State and Federal Corrections Information Systems

An Inventory of Data Elements and an Assessment of Reporting Capabilities

A joint project:

Association of State Correctional Administrators
Corrections Program Office, OJP
Bureau of Justice Statistics
National Institute of Justice

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Executive summary

The Association of State Correctional Administrators is engaged in a long-term effort to improve the quality, scope, and comparability of corrections data. One of its objectives is to develop a set of performance indicators that can be used to describe, measure, and compare management outcomes among departments of corrections. To meet this objective, ASCA has sponsored and supported projects to examine the information and data needed for such an enterprise. This report, *State and Federal Corrections Information Systems*, is the third in a series that has addressed the research capabilities of departments of corrections and identified some of the performance indicators they use.

At the direction of ASCA's State-Federal Subcommittee and an Advisory Committee of other ASCA members and corrections researchers, this project developed and conducted an inventory and assessment of more than 200 data elements in State and Federal corrections information systems. The Inventory is built around six priority information areas: offender profile, internal order, program effectiveness, public safety, recidivism, and operational costs (Table 1). The Inventory addresses two questions: What data on most adult sentenced prisoners do departments collect and maintain in electronic form in their information systems? and To what extent can departments use these data to respond to requests for statistical information about groups of offenders?

In answer to the first question, most of the 52 departments of corrections collect and maintain a common core of data elements that measure many key events in and outcomes of the corrections system. These data elements can be used to describe and profile offenders, to measure recidivism in terms of returns to prison, and to measure aspects of public safety related to offender registry requirements. However, not all departments define and collect these data equally, and 12 departments do not collect any data about released offenders. Moreover, in several other important areas of corrections, including internal order, program effectiveness, and operational costs, departments do not maintain core sets of data.

Most of the data elements in the survey were offender-based data elements and nearly half make up the common core. Most of the core data elements are related to offenders' characteristics, offenses, sentences, how long they can expect to stay in prison, their security risk, and where they were confined. Additional data elements describe release requirements, offenders' behaviors after release, criminal justice system responses to the behaviors, and returns to prison for violations of conditions of supervision.

Corrections departments have encountered obstacles to using their information systems to generate statistical information about groups of offenders. Staffing and software present severe or critical obstacles in up to 26 departments, and they provide moderate obstacles in up to 19 others. Conversely, hardware presents few or no obstacles for most (39) departments. Data availability and quality are severe or critical obstacles in 12 departments and moderate obstacles in 22 others.

Table 1. Availability of corrections data in the six high-priority areas		
Priority information area	Data about offenders, events, and outcomes	
	In the common core	Not in the common core
Profiling offenders		
Who are they?	Demographic characteristics	Family characteristics
		Socio-economic status
What have they done?		
(Offenses and criminal history)	Conviction offenses	Criminal history
		Criminal incident
Where are they?		
(Sentences)	Sentences imposed	
(Commitments)	Current commitments	
	Expected time to be served	
(Assessments)	Risk assessment	Needs assessments
	Classification decisions	
	Confinement characteristics	
(Releases)	Post-commitment movements	
	Good time, other adjustments	
	Releases from custody	
Internal order		Misconduct and infractions
		Responses to misconduct
		Legal proceedings
Program effectiveness		Program participation
		Drug testing
		Medical testing
Public safety	Offender registry	
		Crimes committed after release
		Information about victims
		Employment and residence
Recidivism	Violations while on release	
	Responses to violations and returns to prison	
Operational costs		Program management
		Medical services
		Facility management

Few departments maintain all of the core data elements in electronic form for the vast majority of offenders. Six departments rate 88% or above out of a possible 100% on these criteria, while 11 departments rate less than 75%.

However, