall 1994. In addition, an interface was being developed between the CCH and the State corrections computer system to facilitate more timely CCH updates of prisoner admissions and releases. Finally, an interface between the CCH and the State Sentencing Commission was being developed to allow Commission staff to analyze CCH data in support of the State's new sentencing guidelines.

Kentucky

Data Quality Improvement Activities	CHRI Project Status	Funding Sources
Upgrade court information systems	Completed	State, CHRI I, 5%

In Kentucky CHRI funds were used to expand a court automation project begun in 1984. The project involved automating both the 120-county court systems and the State Administrative Office of the Courts (AOC) computer system. With CHRI funds, court case management systems were installed in 25 county courts, and the central AOC court system was upgraded to facilitate automated reporting from the county courts.

In Kentucky CHRI funds were used to expand a court automation project begun in 1984.

The CHRI project greatly improved disposition reporting to AOC. Under the old system, the county court clerks mailed disposition forms to the State Police and AOC. Now, in counties where court clerks use the automated court case management system, disposition reporting to AOC occurs automatically, and the State AOC system polls the county systems every 12 hours to upload dispositions. Although this system improved disposition reporting timeliness to the AOC system from 3 weeks to 12 hours, AOC officials believed the major benefits were in improved submission extent and data accuracy. The next step for Kentucky will be to implement an automated interface between the AOC system and the central repository.

Louisiana

Data Quality Improvement Activities	CHRI Project Status	Funding Sources
Develop data quality improvement plan	Completed	CHRI I

Louisiana's application for CHRI funds highlighted the significant deficiencies in its criminal history records and reporting systems, in particular lengthy backlogs of 1 to 2 years for fingerprint cards and disposition reports, poor submission of fingerprint cards and disposition reports, and lack of accessibility to criminal history records. The State recognized the need for an overall plan to improve criminal history records.

To develop an overall plan to improve criminal history records . . . Louisiana convened a multiagency task force and hired a private contractor.

To develop the plan, the State convened a multiagency task force and hired a private contractor. State officials believed that the task force improved interagency cooperation and broke down turf barriers, which some State officials felt was the biggest impediment to improving data quality. This plan became the basis for the State's BJA/CJRI plan, which was subsequently approved. In addition, at least one State official believed that the mere existence of the plan would help secure funding from the State legislature for criminal history records improvement.

Maine

Data Quality Improvement Activities	CHRI Project Status	Funding Sources
Install CCH	Ongoing	CHRI I & II, 5%
Automate manual records	Ongoing	CHRI I & II, 5%

In 1986 a multiagency task force on criminal records improvement undertook a study on how to improve the quality of criminal history records. The top priority was automation: specifically, creation of an MNI with a felony flag, design and implementation of a CCH, improvements in the disposition reporting system, and entry of manual records into the automated system. A combination of CHRI funds and BJA/CJRI funds enabled the State to work toward these goals.

As with other States developing a CCH for the first time, an important impact of the new system will be improvements in the accessibility of criminal history information to users because the production of rap sheets can be automated. Delays in processing requests for information were particularly problematic for Maine; at the end of 1992, there was a 2-month backlog of requests for information.

Development of the CCH was delayed because the vendor went bankrupt, and the State had to take over development of the system. At the close of

its CHRI projects, the State had a temporary automated MNI that was fingerprint supported and contained 200,000 names. The MNI was temporary in the sense that the data base was for internal use only and was not accessible online by other criminal justice agencies. Even so, the MNI enabled the State to respond to requests for criminal history information in one-third the time it used to take.

To build on the accomplishments of the CHRI project, Maine planned to use BJA/CJRI and other Federal funds to make its MNI accessible to other criminal justice agencies . . .

To build on the accomplishments of the CHRI project, the State planned to use BJA/CJRI and other Federal funds to make the MNI accessible to other criminal justice agencies and to continue development of the CCH.

Maryland

Data Quality Improvement Activities	CHRI Project Status	Funding Sources
Interface booking system and CCH	Ongoing	CHRI I & II, State
Interface live-scan and AFIS	Ongoing	CHRI I & II, State
Develop felon analysis system	Ongoing	CHRI I, State

In developing its CHRI project, Maryland's Department of Public Safety and Correctional Services turned to the results of its most recent data quality audit. The audit showed that the major weakness was a failure to assign and use the State identification and arrest tracking number uniformly and reliably throughout the criminal history reporting system. To address this problem, the State embarked on a project to standardize arrest processing by implementing live-scan booking workstations at all arresting agencies.

Initially the workstations will be installed in Baltimore, which accounts for 45 percent of the arrests in the State. These workstations are part of a larger effort to implement central booking in Baltimore. The State appropriated $55 million to build a central booking facility, develop the necessary software, procure the required hardware, and operate the facility for 5 years. The State and its vendor completed the system design specification in September 1993; central booking, including the live-scan booking workstations, is scheduled to begin in July 1995.

Because the State funded development of the Baltimore installation, CHRI funds have been reserved for implementation of the system in four to five pilot law enforcement agencies. Implementation at these sites is scheduled for September 1995. In effect, the Baltimore system design and software will be "given" to the State's CHRI project at no charge. A task force consisting of personnel from law enforcement agencies throughout the State was charged with modifying the Baltimore system so that it meets the needs of smaller agencies. This task was scheduled for completion in October 1994. Statewide implementation of the workstation will be possible because the State owns the software; local agencies wishing to install the system need only purchase the required hardware, which for smaller agencies could consist of a single personal computer.

The workstation-based system supports the principle that data quality begins at booking. Key features of the system include:

- A Windows©-based interface.
- Data entry screens for arrestee and arrest event information.
- System-generated arrest tracking numbers.
- A barcoding technology to track offenders entering the jail facility.
- Live-scan fingerprinting workstations that will be linked to the State AFIS.
- An interface to the State CCH so that arrest event information is immediately posted to an offender's record.
- An interface to the State judicial information system.
- An interface to the State Pretrial Services Agency information system.

Due to CHRI funding, Maryland's ATN's are now system generated and electronically passed to both the central repository and the judicial information system.

In terms of impact, the main goal of the booking workstations is to reduce the time between fingerprinting and posting of the arrest to the offender's criminal history record. The goal is to identify 95 percent of offenders within 30 minutes after they are booked. In addition, the percentage of arrests that can be linked to dispositions should improve because arrest tracking numbers are system generated and electronically passed to both the central repository and the judicial information system.

Using CHRI funds, the State also developed a system to determine which offenders were convicted felons. Unlike most States, Maryland's system does not use a felony flag. Instead, upon request, all of the information about an offender in the central repository automated records is analyzed, and a determination on the offender's felony status is made. The second and ongoing phase of this activity is addressing problems that occur when a determination cannot be made on the basis of the statute (for example, some statutes can be either felonies or misdemeanors). The system will then look in the disposition text fields for certain key words such as robbery.

Massachusetts

Data Quality Improvement Activities	CHRI Project Status	Funding Sources
Develop data quality improvement plan	Completed	CHRI I
Interface courts and CCH	Completed	CHRI I
Interface supervisory agencies and CCH	Completed	CHRI I
Process fingerprint card backlog	Completed	CHRI I

Initially the Massachusetts CHRI project focused on development of a long-term data quality improvement plan. For this effort the State convened both a multiagency task force consisting of the heads of criminal justice agencies and a task force working group consisting of key operational personnel from these agencies. The working group conducted a needs assessment and identified impediments to complete and accurate reporting. The plan, which was completed in July 1992, proposed that BJA/CJRI funds be used to extend many of the initiatives begun with CHRI funds. The plan detailed what steps would be necessary to create a fingerprint-supported CCH and to establish a statewide CJIS as the hub for the exchange of fingerprint-supported criminal justice information.

Massachusetts used CHRI funds to build an offender tracking system on the central repository mainframe computer to create a fingerprint-supported CCH.

The initial step in creating the CCH was to build an offender tracking system on the central repository mainframe computer. CHRI funds were used for this task. Subgrants were awarded to the court, correction, parole, probation, and sheriff's agencies so that all relevant court, incarceration, and supervision data would be included in the tracking system. The central repository now receives each night an electronic transmission from the court system via an interface that was developed with CHRI funds, thus reducing the court's submission time from 3 weeks to 1 day; each month the repository receives an electronic submission from the other agencies. Initially these data were only accessible online to central repository staff, but each segment of data was scheduled to be made available via the State telecommunications network over the next several months; parole data became available first in August 1993.

Finally, the State used CHRI funds to reduce a backlog of fingerprint cards at the State Bureau of Identification. At the start of this effort, an estimated 80,000 fingerprint cards were backlogged, which resulted in a 1-year delay in processing.

Michigan

Data Quality Improvement Activities	CHRI Project Status	Funding Sources
Interface courts and CCH	Completed	CHRI I & II, 5%
Obtain unreported dispositions	Completed	CHRI I & II
Interface corrections and CCH	Completed	CHRI I & II
Set felony flags in existing records	Completed	CHRI I

Michigan's CHRI project focused on implementing electronic disposition reporting at the major circuit courts in the State.

Michigan's CHRI project focused on implementing electronic disposition reporting at the major circuit courts in the State. By the end of September 1993, the end of the CHRI project, 37 of the State's 83 counties reported electronically, including most of the largest counties. This activity will be continued with BJA/CJRI funds; eventually the State hopes to receive 80 percent of its dispositions electronically, thus improving the time of disposition reporting from weeks and months to fewer than 7 days.

The State's approach to electronic disposition reporting was to offer three choices to each county:

- Report to the central repository by way of the State Court Administrative Office (SCAO).
- Use a remote terminal to the central repository to enter dispositions.
- Send an electronic message to the central repository from a case management system.

Many of the larger counties chose the third option because they already had their own systems with dedicated lines (for inquiry purposes) to the central repository; thus, the central repository made subgrants to these counties to add a reporting module to their systems. In these cases the central repository provided immediate feedback to the county when a disposition was rejected: for example, when data were missing or a nonstandard charge code was used. Many smaller counties elected to use the first option; SCAO was provided with software so that these counties could report electronically to SCAO, which in turn passed the dispositions on to the central repository.

A subgrant also was made to the State corrections department to develop an interface to the central repository. This system, which was completed by the end of the grant period, greatly improved the timeliness of correctional data. In addition to submitting a fingerprint card to the central repository when a prisoner is admitted, corrections submits a monthly report to the central repository listing prisoners who have been released. Under the new system, the fingerprint card will include the corrections internal file number for the prisoner. Thus the central repository will be able to initiate an online search of the corrections data base, using the corrections file number stored for that offender in the CCH.

The central repository also embarked on an effort to improve the completeness of its CCH by attempting to obtain unreported dispositions for felony arrests made in 1988, 1989, and 1990. The central repository generated open-case lists for each court and then paid a finder's fee for each disposition obtained. To date more than 80,000 such dispositions have been obtained and entered in the CCH, which improved the completeness of the data base significantly. As of November 1993, 87 percent of felony arrests made during these 3 years had final dispositions. Of the records that remain incomplete, the State had discovered that many were cases in which the prosecutor declined to prosecute.

Finally, the State used CHRI funds to implement a felony flagging system. This activity worked well in Michigan because each charge is unambiguously defined as a felony or misdemeanor. The State is now prepared to provide felony flags to the III system.

Minnesota

Data Quality Improvement Activities	CHRI Project Status	Funding Sources
Conduct audit	Completed	CHRI I
Interface live-scan and AFIS	Ongoing	CHRI I & II
Set felony flags in existing records	Completed	CHRI I
Set felony flags in III records	Ongoing	CHRI II
Interface courts and CCH	Completed	CHRI I & II
Upgrade CCH	Completed	State, 5%, CHRI II
Process disposition report backlog	Completed	CHRI II
Conduct training at local agencies	Ongoing	State, CHRI II

A number of different data quality improvement activities were implemented under Minnesota's CHRI projects, which were administered by the Department of Public Safety (DPS). The data quality audit, completed in April 1992 by a private contractor, was viewed as particularly important because the State criminal history central repository had never been audited. The audit found that only 77 percent of arrests were reported, but more than 90 percent of dispositions were reported. In addition, update timeliness of fingerprint cards and disposition reports was determined to be 135 and 400 days, respectively. Among the key audit recommendations were:

- Eliminate the backlogs of fingerprint cards and disposition reports.
- Develop interfaces between the CCH and systems in other criminal justice agencies.
- Improve education and training.
- Establish a multiagency task force to oversee criminal history.

Action was taken on all four of these recommendations during the CHRI II project period.

The CHRI projects leveraged State and BJA/CJRI funds, which together paid for a rewrite of the State's CCH. Among other improvements, this rewrite allowed for the development of interfaces to the State Supreme Court and corrections department and the development of a CCH-AFIS interface. The interface to the Supreme Court was expected to be completed by the beginning of 1994. Then dispositions were to be transmitted nightly to DPS, where automated match programs were to be run to link dispositions with arrests. Previously the Supreme Court information system printed out dispositions on paper forms and submitted them to the central repository. Also, in conjunction with the CCH upgrade, computer programs were developed that determined the felony conviction status of offenders in the CCH and then set a felony flag. Felony flagging efforts were continuing, as DPS staff developed systems to set and update felony flags in the State's III records.

Minnesota's CHRI projects leveraged State and BJA/CHRI funds, which together paid for a rewrite of the State's CCH.

DPS also leveraged State funds to enhance training programs for contributing agencies. State funds were used to hire eight training officers. CHRI funds were used to hire a private contractor to develop a training curriculum to explain the criminal justice reporting system so that all contributing agencies understood the entire process.

In addition, during the CHRI I project period, DPS installed live-scan receiving equipment at the central repository that allowed fingerprints to be transmitted from three booking sites to the central repository within minutes. Using CHRI II funds, DPS planned to interface the live-scan receiving device to the State's newly installed AFIS system, thereby further reducing redundant data entry and delays in identifying offenders.

Finally, DPS contracted with a private vendor to process a backlog of 110,000 dispositions. This activity was completed, and the backlog was eliminated.

Mississippi

Data Quality Improvement Activities	CHRI Project Status	Funding Sources
Conduct audit	Completed	CHRI I
Develop data quality improvement plan	Completed	CHRI I

The Mississippi Department of Public Safety (DPS) used CHRI funds to conduct a baseline audit and to develop a data quality improvement plan. DPS contracted with a private vendor to conduct these activities.

The audit found that there was no centralized criminal history system in the State. DPS's Criminal Records Division (CRD) maintained a file of fingerprint cards, but there was no fingerprint-supported MNI. Reporting to the central repository was also very poor; only an estimated 20 percent of law

enforcement agencies regularly submitted fingerprint cards to CRD. Repository personnel noted that the State never emphasized fingerprint card reporting because the central repository did
not have the staff to process the cards.

Mississippi's data quality improvement plan covered nearly every aspect of reporting, maintaining, and disseminating criminal history records.

The plan's 16 recommendations covered nearly every aspect of reporting, maintaining, and disseminating criminal history records. Major recommendations included:

- Establishing a centralized CCH system.
- Making the data quality improvement task force a standing committee.
- Initiating training for State and local criminal justice officials.
- Conducting a detailed needs assessment.
- Establishing a unique arrest tracking number.
- Standardizing court disposition reporting forms.
- Adopting a day-one approach to automating criminal history records.

These recommendations became the basis for funding requests submitted to the State legislature. DPS hoped to secure funding to establish a CCH system and to hire additional staff.

Missouri

Data Quality Improvement Activities	CHRI Project Status	Funding Sources
Set felony flags in existing records	Completed	CHRI I
Set felony flags in III records	Completed	CHRI II
Assume responsibility for more III records	Completed	CHRI I & II
Automate disposition reporting to FBI	Completed	CHRI II
Conduct training at local agencies	Ongoing	CHRI I & II
Upgrade prosecutor information system	Ongoing	CHRI I & II, 5%
Interface prosecutor and CCH	Ongoing	CHRI I & II, 5%
Upgrade CCH	Ongoing	CHRI I & II
Conduct audit	Completed	CHRI I & II
Upgrade OBTS system	Ongoing	CHRI II

The Missouri State Highway Patrol (MSHP) coordinated implementation of a variety of CHRI activities, including felony flagging, automated disposition reporting, auditing, training, and information system development.

The State's felony flagging efforts focused on determining the felony conviction status of offenders listed in the central repository data base. A felony flag field was added to the data base identification segment, and a computer program was written that made a one-time pass through all the data base records and set each offender's felony flag. This process was relatively easy because every Missouri statute was unambiguously defined as either a felony or a misdemeanor. MSHP personnel reported that 21 percent of the offenders in the data base were flagged as convicted felons. In addition, another computer program was written that updated the felony flag field when new dispositions were posted to the data base.

Three CHRI activities involved the FBI. First, MSHP developed software to set felony flags on its III records; 109,000 felony conviction flags were set in these records. Second, MSHP completed work on an activity aimed at increasing its responsibility of Missouri III records. For this effort the FBI provided a tape of 120,000 Missouri III records for which the FBI was responsible. These records were matched against records in the MSHP data base, and as a result, responsibility for some 14,000 records shifted from the FBI to Missouri. Finally, in January 1993 Missouri was accepted as the ninth State to submit dispositions electronically to the FBI. MSHP submitted a tape to the FBI of all dispositions on file at the central repository with an arrest date of 1985 or later. MSHP will continue to submit monthly tapes of all new dispositions.

An audit program also was initiated with CHRI funds. Rather than hire a private contractor to conduct a baseline audit, MSHP elected to hire a quality control coordinator to develop an ongoing monitoring program. This person also was charged with developing a training manual and training program agenda. This dual responsibility has proven effective: Analyses of the central repository data base for the audit task have pointed out areas that require special emphasis in the training program and have helped MSHP target their training resources to specific agencies.

The primary focus of the State's CHRI project was on enhancing the Missouri Prosecutors Integrated Case Management System (MOPICS). MSHP's Information Systems Division developed the first version of MOPICS in 1986 with assistance from BJA. Originally implemented on an IBM mainframe, the system was later converted to a PC-based system. Both systems supported electronic transfer of dispositions to MSHP, albeit in a batch mode instead of an online mode.

The primary focus of Missouri's CHRI project was on enhancing the Missouri Prosecutors Integrated Case Management System (MOPICS).

With CHRI funds MSHP developed MOPICS/2 and implemented it in February 1994 in nine counties. The new MOPICS/2 had two advantages over the original MOPICS. First, MOPICS/2 was capable of supporting online, two-way communication with the MSHP data base. This allowed for real-time disposition reporting and for online querying of the MSHP data base by prosecutors' offices. Second, MOPICS/2 could be run on a variety of hardware platforms, including single-user or local area network (LAN)-based DOS, Windows©, and OS/2 systems. Thus, the same system could be installed in prosecutors'

offices statewide, regardless of the size of the agency or the hardware the agency used. MSHP hoped to implement MOPICS/2 in three more counties by the end of their CHRI project.

The ability of MOPICS/2 to run on a network was crucial for MSHP's long-term automation plan. That plan envisioned each sheriff, prosecutor, and court in a single county to be a node on a countywide criminal justice network, which would be linked to the MSHP data base. This activity would allow for a paperless, single-point-of-entry reporting system. Pilot projects to test this automation approach were underway in Osage and Randolph counties.

Montana

Data Quality Improvement Activities	CHRI Project Status	Funding Sources
Set felony flags in existing records	Completed	CHRI I
Conduct user needs assessment	Completed	CHRI I
Connect to AFIS network	Completed	CHRI I
Enact mandatory reporting legislation	Completed	CHRI I & II
Implement unique tracking number	Ongoing	CHRI I & II
Conduct training at local agencies	Ongoing	CHRI I & II, 5%

The centerpiece of Montana's CHRI project was implementation of a unique tracking number called the Montana Arrest Number System (MANS). MANS was pilot tested in three counties and was implemented statewide on July 1, 1993.

The centerpiece of Montana's CHRI project was implementation of a unique tracking number called the Montana Arrest Number System (MANS).

Montana's method of implementing MANS was dictated in part by the results of a survey of criminal history information users, which found that many offenders were not being fingerprinted. In designing MANS, it was decided to require arresting agencies to obtain a MANS number from the central repository during the booking process and then to record the MANS number on both the fingerprint card and the disposition report, instead of using preprinted tracking numbers on fingerprint cards. Thus the central repository would have a record of each MANS number and the agency requesting it before the fingerprint card was submitted, thereby enabling the central repository to monitor which agencies failed to submit fingerprint cards. A redesigned disposition report was also part of the MANS activity (the State formerly used the FBI's R–84 form to report dispositions). To further improve submission of fingerprint cards and to help ensure use of MANS, the State changed an administrative rule so that judges only process those defendants who have been fingerprinted and assigned a MANS number.

State central repository personnel reported that enactment of the rule and implementation of the MANS number were lengthy processes, largely because counties in the State were fiercely independent. CHRI project personnel visited agencies in every county to explain how the rule change and the MANS number would benefit the State and make the jobs of agency staff

easier. Selling the new system was an integral part of the ongoing statewide training program. Even before MANS was implemented, central repository staff felt that the training programs were largely responsible for the 40-percent increase in fingerprint card submissions.

The State also used CHRI funds to become part of the Western Identification Network (WIN). As a result of this activity, 58,000 of the State's fingerprint cards were entered into the automated fingerprint identification system (AFIS).

Finally, the State's approach to felony flagging involved an automated pass through existing criminal history records to flag those offenders arrested on felony charges. The existence of a felony arrest was then noted on the offender's rap sheet; it was the requesting agency's responsibility to determine whether the felony arrest resulted in a felony conviction. This approach was selected because court dispositions in existing criminal history records were stored in a text field, making it difficult to determine which offenders were convicted felons.

Nebraska

Data Quality Improvement Activities	CHRI Project Status	Funding Sources
Develop data quality improvement plan	Completed	CHRI I
Revise central repository procedures	Completed	CHRI II
Upgrade CCH	Completed	State, CHRI II, 5%
Interface booking system and CCH	Completed	CHRI II, 5%
Interface supervisory agencies and CCH	Completed	CHRI II
Interface courts and CCH	Completed	CHRI II, 5%
Automate disposition reporting to FBI	Completed	CHRI II
Interface corrections and CCH	Completed	CHRI II
Conduct training at local agencies	Completed	CHRI II
Process disposition report backlog	Completed	CHRI II

Nebraska received two CHRI awards, both of which were coordinated by the Nebraska State Patrol. With the first CHRI award, the State hired a private contractor to develop a long-term data quality improvement plan. The plan became the basis for the State's proposal for a second CHRI award and the BJA/CJRI plan. Nine initiatives were contained in the plan. Implementation of many of these initiatives began with the second CHRI award. The State hoped to complete the initiatives with other Federal and State funds over the next 2 to 3 years.

Three major causes of poor data quality were identified in the plan:

- The State lacked the statutory mandates, policies, and procedures necessary to effectively collect, maintain, and disseminate criminal history record information.
- The roles, responsibilities, and membership of the criminal justice governance structure were not sufficient for making necessary policy and operational decisions.
- The criminal history information system was inadequate and inflexible and did not meet the State's needs.

In addition, it was determined that the State complied with only 5 of the 10 FBI/BJS voluntary reporting standards and 5 of the 12 BJA compliance criteria.

Central to data quality improvement was implementation of an upgraded CCH, called the Patrol Criminal History (PCH) system. Compared with the older CCH, the PCH allowed for more automation, more user-friendly data entry, felony flagging, and reporting to the Immigration and Naturalization Service. Unfortunately, the PCH will not be accessible to criminal justice agencies in the State until the State's telecommunications switch is replaced, which was not scheduled to occur until 1995. (Currently the State is using a switch router developed by the FBI and given to the State in 1973.) Another implication of the delay in replacing the switch is a delay in III participation.

The plan also stressed the importance of electronic interfaces between the central repository and local reporting agencies. With CHRI funds, design work was completed for three major types of interfaces, including an interface to the new statewide court system under development, an interface to the Department of Correctional Services case tracking system, and an interface to law enforcement booking systems. It should be noted that implementation of these interfaces is also contingent on installation of the new telecommunications switch. In addition, the State designed and implemented an interface between the CCH and the State Probation Administrator. This personal computer-based system transmitted probation-related information (such as start and end dates of probation and name of probation officer) to the CCH and transmitted identification information from the CCH to the probation system. This interface was operational in 12 of 20 probation districts.

With CHRI funds, Nebraska completed design work for three major types of interfaces . . .

Another important activity completed with second-year CHRI funds was an overhaul of central repository policies and procedures. Work procedures were rewritten, and document control mechanisms were redesigned. The new policies and procedures reduced document processing times and should therefore reduce the likelihood of future backlogs of fingerprint cards and disposition reports.

Finally, three additional activities were implemented with CHRI funds. First, the central repository cleared a backlog of 40,000 dispositions. Second, the

State Patrol developed a local agency training manual and conducted training sessions throughout the State, an activity to be continued with other Federal funds. Third, the State Patrol developed software to allow for automated disposition reporting to the FBI. Magnetic tapes were being delivered to the FBI on a monthly basis.

Nevada

Data Quality Improvement Activities	CHRI Project Status	Funding Sources
Conduct audit	Completed	CHRI I
Develop data quality improvement plan	Ongoing	CHRI I
Participate in III	Completed	CHRI I
Process fingerprint card backlog	Ongoing	CHRI I

The key activity of Nevada's CHRI project was a baseline data quality audit. In July 1993 the State hired a private contractor to conduct the audit and develop the data quality improvement plan. The audit was completed in December 1993. In early 1994 personnel from the State Department of Motor Vehicles and Public Safety used the recommendations in the audit to develop a long-term data quality improvement plan. The plan was expected to be finalized in May 1994.

The key activity of Nevada's CHRI project was a baseline data quality audit.

The State also used CHRI funds to modify the State message switch and the criminal history system so that the State could participate in III. Nevada became a III State on December 12, 1993.

Finally, the State attempted to reduce a backlog of roughly 43,000 fingerprint cards, thereby reducing an 8- to 9-month delay in processing fingerprint cards. The activity was expected to be completed by June 1994. Offender data associated with these fingerprint cards have already been entered into a temporary CCH file and are available to criminal justice agencies throughout the State. Once the fingerprint card backlog has been processed, these data will be fingerprint supported.

New Hampshire

Data Quality Improvement Activities	CHRI Project Status	Funding Sources
Develop data quality improvement plan	Ongoing	CHRI I
Participate in III	Ongoing	CHRI I
Automate manual records	Ongoing	CHRI I

The New Hampshire Division of State Police (DSP) used CHRI funds to convert some 100,000 manual criminal history records.

The New Hampshire Division of State Police (DSP) coordinated three CHRI project activities. First, DSP hired a private contractor to develop a long-term data quality improvement plan. This plan will become the basis for the State's BJA/CJRI program.

Second, DSP used CHRI funds to convert some 100,000 manual criminal history records. As of February 1994, approximately 70 percent were converted, and DSP expected that this activity would be completed by mid-1994.

Third, DSP was taking steps to enable the State to participate in III. A key element of this effort was an upgrade of the State telecommunication message switch. In addition to allowing for participation in III, the upgraded switch will improve accessibility to criminal records within the State. Before this CHRI project, the CCH data base was not linked to the State law enforcement telecommunications network. Thus, DSP personnel had to intercept messages from law enforcement agencies and then retype the requests into the CCH system, a procedure that will become obsolete once the new switch is installed. CHRI project personnel expected the new switch to be operational in spring 1994.

New Jersey

Data Quality Improvement Activities	CHRI Project Status	Funding Sources
Upgrade CCH	Completed	CHRI I & II, State
Interface courts and CCH	Completed	CHRI I & II, 5%
Interface corrections and CCH	Completed	CHRI I & II
Process disposition report backlog	Completed	CHRI I
Develop felon analysis system	Completed	CHRI I

New Jersey used CHRI funds to make systemic improvements to criminal history data quality in the State. The State's major CHRI activity was to rewrite its CCH system, which had been operational since 1978. The announcement of the CHRI Program was especially timely for New Jersey because the State had just completed a redesign feasibility study of its CCH system.

The new CCH went online in January 1993 and has had an impact on several aspects of data quality. Under the old CCH, arrest data had to be entered

separately into three different systems: the master name index, the criminal history system, and the court disposition reporting system. Now arrest data are entered once, improving record accuracy and reducing data entry costs. Accessibility timeliness and rap sheet accuracy were improved by eliminating the need to type rap sheets manually for applicant licensing. The readability of the rap sheet was also improved by using phrases rather than codes. Perhaps the most important impact of the new CCH is that it allowed the State to interface the CCH with the court-prosecutor system (PROMIS/GAVEL) and the corrections system (OBCIS). Both interfaces were designed and implemented with CHRI funds.

The most important impact of New Jersey's new CCH is that it allowed the State to interface with the court-prosecutor system and the corrections system.

The State's court-repository interface was implemented on a county-by-county basis. By the end of the State's CHRI project in June 1993, two counties were reporting dispositions electronically, and the remaining counties were scheduled to be brought online by the end of 1993. The interface enabled the State to replace a number of different data collection forms that the State Police had been sending to prosecutors and courts for their use in recording dispositions. Now when the central repository receives word from the municipal courts that a case has been referred to the prosecutor, central repository staff use the interface to access the appropriate county's PROMIS/GAVEL system and enter the defendant's SID number in the case record (assuming that a fingerprint card for the defendant has been submitted and a SID number assigned). Consequently, when dispositions are transmitted to the central repository, the link to the proper criminal history record is already in the disposition record. Dispositions are electronically transmitted nightly from each county-based PROMIS/GAVEL system, dramatically reducing submission time from its previous length of several months.

The interface between the CCH and the corrections OBCIS has also improved the timeliness of criminal history data. When the State Police receive a fingerprint card for a new admittee to a State prison and central repository staff determine the prisoner's SID number, that SID number is electronically transmitted to OBCIS and appended to the prisoner's record, ensuring a link between the offender's record on the two systems. This link and the interface between the two systems has improved the accuracy and timeliness of information on rap sheets. When a request for a rap sheet is received, the CCH sends a message to OBCIS for information on a particular SID number. OBCIS forwards any information on the prisoner to the central repository, which merges the OBCIS and CCH data to produce the rap sheet.

The State developed the capability to identify convicted felons. However, the CCH does not have a felony flag, in part because the term "felony" does not exist in New Jersey. When rap sheets are produced, the felony conviction status is determined "on the fly": A felony conviction notice is printed on the rap sheet if the defendant has been convicted of first-, second-, or third-degree offenses, which are punishable by terms from 2 years to life in prison. As an example of a typical problem that States have in identifying felons in existing records, New Jersey disposition reports until recently did not include

the degree of the offense. To identify convicted felons in existing records, the central repository looks for the existence of an indictment number in the conviction segment of the criminal history record.

Finally, a backlog of 50,000 disposition reports was eliminated, thus improving data base completeness. With the newly developed court-repository interface, backlogs should not recur.

New Mexico

Data Quality Improvement Activities	CHRI Project Status	Funding Sources
Install CCH	Ongoing	CHRI I, State, 5%
Merge external data bases into CCH	Ongoing	CHRI I
Conduct audit	Completed	CHRI I
Interface prosecutor and CCH	Ongoing	CHRI I, State
Upgrade AFIS	Completed	CHRI I, State

The CHRI effort enabled New Mexico to establish a CCH system and to make systemic improvements to data quality.

A pre-CHRI project assessment found that the State had "no CCH, very poor AFIS capability, and virtually no disposition reporting." The CHRI effort enabled New Mexico to establish a CCH system and to make systemic improvements generally to data quality. The State hired a private contractor to develop and implement a CCH, which was scheduled to undergo beta tests in March 1994. The State hoped to have the CCH operational by June 1994, when the CHRI project ended.

In supplying data for the new CCH, the State merged data from several existing automated data bases rather than undertake a massive conversion of existing manual criminal history records. The existing data bases included the State's automated master name index, which consisted of approximately 300,000 records; New Mexico arrest records maintained by the FBI; disposition records from the State's prosecutors; and records from the State corrections department. These data had to be carefully screened before they were posted to the CCH. In particular, the status of the SID number had to be carefully examined. For example, FBI records prior to 1981 generally did not have SID numbers because New Mexico did not become a single-source State until after that date. Manual criminal history records were also converted and new fingerprint cards were received on existing offenders.

In conjunction with development of the CCH, efforts were also under way to automate disposition reporting by prosecutors. Fortunately, there were only two prosecutor case management systems that had to be interfaced: a system in Albuquerque and a system for prosecutors in every other part of the State. The interface was expected to be completed by mid-1994, allowing a nightly transfer of disposition data to the central repository. Prosecutors have agreed not to accept cases from law enforcement agencies unless they have assigned a unique tracking number to the case.

Also in conjunction with the CCH development, the State upgraded its AFIS capabilities. CHRI funds were used to hire a contractor to assess alternative AFIS expansion options. State funds were used to purchase additional AFIS equipment to allow the central repository to access Albuquerque's AFIS. In addition, the State appropriated funds to enable the central repository to purchase its own AFIS.

Finally, the State used CHRI funds to conduct a baseline audit of the central repository. Staff at the State Department of Public Safety performed the audit. The major goals of the audit were to determine the percentage of felony arrests that had final dispositions and to determine the timeliness of law enforcement agencies in submitting fingerprint cards. On the basis of a sample of arrests, it was determined that 25 percent of felony arrests had final dispositions; it was also determined that an average of 31 days elapsed between a felony arrest and receipt of a fingerprint card at the central repository. The State planned to use these figures as a baseline from which to measure changes resulting from activities initiated with CHRI project and BJA/CJRI funds.

New York

Data Quality Improvement Activities	CHRI Project Status	Funding Sources
Obtain unreported dispositions	Completed	CHRI I, 5%
Document reporting system	Ongoing	CHRI I & II
Upgrade CCH	Ongoing	CHRI I & II
Standardize reporting procedures	Ongoing	CHRI I & II, 5%

Like many States, New York and its Division of Criminal Justice Services (DCJS) used CHRI funds to improve disposition reporting. However, unlike most States, most of New York's dispositions were already being reported electronically to the central repository prior to the CHRI program. This was accomplished through an interface developed in the mid-1980's between the DCJS system and the Office of Court Administration (OCA) mainframe. In addition, criminal and superior courts in many of the State's most populous counties, including those encompassing New York City, had been forwarding dispositions electronically to the OCA system since the late 1980's via the OCA's Criminal Records Information Management System (CRIMS). Nevertheless, a major conclusion of a data quality audit conducted in 1989 noted that dispositions available on the OCA system often were not contained in the DCJS system. The primary reason for the discrepancies between the two systems was that the previous automated reporting system did not allow for transmission of dispositions for cases that had not been manually compared with official case papers. Data entry backlogs in the courts delayed the performance of this requirement and caused discrepancies between the OCA and DCJS systems. With the implementation of CRIMS, this manual process was eliminated, and dispositions were transmitted within 24 hours of the court appearance.

Given these audit results, DCJS used CHRI funds in two major ways. A collection team was convened and charged with collecting felony dispositions rendered from 1985 to 1989 that were on the OCA system but not on the DCJS system. At the beginning of this effort, the collection team estimated that 130,000 felony arrests made between 1985 and 1989 did not have dispositions. To obtain these dispositions, the collection team first gave a tape containing these arrests to OCA so that it could attempt to match the arrests to dispositions on their system. This effort was delayed because OCA reported problems in linking the data. Efforts resumed with the generation of a new tape file created to eliminate any cases that had been manually collected in the interim. OCA was about to begin transmission of dispositions for the cases identified. The effort will be continued with BJA/CJRI funding. Second, the collection team began a field effort to collect missing dispositions; as of February 1994, approximately 9,500 felony dispositions had been added to the DCJS system. This field effort will also be continued with BJA/CJRI funding.

In the course of its research, the collection team also identified some 70 problems and limitations with the DCJS CCH. For example, the CCH allowed duplicate tracking numbers. Original plans called for two programmers to be hired with the State's second CHRI award to fix as many of these data base problems as possible. As of April 1994, DCJS was in the process of hiring one of these programmers. However, to address an immediate need for a complete rewrite of the existing disposition maintenance program, funding for one of the programmer positions was reallocated to train existing staff in a three-tier client server architecture for the development of the new program. The need to rewrite the maintenance program arose from a project funded by the BJA/CJRI Program to provide some users of criminal history data the ability to make documented corrections to that data online.

New York used CHRI funds to convene a study team that was charged with identifying and documenting impediments to complete, accurate, and timely reporting.

The second major use for CHRI funds was to convene a study team that was charged with identifying and documenting impediments to complete, accurate, and timely reporting. The study team completed a comprehensive assessment of reporting practices at a sample of contributing agencies and was scheduled to present its findings to the State's multiagency criminal records task force in May 1994. One finding of this assessment was that the disposition reporting problem appeared to be less serious than it actually was because of "hanging arrests" on the CCH. This occurred when more than one fingerprint card was submitted for an arrest, when only one should have been submitted. The study team discovered this occurred when one arresting agency turned the arrest over to another arresting agency, when multiple agencies were involved in the arrest, when persons were arrested on a bench warrant, when arresting agencies submitted a fingerprint card for each charge, or when courts consolidated two or more arrests into a single case. In general, the study team found that "failures in communication among agencies as well as a lack of standardization in the processing of arrests and dispositions" were the major causes of reporting problems.

At the end of the State's CHRI project in August 1994, the study team planned to publish a handbook for local contributing agencies that contained standardized arrest and disposition reporting procedures.

North Carolina

Data Quality Improvement Activities	CHRI Project Status	Funding Sources
Improve court records accessibility	Completed	CHRI I
Automate manual records	Ongoing	CHRI I

The North Carolina SBI and the State AOC worked together to increase the accessibility of the AOC data base to law enforcement users.

The North Carolina State Bureau of Investigation (SBI) and the State Administrative Office of the Court (AOC) worked together to increase the accessibility of the AOC data base to law enforcement users. Previously only those agencies with an AOC terminal had access to court records, and few law enforcement agencies had such terminals. CHRI funds were used to develop software so that agencies with a terminal to the SBI CCH system could use that same terminal to inquire into the AOC's system. The software was completed, and the system is operational.

As part of the State's activity to fully automate its criminal records, data entry workstations were purchased so that each data entry clerk could enter records directly into the CCH. Prior to the CHRI project, central repository staff had to fill out a coding sheet, which was subsequently given to staff who had access to a data entry workstation. This intermediate coding step was eliminated by the new workstations. The new workstations were also used by temporary personnel hired to convert some 70,000 manual criminal history records.

North Dakota

Data Quality Improvement Activities	CHRI Project Status	Funding Sources
Upgrade CCH	Completed	CHRI I
Install prosecutor information system	Ongoing	CHRI I, State, 5%
Interface prosecutor and CCH	Ongoing	CHRI I, State, 5%
Participate in III	Completed	CHRI I

The focal point of North Dakota's CHRI project was rewriting the central repository CCH.

The focal point of North Dakota's CHRI project was rewriting the central repository CCH. The new CCH, which went online in July 1993, promised to improve data quality in a number of ways, one of which was felon identification. The State's old CCH, like many other CCH systems, was a text-based system designed to store information; little thought had been given to how the data might be analyzed. Conviction data were stored in a free-format text field. The new CCH has a felony flag field that will be updated on the basis

of the conviction level associated with a disposition. Because conviction data stored in the older CCH system were not amenable to automated analyses, the State is taking a day-one approach to flagging felons.

The new CCH also enabled the central repository to develop interfaces with other agencies. The State expected to participate in III by March 1994. CHRI funds were also used to implement automated disposition reporting by prosecutors. Case management software was developed that makes such reporting a byproduct of the prosecutor office's day-to-day work. Plans call for dispositions to be reported to the central repository in real time, as they are entered into the case management system. The State plans to continue development of the interface with BJA/CJRI funds.

Northern Mariana Islands

Data Quality Improvement Activities	CHRI Project Status	Funding Sources
Develop data quality improvement plan	Completed	CHRI I, 5%
Install CCH	Ongoing	CHRI I, 5%

Prior to the CHRI program, the Commonwealth of the Northern Mariana Islands had no criminal history system. Traditionally, the courts acted as the central repository, maintaining nonfingerprint-supported disposition information. CHRI funds were used to develop a long-term data quality improvement plan and to establish a criminal history system in the Commonwealth's Department of Public Safety.

Northern Mariana Islands' CHRI funds were used to develop a long-term data quality improvement plan and to establish a criminal history system in the Commonwealth's Department of Public Safety.

The Commonwealth's Criminal Justice Planning Agency (CJPA) hired a private contractor to assist a multiagency task force in producing a data quality improvement plan. The major recommendations of the plan included the following activities:

- Obtain training in fingerprint classification, filing, and maintenance and in criminal history record creation, maintenance, and dissemination.
- Develop a master fingerprint file of existing and new arrest fingerprint cards.
- Develop a fingerprint-based automated MNI.
- Develop a fingerprint-based manual criminal history record.

As of early 1994, progress had been made on all four recommendations. Training was conducted for CJPA staff on proper fingerprinting techniques; on developing procedures to ensure complete, accurate, and timely reporting; and on developing policies regarding the creation, maintenance, and dissemination of criminal history record information. The Commonwealth created a master fingerprint file and added a small number of offenders to an automated MNI. Associated with each MNI record is a unique State identification

number and a set of word processing package-based arrest and disposition records. Once an effective manual criminal history system is established, the Commonwealth will create a computerized criminal history system.

Ohio

Data Quality Improvement Activities	CHRI Project Status	Funding Sources
Conduct audit	Completed	CHRI I & II
Interface courts and CCH	Ongoing	CHRI I & II
Automate disposition reporting to FBI	Completed	CHRI I & II
Process disposition report backlog	Ongoing	CHRI I & II

Using CHRI funds, the Ohio Bureau of Criminal Identification pilot-tested a court-repository interface . . .

Prior to the CHRI program, the Ohio Bureau of Criminal Identification and Investigation viewed the quality of disposition reporting as its most serious problem. In 1991 the Bureau estimated that only 23 percent of arrests in its CCH had dispositions. More important, virtually no dispositions were being received from the major courts with jurisdiction over felony cases. The Bureau felt that the primary reason for poor disposition reporting was confusion about who should report and what disposition form should be used. In spite of the low reporting rate, central repository staff could not keep up with the inflow of dispositions, and a backlog of 100,000 dispositions had developed.

The Bureau recognized that automated disposition reporting through an interface to the CCH offered the potential both to increase the percentage of dispositions reported to the central repository and to reduce the workload for the data entry clerks. Using CHRI funds, the Bureau pilot-tested a court-repository interface in Hamilton and Cuyahoga counties, which accounted for 25 percent of the felony cases in the State. The interfaces were expected to be completed in late 1994. In addition, CHRI funds were provided to the State's prosecutor association to modify its information system so that dispositions could be reported to the central repository. The Bureau also used CHRI funds to improve disposition timeliness in the CCH by processing disposition backlogs.

Two other CHRI-supported activities were completed recently. The Bureau hired a private contractor to conduct a baseline data quality audit and developed the necessary software to automate disposition reporting to the FBI.

Oklahoma

Data Quality Improvement Activities	CHRI Project Status	Funding Sources
Merge external data bases into CCH	Ongoing	CHRI I

The Oklahoma SBI attempted to improve the completeness of its CCH by merging the records on the Arrest Disposition Reporting System (ADRS) into the CCH.

The Oklahoma State Bureau of Investigation (OSBI) attempted to improve the completeness of its CCH by merging the records on the Arrest Disposition Reporting System (ADRS) into the CCH. ADRS was developed in the 1970's as a case tracking system for district attorneys. The system had significantly more dispositions than the CCH; however, ADRS was not fingerprint supported, and not all of its records had a process control number that could link the disposition with an arrest fingerprint card. OSBI hired a private contractor to move and merge the ADRS data base into the CCH, a process that was expected to be completed in late 1994.

Oregon

Data Quality Improvement Activities	CHRI Project Status	Funding Sources
Interface courts and CCH	Completed	CHRI I, State
Process disposition report backlog	Completed	CHRI I, State
Implement monitoring system	Completed	CHRI I
Set felony flags in existing records	Completed	CHRI I
Conduct audit	Completed	CHRI II

Using CHRI I funds, Oregon completed four activities that improved data quality. First, the State developed and implemented an interface between the Oregon Judicial Information Network (OJIN) and the State central repository CCH data base. This effort capped a multiyear court automation project. Prior to 1985 the State used multipart forms to report arrests and dispositions; court clerks completed one of the copies and mailed it to the central repository. From 1985 to 1989, the OJIN system was implemented in all the counties. The court-repository interface was simplified by the fact that the State had a unified court system, which meant that all the counties used an identical system. With the implementation of OJIN, court clerks submitted computer printouts of dispositions to the central repository. In July 1992 the interface between OJIN and the central repository was completed. The interface is two-way: OJIN transmits dispositions weekly to the central repository, and the central repository transmits State identification numbers of the offenders associated with the dispositions back to OJIN. The percentage of dispositions that can be automatically posted to the CCH has continued to increase; by fall 1993 it was 90 percent. Most of the remaining 10 percent could not be posted automatically because the associated arrest information was not in the CCH data base.

Second, the Oregon State Police developed and implemented a fingerprint card monitoring system for cards that were unreadable and subsequently returned to the submitting agency. Prior to the CHRI project, fingerprint cards that were unacceptable were returned to the submitting agency, and no arrest information was recorded in these cases. With CHRI funds a PC-based monitoring system was developed: Central repository personnel entered the arrest facts recorded on the fingerprint card in a data base. This data base was periodically analyzed to track rejected cards and to target training resources toward agencies with higher-than-average rejection rates.

The Oregon State Police developed and implemented a fingerprint card monitoring system for cards that were unreadable and subsequently returned to the submitting agency.

Third, CCH data base completeness was improved by reducing a backlog of some 60,000 (paper) disposition reports. Delays between receipt and entry of disposition reports were reduced from 6 weeks to 1 week. A backlog should not recur because of the OJIN-CCH interface. Fourth, CHRI I funds were used to set felony flags on offenders in the CCH data base. Flags were able to be set on all offenders convicted after 1987, when a felony conviction disposition code was implemented.

Oregon's second CHRI award was used to conduct a baseline audit. A private contractor was hired for this project, and a final audit report was expected to be completed by March 1994.

Pennsylvania

Data Quality Improvement Activities	CHRI Project Status	Funding Sources
Automate manual records	Completed	CHRI I & II, 5%
Process fingerprint card backlog	Completed	CHRI I
Assume responsibility for more III records	Completed	CHRI I
Process disposition report backlog	Completed	CHRI I & II, 5%
Set felony flags in existing records	Ongoing	CHRI I & II
Conduct audit	Completed	CHRI II
Install live-scan devices	Completed	CHRI II, 5%
Conduct training at local agencies	Ongoing	CHRI II

Pennsylvania's CHRI projects encompassed a number of different activities that can be categorized into four broad groups:

- Activities aimed at improving fingerprint card reporting.
- Data entry and data conversion activities for improving the completeness of central repository records.
- A flagging program for identifying felons, career criminals, and aliens.

■ A baseline audit.

The Pennsylvania State Police (PSP) estimated that prior to the CHRI program, 35 percent of all arrests were not reported to the central repository. Moreover, they estimated that 10 percent of submitted fingerprint cards were not readable. Thus, a priority for Pennsylvania's CHRI project was to improve fingerprint reporting. This was accomplished through two main activities.

Pennsylvania CHRI funds contributed to a statewide effort to implement live-scan fingerprinting.

First, CHRI funds contributed to a statewide effort to implement live-scan fingerprinting. Specifically, four live-scan devices were placed at high-volume PSP troop barracks. Along with 15 devices expected to be purchased with BJA/CJRI funds and placed at local law enforcement agencies and with some already existing devices in Philadelphia and Harrisburg, PSP estimated that half of all fingerprint cards received at the central repository would be live-scan generated. These fingerprint cards were being printed at the local booking facility and then mailed to PSP; PSP hoped to interface the devices to its AFIS in the future. How much these devices improve fingerprint card reporting rates remains to be seen, although PSP reported a significant improvement in the readability of the cards.

The second activity aimed at improving fingerprint cards was implementation of local agency training programs. In conjunction with the Pennsylvania Chief's Association, PSP conducted 1-day regional training seminars on reporting requirements and fingerprinting techniques. In addition, PSP produced a training video that was distributed to law enforcement agencies across the State. These training efforts were to continue through October 1994.

CHRI funds were also used to support a number of data conversion and data entry activities. For example, PSP personnel were paid overtime to eliminate a backlog of 59,000 disposition reports. This backlog was partially the result of shortcomings in the disposition reporting system. Under this system, dispositions submitted by the 67 counties were sent to a third-party vendor for key entering. The keyed data were then forwarded to the central State court and then to PSP. The lack of edit checks in the process was felt to be partially responsible for the fact that PSP could not post approximately 20 percent of the dispositions to the CCH.

A second backlog of 30,000 fingerprint cards submitted by the State corrections department was eliminated with first-year CHRI funds. In processing these cards, it was found that 4,500 (15 percent) of the associated offenders did not have a fingerprint card on file with PSP. The long-term solution to this backlog problem was to provide the corrections department with online access to the CCH and to instruct staff only to submit a fingerprint card if there was not one already on file for the offender.

A third backlog of 300,000 firearm sale records was also being addressed. PSP hoped to identify convicted felons who had purchased firearms. The final data conversion activity involved conversion of manual criminal history records. PSP did not begin automating its criminal history records until

1984; consequently, the State had an extensive file of about 750,000 manual records. The objective of this activity was to convert manual records of approximately 18,000 active offenders. In addition, PSP assumed responsibility for some 15,000 III records that previously had been supported by the FBI. However, according to FBI records, as of June 1993 the FBI still supported some 225,000 Pennsylvania records.

The PSP felony flagging activity involved programmatically identifying existing offenders in the CCH and setting a felony flag in the offender's ident segment. PSP personnel used the State's definition of a felony that corresponds to Federal law: "an act punishable by more than 1 year in prison." In the first run of the software to set felony flags, some 280,000 offenders were identified as convicted felons. In addition to setting felony flags, PSP also set flags for career criminals (offenders convicted of three or more prior felonies) and aliens convicted of felonies. Work on the flagging programs was expected to be completed in summer 1994.

Finally, CHRI funds were used to conduct a baseline data quality audit. PSP hired a private contractor for this effort, which was completed in early 1994. The major recommendation from the audit report was that PSP expand its training program to improve arrest and disposition reporting. PSP incorporated the training recommendations into its ongoing CHRI-supported training programs.

Rhode Island

Data Quality Improvement Activities	CHRI Project Status	Funding Sources
Interface courts and CCH	Completed	CHRI I
Upgrade CCH	Completed	CHRI I
Obtain unreported dispositions	Completed	CHRI I

CHRI funds were used to complete one of the most important aspects of Rhode Island's master plan: data sharing between the courts and the central repository.

In 1988 Rhode Island developed a master plan for automation of its criminal justice agencies. Updated in 1990, the plan focused on both automation within individual agencies and automation among agencies, the goal being to link agencies through a central CJIS hub. CHRI funds were used to complete one of the most important aspects of that plan: data sharing between the courts and the central repository. Indeed, a 1991 audit of the central repository's data base showed that 50 percent of the reported arrests had no disposition.

To develop the court-repository interface, the central repository CCH had to be rewritten. The CCH is now in a modern, relational data base environment that allows for easy ad-hoc querying and report generation. The number of programs needed to maintain the criminal history system has been reduced from dozens to one. One master program allows the repository staff to access inquiries, entries, dispositions, expungements, pistol permits, warrants, and sex offender registrations. The process of updating dispositions was reduced from six steps to one.

New procedures also had to be developed to ensure more complete fingerprint and disposition reporting. An offender's State identification number, if found after a name search, is recorded on both the fingerprint card and the charging documents submitted to the courts. Each day a file of new court cases is transmitted to the central repository, where staff match them to the submitted fingerprint cards. Once an offender has been positively identified, staff update the court's automated case tracking system with the offender's SID number. Later, dispositions will be forwarded to the central repository on a nightly basis. Felony convictions will be flagged in the transmitted file.

The original rewrite of the CCH was designed for electronic posting of charging information from the court information system; however, for a number of reasons, manual transmittal is still being used. The most significant reason is the lack of uniform data entry at the district court level, primarily due to personnel constraints. Because not all district courts are entering felony information, arrest information cannot be consistently captured at the arraignment level.

CHRI project staff completed data entry of missing dispositions for felony arrests made between 1985 and 1993. Temporary personnel used printouts supplied by the courts in this effort. Finally, fingerprint classifications were entered and updated for more than 75,000 offenders, allowing for the eventual electronic sharing of data with other jurisdictions.

South Carolina

Data Quality Improvement Activities	CHRI Project Status	Funding Sources
Set felony flags in existing records	Completed	CHRI I
Process disposition report backlog	Completed	CHRI I
Interface courts and CCH	Completed	CHRI I & II, State, 5%

South Carolina's two CHRI projects focused on improving disposition reporting. The South Carolina Law Enforcement Division (SLED) and the South Carolina Court Administration (SCCA) worked together to transform the State's manual disposition reporting system into an automated system. SLED also undertook the CHRI-supported activities of establishing a felony flagging system and processing a backlog of disposition reports that improved data quality.

South Carolina's two CHRI projects focused on improving disposition reporting.

Prior to the CHRI program, South Carolina's disposition reporting system was entirely paper based. Court clerks in the 46 counties forwarded paper disposition forms to the central SCCA office, where 7 SCCA data entry clerks entered the data in the SCCA data base housed on a mainframe at SLED. In addition, SCCA forwarded paper disposition forms to SLED, where SLED personnel posted the disposition to the CCH. Realizing that an electronic disposition reporting system could improve data quality, timeliness, and accuracy and reduce costs, the State Justice Institute (SJI) and the South Carolina Bar Foundation in 1991 funded development of a central SCCA computer system that could receive dispositions electronically from these county systems.

Soon after the SJI funds became available, the State received the first of its two CHRI awards. In addition to supporting SLED's efforts to identify convicted felons and process a backlog of disposition reports, the CHRI funds were directed toward building on the goals of the SJI grant. While the SJI grant funded development of the central SCCA system, CHRI funded development of software that would facilitate electronic submission of dispositions from the counties to the new SCCA system and development of an electronic interface between the new SCCA system and the SLED CCH.

Two important points should be made about the approach South Carolina took in these efforts. First, 19 counties, including the most populous counties, already had court information systems. The new SCCA system had to be able to accept data from those systems, which existed on a variety of hardware platforms and had their own data formats and conventions. Some CHRI funds were given to these counties to defray the costs of interfacing their systems to the new SCCA system. Second, in the 27 counties that lacked automation, CHRI funds were used to develop an inexpensive PC-based court case management system that county court clerks could use to manage their cases and assist with scheduling. The package included a module for reporting electronically to the new SCCA system. Dispositions were transmitted in batches, posted to the SCCA data base, and reformatted and transmitted to the SLED CCH.

As of February 1994, 32 of 46 counties had discontinued submitting paper disposition forms and only reported electronically. The other 14 counties expected to report electronically by the end of the year. In addition to improving the timeliness and accuracy of disposition reports, the activity also greatly improved cooperation between SLED and SCCA.

SLED also established a felony flagging system and reduced a backlog of disposition reports. Flagging was based both on Federal law (the Gun Control Act of 1968) and State law (a crime of violence or a misdemeanor punishable by imprisonment of more than 2 years). Because the State had a post-sale firearm eligibility verification law, at least prior to enactment of the Brady law, firearm sales in violation of Federal but not State law were referred to the Bureau of Alcohol, Tobacco and Firearms; others were investigated by SLED. As part of these efforts, SLED altered its data base so that the State statute on which the offender was convicted was recorded in the data base; prior to this upgrade, conviction information was simply stored in a literal field, making it difficult to determine in an automated manner whether an offender had a felony conviction. Data entry screens were also rewritten to facilitate flagging of convicted felons.

Finally, SLED used CHRI funds to clear a backlog of 125,000 dispositions, reducing delays in the processing of disposition reports from 12 months to 1 month. Because dispositions are now reported electronically, disposition backlogs should not recur.

South Dakota

Data Quality Improvement Activities	CHRI Project Status	Funding Sources
Participate in III	Ongoing	CHRI I
Obtain unreported dispositions	Completed	CHRI I
Interface courts and CCH	Ongoing	CHRI I

Perhaps the most important goal of South Dakota's CHRI project was to enable the State to become a participant in III. Two major tasks had to be completed for this to happen. First, the State needed to upgrade the hardware and software of its message switch. A private contractor was hired for this task, and the new switch was expected to be operational in fall 1993. Second, the State needed to become a single-source State; this occurred on June 1, 1993. To help local reporting agencies adapt to the change, CHRI project staff compiled a detailed training and procedures manual, which was distributed to all State reporting agencies. CHRI project staff hoped that the State would become a participant in III by June 1994.

Perhaps the most important goal of South Dakota's CHRI project was to enable the State to become a participant in III.

The State selected two other activities to improve criminal history record data quality. First, CHRI project staff initiated an effort to obtain all missing felony dispositions from the past 5 years. An analysis of the CCH data base indicated that 4,270 (19 percent) of 21,931 felony arrests were missing. Project staff researched the missing dispositions and were able to close out more than 90 percent of them, including dispositions that were in the court data base but never reported to the central repository and cases that were prosecutor declinations. The rest of the dispositions were primarily cases in which offenders failed to appear at court proceedings and were presumed to have left the State.

Finally, the State developed a court-repository interface. In developing the interface, the State had a tremendous advantage in its unified court system, with all the court records on one computer system. Also, the courts agreed to include the arrest tracking number in their system. The method by which the dispositions would be transmitted to the central repository (tape or online transmission, for example) and the frequency of transmission had not yet been determined. The State expected to complete the interface by August 1994.

Tennessee

Data Quality Improvement Activities	CHRI Project Status	Funding Sources
Install CCH	Completed	State, CHRI
Automate manual records	Completed	CHRI I
Set felony flags in existing records	Completed	CHRI I

In Tennessee CHRI funds were used to establish a CCH system. Work on the system had begun with State funds, but the CHRI program allowed implementation of the CCH to be accelerated. The CCH went online in April 1992. Since then, the central repository has used CHRI funds to hire temporary employees and pay existing personnel overtime to automate the records of 600,000 offenders. By the end of the State's CHRI project, 580,000 of the 600,000 offenders had been added to the automated MNI. A felony flag in the MNI was set when each record was converted. Including aliases, approximately 1 million names were added to the State's MNI. In addition, the criminal history records of 191,000 of the 600,000 offenders were fully automated with CHRI funds.

By the end of Tennessee's CHRI project, 580,000 of 600,000 offenders had been added to the automated MNI.

The CCH had already been interfaced to Tennessee and National Law Enforcement Telecommunications System telecommunications networks for online queries. Given that responses to requests for criminal history information previously had to be typed by hand following a search of the manual files, the impact of the CCH on the accessibility of criminal history records has been significant. The State hoped to use BJA/CJRI or other funds to embark on additional data quality improvement activities, including participation in III, implementation of automated disposition reporting, and design of a new fingerprint card with a unique arrest tracking number.

Texas

Data Quality Improvement Activities	CHRI Project Status	Funding Sources
Upgrade CCH	Completed	CHRI I & II
Interface courts and CCH	Completed	CHRI I & II, 5%
Interface corrections and CCH	Completed	CHRI I & II
Implement unique tracking number	Completed	CHRI I

The activities Texas selected for its CHRI project stemmed from a data quality audit conducted in 1988 by the Criminal Justice Policy Council. The audit recommendations led to passage of a legislative package in 1989, with revisions in 1991 and 1993, that included stricter reporting requirements and mandated development of a criminal justice information system (which required an enhanced CCH and creation of a corrections tracking system). The State recognized that electronic disposition reporting was the key to

improving disposition reporting and to eliminating the ever-present backlogs at the central repository. The CHRI program, and subsequently the BJA/CJRI program, enabled Texas to address these legislative requirements while also responding to Federal needs.

Texas' CHRI I project focused on rewriting the Department of Public Safety CCH system and pilot-testing the court-repository electronic interface.

The State CHRI I project focused on rewriting the Department of Public Safety CCH system and pilot-testing the court-repository electronic interface. The new CCH went online in June 1993. Whereas the old CCH was built around "flat" data files, the new CCH incorporates a data base management system, which allows for flexible report generation and extensive analysis capabilities. The new CCH also includes a field indicating whether the offense is a felony or a misdemeanor. The major benefit of the new CCH is that it allows for electronic interfaces to the county data processing systems.

The State is approaching automated disposition reporting by bringing the counties into the system one at a time. Counties are selected on the basis of disposition volume and the level of county interest in participating in the program. Reporting in the participating counties works as follows. The arresting agency forwards charging documents to the county district attorney, which leads to creation of a case record in the county computer system. The arresting agency also forwards fingerprint cards to the central repository, where personnel identify the offender through the statewide AFIS and associate a SID number with the offender. Repository personnel then transmit the recorded data, including the SID number, to the county computer system.

To solidify the linkage between the CCH and the county systems, a new fingerprint card with a unique charge-specific tracking number was implemented. The State embarked on an extensive training program to ensure that the tracking numbers were entered into the county systems. The frequency with which dispositions are transmitted from the county system to the central repository is at the discretion of the county, which can use online or batch transmissions. The CCH records the updates in batches. No disposition is transmitted to the CCH until the SID number has been added to the county case record.

The first county to participate in the program was Tarrant County, which used IBM hardware; CHRI I funds were used to upgrade that system to be compatible with and communicate with the CCH, which uses an Amdahl system. This pilot test proved the feasibility of the interface and established standards for the remaining counties. During CHRI II, funds were used to complete the conversion of the State CCH data base and to test electronic submissions from Nueces County, which uses Hewlett-Packard hardware.

By April 1994, the State expected that eight of the largest counties would be reporting dispositions electronically. BJA/CJRI funds were made available to counties that wished to upgrade their systems so that they could communicate with the CCH and continue the initiative started with CHRI funds. As of April 1994, 21 counties had received BJA/CJRI funds, and another 24 counties were expected to be funded by the end of the year.

Finally, the State used CHRI funds to develop an interface to the State-funded corrections tracking system in the Department of Criminal Justice. As status information, such as an inmate's release from prison, is entered in the tracking system, the subject's criminal record in the CCH will be automatically updated. The State expected to complete this project by early 1995.

Utah

Data Quality Improvement Activities	CHRI Project Status	Funding Sources
Upgrade CCH	Completed	CHRI I, 5%
Interface booking system and prosecutor	Completed	CHRI I
Interface courts and CCH	Completed	CHRI I
Interface prosecutor and courts	Completed	CHRI I, 5%
Interface corrections and CCH	Completed	CHRI I, 5%

In Utah CHRI funds were used to electronically link State criminal justice agencies with criminal justice agencies responsible for reporting criminal history information in Salt Lake County, Utah's largest county. The agencies being linked included county agencies such as the Salt Lake County Sheriff and Salt Lake County Prosecutor with State agencies such as corrections, courts, and the central repository. As is the case in many States, all of these agencies developed independent computer systems with little thought given to sharing data. Once completed, the project will make systemic improvements to the quality of criminal history records and become a model for implementation of similar systems for other counties in the State.

In Utah CHRI funds were used to electronically link State criminal justice agencies with criminal justice agencies responsible for reporting criminal history information in Salt Lake County, Utah's largest county.

Before the interfaces could be developed, a number of other activities had to be completed. Procedural changes were needed to improve record linkage. Prior to the CHRI project, the State had a tracking number called the Offense Tracking Number (OTN), which was not being used effectively. A pre-CHRI project audit estimated that 54 percent of cases on the court's computer system did not have an OTN. A multipart fingerprint card was introduced, and new laws requiring prosecutors to provide OTN's to the courts at the time of case filing were enacted. The immediate impact of these changes was that the central repository began receiving prosecutor declinations for the first time. The central repository CCH had to be upgraded to accommodate the interfaces. As part of this effort, the readability of rap sheets was improved, and better data entry screens with electronic edits were developed.

Work on the interfaces has been partially completed. The interface between the jail systems and the Salt Lake County prosecutor system was completed, and the prosecutor now receives notification of new cases in real time. The interface between the prosecutor system and the courts was also completed. This interface is two-way: Basic case information is electronically transmitted from the prosecutor to the courts at the time of case filing, and prosecutors

are able to electronically access the court calendar. The court-repository interface was completed, and dispositions are being reported by electronic transfer once per month.

Vermont

Data Quality Improvement Activities	CHRI Project Status	Funding Sources
Install CCH	Ongoing	CHRI I
Automate manual records	Ongoing	CHRI I

The Vermont DPS used CHRI funds to develop a CCH system. Prior to the CHRI Program, the State had an automated master name index but no automated criminal history records.

The Vermont Department of Public Safety (DPS) used CHRI funds to develop a CCH system. Prior to the CHRI Program, the State had an automated master name index but no automated criminal history records. DPS contracted with a private vendor to install the new CCH. DPS expected the entire CCH system to be operational, including the communications system for allowing State criminal justice agencies to conduct online searches of the CCH, by fall 1994.

Once the CCH was operational, DPS planned to use remaining CHRI funds to convert manual criminal history records. The highest priority was to be given to the records of offenders in State prisons and on probation, to be followed by the records of offenders arrested in the past 5 years. In addition, new criminal records and records for which requests are made will be automated on a day-one basis.

Virginia

Data Quality Improvement Activities	CHRI Project Status	Funding Sources
Process disposition report backlog	Completed	CHRI I
Upgrade CCH	Ongoing	CHRI I & II
Set felony flags in existing records	Completed	CHRI I, 5%
Set felony flags in III records	Completed	CHRI I
Interface booking system and courts	Ongoing	CHRI II, 5%

Data entry and data conversion activities were an important component in Virginia's CHRI I project. In particular, a disposition report backlog had been developed at the Virginia State Police (VSP), largely because VSP staff had to be diverted to legislatively mandated programs, such as the point-of-sale firearm eligibility verification system. Temporary employees were hired with CHRI funds, and a backlog of 80,000 dispositions was eliminated. Delays in entering disposition reports were reduced from 4 months to 4 days. VSP also embarked on a project to flag convicted felons who are listed in VSP's MNI but whose criminal history record had not yet been automated. VSP had some 300,000 manual criminal history records. By the end of the CHRI I project

period, approximately 73,000 records had been identified for automation. This activity was to be continued with BJA/CJRI funding. Finally, VSP successfully completed a pilot project with the FBI in which felony flags were added to Virginia's III records. The initial transfer of data to III resulted in 218,000 records being flagged.

Improvements to the VSP CCH were made during the two CHRI projects. VSP developed three different versions of its rap sheets. For example, a police officer whose only interest was in recent arrests would request a basic rap sheet, while a probation officer who was preparing a presentence investigation report would request the version containing the most detailed information. Another improvement to the CCH was to include juvenile arrest reporting capabilities for offenses that would be felonies in an adult court. This modification was made as a result of 1993 legislation. Finally, during the CHRI I project period, a module was added to the CCH that extracted the necessary data for the VSP OBTS system. Prior to this effort, VSP staff had to manually enter the OBTS data, so this improvement saved considerable personnel data entry time.

The major CHRI II activity was development and installation of an interface linking local booking centers to the courts. The State Department of Criminal Justice Services and the Supreme Court worked with five law enforcement agencies in the State to develop and pilot test the interface. The system was designed to simultaneously store the arrest information in the agency's local information system and to electronically forward the information to the magistrate and court information systems. In turn, warrant and disposition information was to be sent electronically to local law enforcement agencies. The interface was expected to be operational in three agencies by spring 1994. This system should ensure that accurate and complete arrest information is forwarded to the courts, thus also ensuring that dispositions subsequently submitted from the courts to the central repository will be able to be linked to arrests. If the pilot test were successful, the State planned to expand implementation of the system using BJA/CJRI funds.

Virginia's major CHRI II activity was development and installation of an interface linking local booking centers to the courts.

Washington

Data Quality Improvement Activities	CHRI Project Status	Funding Sources
Process disposition report backlog	Completed	CHRI I & II
Process FBI rap sheet backlog	Completed	CHRI I
Develop data quality improvement plan	Completed	CHRI I
Set felony flags in existing records	Completed	CHRI I
Conduct training at local agencies	Completed	CHRI I, 5%
Participate in III	Completed	CHRI II
Revise central repository procedures	Completed	CHRI II, 5%
Interface booking system and CCH	Completed	CHRI II, 5%
Interface courts and CCH	Completed	CHRI II, 5%

The focal point of Washington's first year CHRI project was development of a data quality improvement plan.

The focal point of Washington's first year CHRI project was development of a data quality improvement plan. For this task, Washington hired a private contractor who worked closely with the State's multiagency task force. The result was a comprehensive long-term plan that became the basis for the State's second-year CHRI project application and its BJA/CJRI plan. The State felt that the process of developing a plan through the multi-agency task force was extremely valuable because, as one official said, "The key players in each agency bought into a process for decisionmaking and consensus building."

The State's first-year CHRI project also included four other activities. First, to reduce the disposition report backlog, the State hired temporary employees who entered 60,000 dispositions and improved update timeliness from 9 months to 2 months. However, State Patrol personnel noted that backlogs recurred. The court-repository interface system under development should help solve the felony disposition backlog problem. Second, the State's backlog of 25,000 FBI rap sheets was eliminated. The backlog will not recur because the State is now a III participant.

Third, training materials were developed, and State Patrol personnel conducted 44 training sessions that were attended by 685 individuals in 360 different agencies. Training focused on criminal history information reporting requirements and procedures and on fingerprinting techniques. Fourth, the State Patrol added a felony flag to its criminal history system and, on the basis of offense codes, determined the felony conviction status of offenders currently in the system. Procedures were put in place to flag felons on an ongoing basis. The State reported that by the end of 1992, 120,000 offenders were flagged as felons.

As noted above, the State's CHRI II project activities were selected on the basis of data quality improvement plans developed during the CHRI I project and included the following projects. First, the State became a participant in III in February 1993. Second, the State Patrol revised many of its internal procedures for processing arrest and disposition reports. In general, the central repository switched from an assembly line operation in which each staff person performed one task to one in which all staff handled everything. The State Patrol reported that this switch greatly improved staff morale. Revisions of central repository procedures continued with BJA/CJRI funds.

Third, the State pilot tested a booking-repository interface in which data entered in county-based jail management systems were transmitted electronically to the central repository. The idea was to update the transmitted booking record once the fingerprint card arrived at the central repository. Jail management software with an interface to the central repository was installed in three counties. An initial evaluation of these systems found that the interfaces were of limited value because many of the records, particularly those for misdemeanors, used local charge codes that the central repository could not translate. The system was being evaluated further by the State.

Fourth, the State developed functional specifications for a court-repository interface to facilitate electronic disposition reporting to the central repository. BJA/CJRI funds will fund implementation of the system. The system was pilot tested in King County, which accounted for 50 percent of the felonies in the State. The success of the system depended on implementation in King County of a unique tracking number called the process control number to match arrests with dispositions automatically.

West Virginia

Data Quality Improvement Activities	CHRI Project Status	Funding Sources
Install CCH	Ongoing	CHRI I & II

West Virginia viewed the CHRI project as an opportunity to implement a CCH.

Prior to the CHRI program, West Virginia had no CCH system. The State's master name index was also manual. Consequently, the State viewed the CHRI project as an opportunity to implement a CCH.

The State's first CHRI award was used to hire a contractor to complete a functional requirements report that became the basis for a request for proposal for the new CCH. This report was completed in August 1992. With its second CHRI award, the State planned to hire a vendor to develop a CCH. The State expected its new CCH system to be operational by the end of 1996.

BJA/CJRI funds will be used to support data conversion efforts, particularly automation of the State's MNI and transfer of West Virginia's criminal history records from the FBI into the new CCH.

Wisconsin

Data Quality Improvement Activities	CHRI Project Status	Funding Sources
Process disposition report backlog	Ongoing	CHRI I & II, State
Conduct audit	Completed	CHRI II
Set felony flags in existing records	Completed	CHRI I & II
Implement monitoring system	Completed	CHRI I & II
Process FBI rap sheet backlog	Completed	CHRI I & II
Participate in III	Ongoing	CHRI I & II

The most important recommendations for Wisconsin's CHRI project were a rewrite of the State CCH and implementation of automated disposition reporting.

Wisconsin's Crime Information Bureau coordinated the State's two CHRI awards. By early 1994, four of Wisconsin's six CHRI-supported activities were completed. First, the State hired an outside contractor to conduct a baseline assessment of its criminal history system. The last such assessment was conducted in 1980. The completed assessment included 28 recommendations that became the basis for the State's BJA/CJRI plan. The most important recommendations included a rewrite of the State CCH and implementation of automated disposition reporting.

Second, a felon identification system was completed and is now operational. The State has a felony check box on the fingerprint card and disposition report, but until this CHRI project the State CCH did not include a felony flag. A computer program was developed to examine an offender's criminal history record and determine the offender's felony status on the basis of Wisconsin law, which was defined as "convicted of a felony in Wisconsin or of a crime in another State that would be a felony in Wisconsin." The program was to be applied to the entire CCH data base to update the felony status of all existing offenders.

Third, the State developed software that reads a tape of numbers from the FBI and applies it against the CCH. Thus, a time-consuming manual process was eliminated. Fourth, the State developed a monitoring system that flags dispositions that have been open for a period longer than expected. This system was expected to increase the disposition reporting rate.

Two ongoing CHRI-supported activities were expected to continue through the remainder of the CHRI project in September 1994. CHRI funds helped support an effort to process a backlog of disposition reports at the central repository. Unfortunately, this activity was plagued by personnel problems; as a result, the project has not been fully staffed, and the backlog size had grown from 48,000 dispositions at the start of the project in October 1990 to 118,000 dispositions in December 1993. The central repository keyed the SID numbers of all outstanding disposition reports to a newly created data base. When a criminal record is requested, the new data base is searched for a corresponding SID. When a match occurs, the related disposition report is retrieved and keyed to the record before release of the information.

Finally, the State developed an implementation plan and system design for participation in III. The State hoped to become a III participant by the end of 1994.

Wyoming

Data Quality Improvement Activities	CHRI Project Status	Funding Sources
Improve CCH accessibility	Completed	CHRI I, local
Automate manual records	Completed	CHRI I
Interface courts and CCH	Completed	CHRI I, State
Set felony flag in existing records	Completed	CHRI I, State
Conduct training at local agencies	Completed	CHRI I

The major activity in Wyoming's CHRI project was to increase local law enforcement access to the CCH at the central repository.

The major activity in Wyoming's CHRI project was to increase local law enforcement access to the CCH at the central repository. This was accomplished by upgrading the State switching system and moving it to a different computer. With the old switching system, local law enforcement agencies were limited to a single "dumb" terminal that could only be used for inquiries to the State CCH. The new switching system supports personal computers (PC's), and agencies can have several PC's linked to the CCH: one for dispatchers, one for detectives, and one for record clerks, for example. With a combination of CHRI funds and local agency contributions, approximately 70 percent of local law enforcement agencies now have these PC's. Currently, the PC's are being used to query the CCH. However, having the PC's in place means that the State can better support incident-based reporting through downloading of the data via the PC's and can take advantage of the FBI's Integrated Automated Fingerprint Identification System and National Crime Information Center 2000 initiatives.

The State's four other CHRI activities can be summarized as follows. The State used CHRI funds to automate 7,800 manual records, improving data base completeness; 99 percent of all records were automated. The task of identifying felons in existing criminal history records was in progress. The CCH record format now contains a placeholder for a felony flag, and the courts provided a table indicating which statutes are felonies. The State planned to use non-CHRI resources during 1994 to set felony flags on existing records. The court-repository interface activity was put on hold because budget cutbacks stalled the State's court automation project. Finally, in fall 1993 the State began a training program for local law enforcement agencies, focusing on compliance with reporting procedures and on improving the quality of fingerprinting.

Discussion of the State Questionnaire

To better understand how States view data quality issues and approaches to improving data quality, and to assist in this selection of States for the focused systemic study, a brief questionnaire was developed and administered during the CHRI evaluation study in early 1993. A discussion of the results of the survey follows.

Survey Instrument

The text of the two-page questionnaire is shown in Exhibit C–1 along with tabulated average scores for each question, based on a sample size of 39. The questionnaire consisted of two pairs of questions. Questions 1 and 2, both of which have 36 parts, addressed data quality issues; Question 1 asked how important each identified data quality issue was to an effective State criminal history repository, while Question 2 asked how much of a problem each data quality issue was in the respondent's State. An interesting statistic is the difference between the Question 1 criticality rating and the Question 2 problematic rating for each issue. As indicated in Exhibit C–1, this *alignment rating* showed that the greater the alignment score, the more the State felt that the issue, although critical, was not a problem because the State had *aligned* its priorities and activities to ensure that the issue was dealt with and posed no serious problem. The 36 data quality issues contained in Exhibit C–1 addressed a broad range of arrest and disposition reporting and processing issues as well as issues regarding responding to requests for criminal history information.

Question 2 bears an interesting resemblance to the BJS-sponsored data quality surveys.[1] For example, the BJS surveys ask for the percentage of arrests for which the repository received a fingerprint card. The questionnaire in Exhibit C–1 asked how much of a problem the arresting agencies found submission of fingerprint cards, ranging from "very serious" to "not a problem at all." Answers to these two related questions may not be highly correlated;

[1] SEARCH. 1991 (March). *Survey of Criminal History Information Systems.* Washington, DC: U.S. Department of Justice, Office of Justice Programs, Bureau of Justice Statistics. See also SEARCH. 1993 (November). *Survey of Criminal History Information Systems, 1992.* Washington, DC: U.S. Department of Justice, Office of Justice Programs, Bureau of Justice Statistics.

Exhibit C–1 Data Quality Questionnaire

As part of Q.E.D.'s efforts to assess the impact of the Bureau of Justice Statistics (BJS) Criminal History Records Improvement Program and to develop a guide that can help States improve data quality, experts in criminal history systems from all the States are being asked to complete this two-page questionnaire. This questionnaire focuses on State criminal history repositories and how they process information about criminal justice. Processing for purposes unrelated to criminal justice (for example, applicant fingerprint cards) should not be considered unless specified in the question.

The questionnaire should take about 20 minutes to complete.

The answers to many of these questions will be subjective. For example, Question 2 asks respondents to indicate on a scale of 1 to 5 the degree to which various data quality issues are problems in any State. Such questions can be answered on a relative basis by ranking issues according to seriousness, with "1" being the least serious and "5" being the most serious.

Please answer "N/A" for any questions not applicable to your State.

Only tabulated responses from all States will be reported. Individual responses will remain strictly confidential, but the following contact information will expedite resolution of any remaining questions:

Name: _____

Agency: _____

Phone: _____

Direct questions or comments regarding this questionnaire to Tom Rich at Q.E.D., phone 617–225–2510. Return the completed survey by fax (617–225–2625) or mail to:

Tom Rich
Q.E.D., Inc.
432 Columbia St.
Cambridge, MA 02141

Thank you for your cooperation.

Exhibit C–1 Data Quality Questionnaire (continued)

Q1. On a scale of 1 to 5, rate how critical the following data quality issues are to an effective State criminal history repository. (1 = not at all, 3 = fairly critical, 5 = very critical)

Q2. On a scale of 1 to 5, rate how problematic the following data quality issues are in your State. (1 = not a problem, 3 = fairly serious, 5 = very serious)

Issue	Criticality Q1 (N = 39)	Problematic Q2 (N = 39)	Alignment Q1 — Q2
Fingerprint card reporting by local arresting agencies			
Legibility of fingerprints	4.8	2.8	2.0
Degree to which all data elements on card are filled in	4.0	2.5	1.5
Accuracy of data elements on cards	4.6	2.4	2.2
Degree to which cards are submitted to repository	4.8	2.8	2.0
Delays in submitting cards to repository	4.1	2.9	1.2
Suspect identification by repository			
Accuracy of identification/non-identification decision	5.0	1.7	3.3
Delays in making identification/non-identification decision	4.2	2.2	1.9
Delays in rap sheet transmittal to arresting agency	3.5	2.3	1.2
Arrest data entry by repository			
Delays in entering arrest data in criminal history data base	4.6	2.4	2.2
Accuracy of data entry of arrest data	4.9	1.9	3.0
Final disposition reporting process by courts or prosecutors			
Degree to which all data elements on disposition reports are filled in	4.5	2.7	1.8
Degree to which reports indicate whether person was convicted of a felony	4.2	2.5	1.7
Accuracy of data elements on report	4.9	2.5	2.4
Degree to which final dispositions are submitted to repository	4.8	3.1	1.7
Delays in submitting disposition reports to repository	4.3	3.1	1.2
Final disposition data entry by repository			
Degree to which dispositions can be linked to corresponding arrests	4.9	2.4	2.5
Delays in entering disposition data in criminal history data base	4.3	3.0	1.3
Accuracy of data entry of disposition data	4.9	2.0	2.9

Exhibit C–1 Data Quality Questionnaire (continued)

Q1. On a scale of 1 to 5, rate how critical the following data quality issues are to an effective State criminal history repository. (1 = not at all, 3 = fairly critical, 5 = very critical)

Q2. On a scale of 1 to 5, rate how problematic the following data quality issues are in your State. (1 = not a problem, 3 = fairly serious, 5 = very serious)

Issue	Criticality Q1 (N = 39)	Problematic Q2 (N = 39)	Alignment Q1 — Q2
Record request processing by repository			
Delays in responding to requests by criminal justice agencies	4.4	1.7	2.7
Delays in responding to requests by non-criminal justice agencies	3.5	1.6	1.9
Readability of rap sheet	4.4	1.9	2.5
Alien conviction reporting to the Immigration and Naturalization Service (INS)			
Degree to which alien conviction information is reported to INS	3.1	2.3	0.8
Delays in reporting alien conviction information to INS	2.8	2.2	0.6
Accuracy with which offenders are identified as aliens	3.3	2.2	1.1
Reporting to the FBI			
Degree to which fingerprint cards are submitted to the FBI	4.1	1.8	2.3
Delays in submitting fingerprint cards to the FBI	3.8	1.9	1.9
Degree to which final dispositions are submitted to the FBI	3.8	2.7	1.1
Delays in submitting final dispositions to the FBI	3.7	2.6	1.1
Completeness of repository's criminal history data base			
Degree to which data base has all arrests from past 5 years	4.7	2.8	1.9
Degree to which arrests in data base have final dispositions	4.8	3.7	1.1
Degree to which each offender's felony conviction status can be determined	4.4	3.0	1.4
Degree to which all records in master name index are automated	4.5	1.7	2.8
Degree to which all criminal history records from past 5 years are automated	4.4	1.9	2.5
Size of fingerprint card backlog	4.5	2.2	2.3
Size of FBI rap sheet backlog (for States that rely on FBI rap sheets)	3.4	2.1	1.3
Size of disposition report backlog	4.3	2.8	1.5

Exhibit C–1 Data Quality Questionnaire (continued)

Q3. On a scale of 1 to 5, rate how much a major effort in the following areas would improve data quality in your State. (1 = minimal improvement, 3 = moderate improvement, 5 = major improvement)

Q4. On a scale of 1 to 5, rate the degree of effort under way to improve data quality in your State. (1 = no effort, 3 = moderate effort, 5 = major effort under way or completed)

Issue	Importance Q3 (N = 39)	Implementation Q4 (N = 39)	Need Q3 — Q4
Planning			
Conduct a baseline data quality audit	3.3	3.1	0.2
Conduct a repository needs assessment	3.4	3.0	0.4
Conduct a criminal justice information user needs assessment	3.4	3.2	0.2
Develop a long-term data quality improvement plan	4.1	3.8	0.3
Legislation			
Enact legislation requiring reporting of criminal justice data	2.5	2.0	0.5
Training			
Expand training programs in reporting procedures for local arresting agencies	3.8	2.8	1.0
Expand training programs in reporting procedures for prosecutors and courts	3.8	2.5	1.3
Expand training programs for repository staff	2.7	2.4	0.3
Cooperation and commitment			
Improve interagency cooperation and commitment to data quality	4.1	3.7	0.4
Standardizing procedures			
Implement standardized procedures for arrest reporting	3.4	3.0	0.4
Implement standardized procedures for disposition reporting	3.8	3.2	0.6
Implement procedures for improving fingerprint card processing at repository	3.0	2.9	0.1
Implement procedures for improving disposition report processing at repository	3.0	3.0	0.0
Automation			
Upgrade/install new computerized criminal history system	3.4	3.2	0.2
Upgrade/install new automated master name index system	2.5	2.5	0.0
Upgrade/install new AFIS	3.7	3.1	0.6
Become a participant in the Interstate Identification Index (III)	3.0	3.0	0.0
Develop systems to monitor delinquent disposition reports	3.6	2.6	1.0
Upgrade/install new court information system	4.1	3.2	0.9
Upgrade/install new prosecutor information system	3.5	2.4	1.1

Exhibit C–1 Data Quality Questionnaire (continued)

Q3. On a scale of 1 to 5, rate how much a major effort in the following areas would improve data quality in your State. (1 = minimal improvement, 3 = moderate improvement, 5 = major improvement)

Q4. On a scale of 1 to 5, rate the degree of effort under way to improve data quality in your State. (1 = no effort, 3 = moderate effort, 5 = major effort under way or completed)

Issue	Importance Q3 (N = 39)	Implementation Q4 (N = 39)	Need Q3 — Q4
Upgrade/install new information systems at local arresting agencies	3.6	2.4	1.2
Implement live-scan fingerprint systems at local arresting agencies	4.2	2.1	2.1
Electronic data sharing			
Upgrade/install new electronic interface between arresting agencies and repository	3.6	2.3	1.3
Upgrade/install new electronic interface between arresting agencies and prosecutors	3.6	1.8	1.8
Upgrade/install new electronic interface between arresting agencies and courts	3.4	1.8	1.6
Upgrade/install new electronic interface between prosecutors and repository	3.6	1.9	1.7
Upgrade/install new electronic interface between corrections and repository	3.8	2.7	1.1
Upgrade/install new electronic interface between courts and repository	4.3	3.1	1.2
Data entry			
Process fingerprint cards backlogged at repository	3.0	2.7	0.3
Process disposition reports backlogged at repository	3.0	3.0	0.0
Process FBI rap sheets backlogged at repository	2.0	1.7	0.3
Locate and process fingerprint cards not submitted to repository	3.4	2.1	1.3
Locate and process disposition reports not submitted to repository	4.0	3.0	1.0
Enter repository's manual master name index records in automated system	2.1	1.9	0.2
Enter repository's manual criminal history records in automated system	2.8	2.4	0.4

indeed, as one State project coordinator noted, "Eighty-percent reporting may be great to one person, but lousy to another."

In terms of this questionnaire, however, there was less interest in how serious a problem a particular data quality issue was than how serious one issue was *relative* to another issue. Do States see, for example, submission extent of fingerprint cards as a more serious problem than submission extent of disposition reports? The hypothesis here is that when selecting data quality improvement activities, States were motivated by the relative seriousness of various data quality issues.

Questions 3 and 4 in Exhibit C–1 concerned approaches to improving data quality. Each of these questions had 35 parts, each of which addressed a different approach to improving data quality; Question 3 asked how much the various approaches, if implemented, would improve data quality, while Question 4 asked how extensively the activity was actually being implemented in the respondent's State. An interesting statistic is the difference between the Question 3 importance rating and the Question 4 implementation rating. As indicated in Exhibit C–1, this was called the *need* rating: the greater the need score, the more the State felt that the activity was not being implemented at a level commensurate with its importance, and the State needed to ensure that the activity would be so implemented to improve the State's data quality.

Survey Conduct

An initial version of the questionnaire was sent to four States for pilot testing and feedback. All pilot testers commented on the subjective nature of the questionnaire; most had never seen a questionnaire like this before and thought it was an interesting approach. Some commented on how such a questionnaire would be helpful in prioritizing problems and solutions and in assessing whether the activities with high payoffs were being implemented.

After pilot testing the questionnaire was distributed to all the States, 39 of which subsequently completed the questionnaire. Actually, 6 States completed more than one questionnaire, bringing the total number of completed questionnaires to 52. The focus of the questionnaire was on State criminal history repositories and how they processed criminal justice-related information. Appropriately, 45 of the 52 respondents (87 percent) were repository officials. Six of the remaining seven were from State criminal history planning agencies. Of the 45 repository officials who completed the questionnaire, 16 (36 percent) were either repository directors or assistant directors, and 25 (56 percent) were repository section leaders. However, in analyzing the completed questionnaires, it was decided to give equal weight to each State's response. Thus, the responses from States that completed more than one questionnaire were averaged prior to analysis of the responses from all 39 States. In sum, even though 52 questionnaires were returned, for analysis purposes the questionnaire's sample size, or *N,* was 39.

Like all questionnaires, the questionnaire contained in Exhibit C–1 is subject to reliability or consistency concerns. In particular, the question may be asked: How would different individuals in the same State answer each question? Fortunately, the New York State Division of Criminal Justice Services (DCJS) provided at least a partial answer to this question. DCJS provided six completed questionnaires: from three managers in the identification section, from two managers in the data processing section, and from one manager in the data quality unit. The DCJS responses were analyzed, and a standard deviation (a measure of reliability) was computed for each of 142 sets of responses (36 sets apiece for Questions 1 and 2, 35 sets apiece for Questions 3 and 4). As shown in Exhibit C–2, 70 percent of the 142 response sets have a standard deviation of 1.0 or less, suggesting that the questionnaire responses are quite reliable or consistent, at least within one agency in one State.

Data Quality Issues

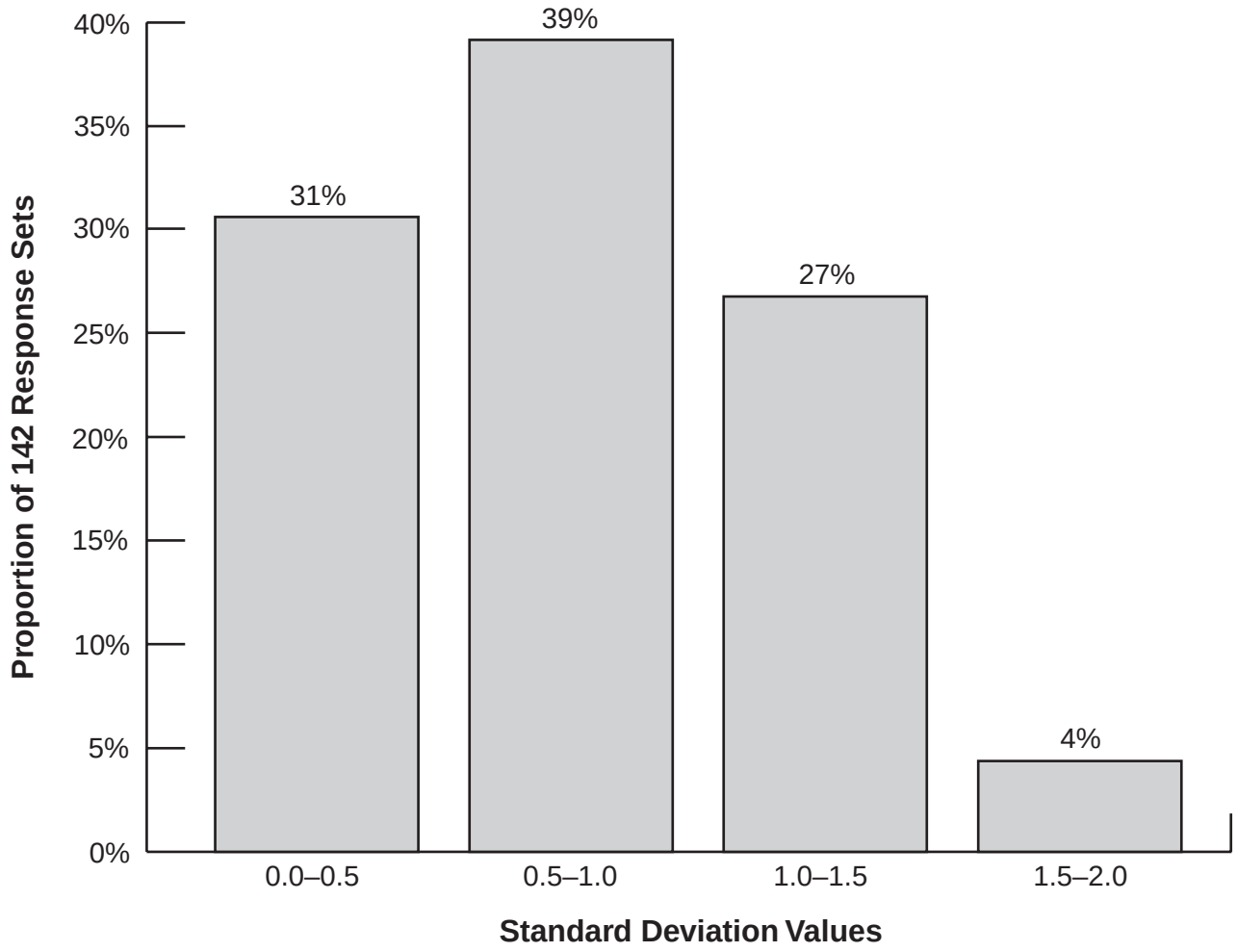
Questions 1 and 2 of the data quality questionnaire addressed data quality issues, with Question 1 focusing on what issues were most critical to an effective State repository and Question 2 focusing on what issues were viewed as problematic in the respondent's State. Answers to both questions ranged from 1 to 5. Average responses to each of the 36 parts of Questions 1 and 2 are noted in Exhibit C–1.

The averages range from 5.0 for accuracy of identification (meaning that all States felt that this issue was very critical to an effective State repository) to 2.8 for delays in reporting alien conviction information to the Immigration and Naturalization Service. One should not conclude that the accuracy of identification (the ident/nonident decision) was the only critical data quality issue because 15 of the 36 data quality issues had an average response of 4.5 or higher. Indeed, many respondents indicated that they were splitting hairs when assigning a 5 to certain data quality issues and a 4 to others.

Question 2 addressed how problematic the States saw the 36 data quality issues. As shown in Exhibit C–1, how frequently the arrests recorded in the data base had final dispositions was seen as the most serious problem, although it was not viewed as a "very serious problem" because its average score was only 3.7 out of 5. In fact, the three most serious problems all concerned disposition reporting. Finally, 9 of the 36 issues had average scores below 2.0, indicating States saw them as very minor problems.

Perhaps of greater significance is the alignment rating in Exhibit C–1. The alignment rating is the difference between the Question 1 criticality rating and the Question 2 problematic rating. Obviously, a low alignment rating is a cause for alarm; however, the two lowest alignment scores—0.6 and 0.7—were for Issues 23 and 22, respectively, which were not considered by the States to be very critical (their criticality ratings were only 2.8 and 3.1, respectively). Clearly, then, the concern should be with those issues that have high criticality ratings and, at the same time, low alignment ratings. The top five

Exhibit C–2 Questionnaire Response Reliability: Based on New York State Responses

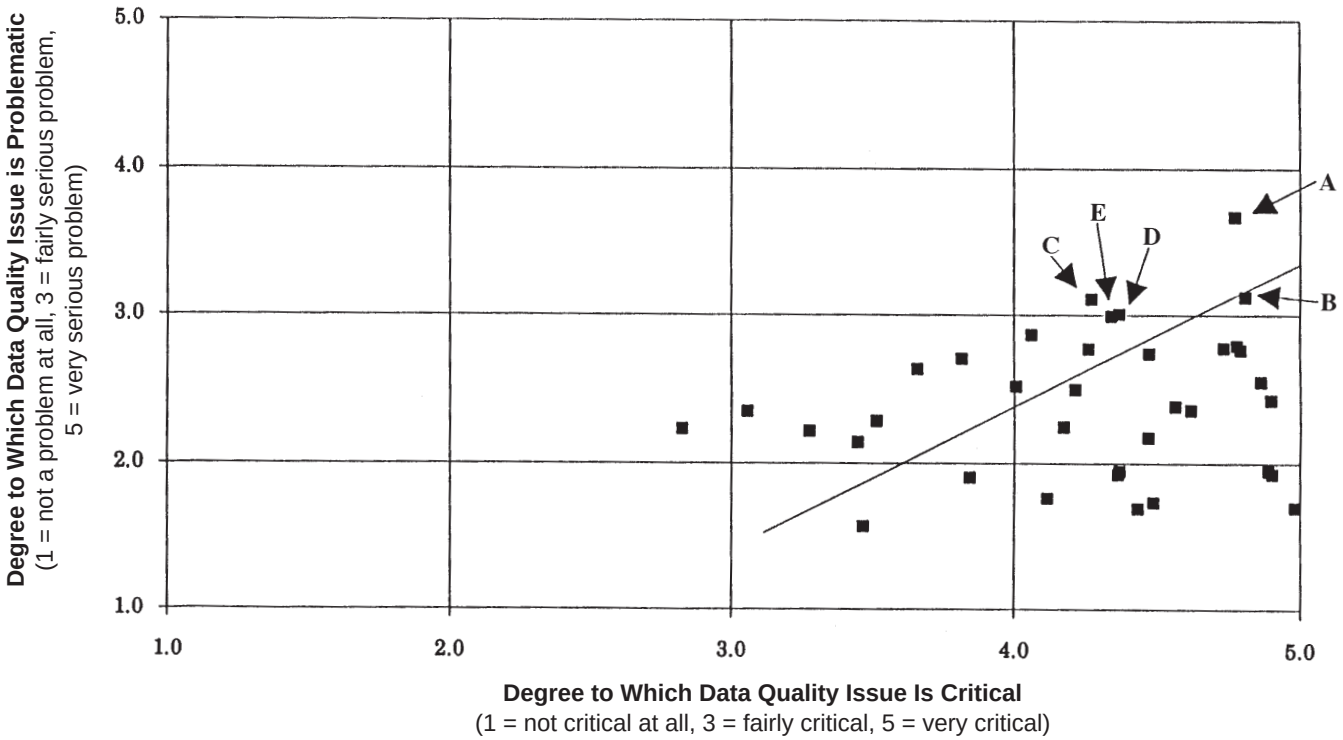


Note: Based on six completed questionnaires submitted by New York State Division of Criminal Justice Services

items in this grouping are issues 30 (degree to which arrests recorded in data base have a final disposition), 14 (degree to which final dispositions are submitted to repository), 15 (delays in submitting disposition reports to repository), 31 (degree to which each offender's felony conviction status can be determined), and 17 (delays in entering disposition data in criminal history data base).

This same grouping can be seen when the criticality and problematic ratings for each data quality issue are jointly plotted (see Exhibit C–3). Another interesting aspect of Exhibit C–3 is the slope of the regression line through the 36 points; the positive slope suggests that the more critical the issue, the more problematic it is for the States.

Exhibit C–3 Data Quality Improvement Activities: Relationship Between Criticality and Problematic Status



Noted Data Quality Issues:

A = Degree to which arrests in data base have a final disposition.
B = Degree to which final dispositions are submitted to repository.
C = Delays in submitting disposition reports to repository.
D = Degree to which each offender's felony status can be determined.
E = Delays in entering disposition data in criminal history data base.
(Refer to data quality issues in Exhibit C–1.)

The preceding analysis lumped all the States together and looked only at averages across all State responses. Of course, the States are in very different situations in terms of their data quality. In light of this, it is not unexpected to see how differently States viewed specific data quality issues. Exhibit C–4 looks in detail at how States viewed three very critical data quality issues: the accuracy of the ident/nonident decision (identification accuracy), how frequently final dispositions were submitted to the repository (submission extent of dispositions), and how frequently arrests recorded in the repository data base had final dispositions (data base completeness). Although all States viewed the identification accuracy issue as very critical to an effective State repository, 27 of 39 States considered it "not a problem at all." On the other hand, four States considered this most basic of all repository functions "a very

Exhibit C–4 Data Quality Issues: State-to-State Variations

a) Accuracy of Ident/Non-Ident Decision

Critical Nature of Data Quality Issue	Problem Nature of Data Quality Issue	# of States Reporting That Issue
5 (Very critical)	5 (Very serious problem)	4
	4	0
	3 (Fairly serious problem)	3
	2	5
	1 (Not a problem)	27
Less than 5 (Not very critical)	—	0
	TOTAL	39

b) Degree to Which Final Dispositions Are Submitted to Repository

Critical Nature of Data Quality Issue	Problem Nature of Data Quality Issue	# of States Reporting That Issue
5 (Very critical)	5 (Very serious problem)	6
	4	5
	3 (Fairly serious problem)	14
	2	8
	1 (Not a problem)	2
Less than 5 (Not very critical)	—	4
	TOTAL	39

c) Degree to Which Arrests in Data Base Have a Final Disposition

Critical Nature of Data Quality Issue	Problem Status of Data Quality Issue	# of States Reporting That Issue
5 (Very critical)	5 (Very serious problem)	12
	4	2
	3 (Fairly serious problem)	15
	2	2
	1 (Not a problem)	2
Less than 5 (Not very critical)	—	5
	TOTAL	39

serious problem." Although 35 of 39 States viewed the submission extent of dispositions issue as very critical to an effective State repository, the degree to which it was considered a problem varied widely. At one extreme, 6 of the 35 States viewed it as "a very serious problem" and, at the other extreme, 2 of the 35 States viewed it as "not a problem at all." Finally, while 34 of 39 States viewed the data base completeness issue as very critical to an effective State repository, 12 considered it "a very serious problem" within their State.

Another point of interest is whether questionnaire respondents saw their States as having one or several overriding data quality problems. That is, did the States see themselves as having one weakest link in their data quality chains or several weak links? If a respondent saw her or his State as having a single weakest link, then the corresponding issue could have been assigned a 4 or 5, with every other issue assigned a 2 or 3. On the other hand, if a respondent saw her or his State as having several weak links, then several different issues could have been assigned a 5, and lower problematic ratings could have gone to the remaining issues. On the basis of these criteria, 10 of the 39 States had a single weakest link; the remaining 29 States had multiple weak links (that is, more than one data quality issue had the highest problematic rating given). Across all States, 5.8 is the average number of weak links.

Data Quality Improvement Activities

Questions 3 and 4 of the data quality questionnaire addressed data quality improvement activities. Question 3 focused on which activities States felt would, if implemented, yield significant improvements in data quality; Question 4 focused on which activities were being implemented. The questionnaire included 35 different data quality improvement activities, with States ranking each activity on a scale of 1 to 5. For Question 3, a 1 meant the activity would yield minimal improvement and a 5 meant the activity would yield major improvement; for Question 4, a 1 meant the activity was not currently being implemented and a 5 meant a major effort was under way to implement the activity or the activity had been completed. The average responses for each of the 35 parts to Questions 3 and 4 are shown in Exhibit C–1.

Looking at the average responses to Question 3, the five activities that States saw as yielding the most improvement in data quality were activities 28 (upgrade/install new electronic interface between courts and repository), 22 (implement live-scan fingerprint systems at local arresting agencies), 9 (improve interagency cooperation and commitment to data quality), 4 (develop a long-term data quality improvement plan), and 19 (upgrade/install new court information system). That an electronic interface between courts and the repository heads the list should not be surprising in light of the responses to Question 2. As noted earlier, the three most serious data quality problems all concerned disposition reporting.

In terms of which activities were being implemented (see Question 4 in Exhibit C–1), the two activities that appear to have been implemented in a major way most frequently were activities 4 (develop a long-term data quality improvement plan) and 9 (improve interagency cooperation and commitment to data quality). This is not surprising in light of the requirements of the BJA/CJRI Program (convening a multiagency task force and developing a data quality improvement plan).

Were States implementing what they considered to be the activities that could yield the greatest improvement in data quality? In the case of the two activities mentioned above, yes; that is, while activities 4 and 9 had an equally high importance rating (4.1), they had at the same time low need ratings (0.3 and 0.4). On the other hand, there were several highly rated activities that, at the same time, had high need ratings. The top four items that fell into this grouping were activities 22 (implement live-scan fingerprint systems at local arresting agencies), 24 (upgrade/install new electronic interface between arresting agencies and prosecutors), 26 (upgrade/install new electronic interface between prosecutors and repository), and 25 (upgrade/install new electronic interface between arresting agencies and courts). Not surprisingly, these activities are all in the high-cost, automation-related area. Again, this same grouping can be seen when the importance and implementation ratings for each data quality improvement activity are jointly plotted (see Exhibit C–5). A reassuring aspect of Exhibit C–5 is the slope of the regression line through the 35 points; the positive slope suggests that the more important the activity, the more likely it was to be implemented.

Exhibit C–6 looks at variations among States for two highly rated activities: court repository interfaces and live-scan fingerprinting systems. Although 27 of 39 States felt that a court-repository interface would yield a major improvement in data quality, only 13 of these 27 States had major efforts in this area. On the other hand, 8 of these 27 States had no effort under way on court-repository interfaces. Clearly, these States will be focusing on such projects in the future. In regard to live-scan fingerprinting systems, it is the activity with the greatest potential but implemented least often. In fact, 11 of the 20 States that saw live-scan systems as yielding major improvements in data quality had no effort under way in that area, no doubt because of the high costs involved.

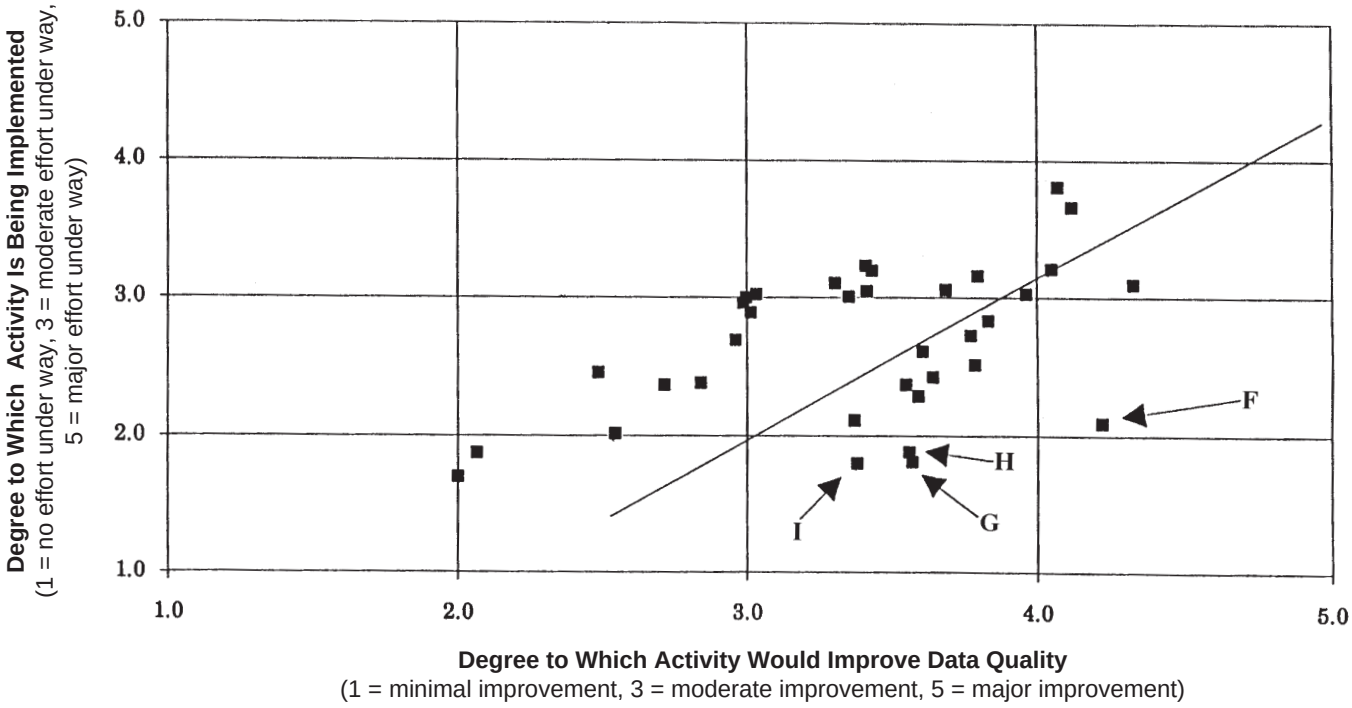
Selection of Systemic Study States

This data quality questionnaire provided input essential to the selection of States for the focused systemic study. As discussed in Chapter 2, it was agreed that two of the four criteria that should be taken into consideration when selecting sites for the systemic study were:

- The site should be implementing strategies that are considered to be very important from the perspective of improving data quality.
- The site should be implementing strategies that are considered to be of great interest because a significant number of other States are contemplating their implementation.

The first criterion was embodied in the importance rating, and the second criterion was embodied in the need rating in the data quality survey. These two criteria, together with the other two criteria identified in Chapter 2, were analyzed to obtain the four States for the systemic study.

Exhibit C–5 Data Quality Improvement Activities: Relationship Between Importance and Implementation Status



Noted Data Quality Issues:

F = Implement live-scan fingerprint systems at local arresting agencies.

G = Upgrade/install new electronic interface between arresting agencies and prosecutors.

H = Upgrade/install new electronic interface between prosecutors and repository.

I = Upgrade/install new electronic interface between arresting agencies and courts.

(Refer to data quality issues in Exhibit C–1.)

Exhibit C–6 Data Quality Improvement Activities: State-to-State Variations

a) Upgrade/install new electronic interface between courts and repository

Degree to Which Activity Would Improve Data Quality	Degree to Which Activity Is Being Implemented	Number of States
5 (Major Improvement)	5 (Major effort under way)	13
	4	0
	3 (Moderate effort under way)	3
	2	3
	1 (No effort under way)	8
Less than 5 (Less than major improvement)	—	12
	TOTAL	39

b) Implement live-scan fingerprint systems at local arresting agencies

Degree to Which Activity Would Improve Data Quality	Degree to Which Activity Is Being Implemented	Number of States
5 (Major Improvement)	5 (Major effort under way)	3
	4	3
	3 (Moderate effort under way)	1
	2	2
	1 (No effort under way)	11
Less than 5 (Less than major improvement)	—	19
	TOTAL	39

Sources for Further Information

Bureau of Justice Assistance
810 Seventh Street NW.
Washington, DC 20531

U.S. Department of Justice Response Center
1–800–421–6770 or 202–307–1480

BJA Clearinghouse
P.O. Box 6000
Rockville, MD 20849–6000
1–800–688–4252

Bureau of Justice Assistance Information

General Information

Callers may contact the U.S. Department of Justice Response Center for general information or specific needs, such as assistance in submitting grants applications and information on training. To contact the Response Center, call 1-800–421–6770 or write to 1100 Vermont Avenue NW., Washington, DC 20005.

Indepth Information

For more indepth information about BJA, its programs, and its funding opportunities, requesters can call the BJA Clearinghouse. The BJA Clearinghouse, a component of the National Criminal Justice Reference Service (NCJRS), shares BJA program information with State and local agencies and community groups across the country. Information specialists are available to provide reference and referral services, publication distribution, participation and support for conferences, and other networking and outreach activities. The Clearinghouse can be reached by:

- ❒ **Mail**
  P.O. Box 6000
  Rockville, MD 20849–6000

- ❒ **Visit**
  2277 Research Boulevard
  Rockville, MD 20850

- ❒ **Telephone**
  1–800–688–4252
  Monday through Friday
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- ❒ **Fax**
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- ❒ **NCJRS World Wide Web**
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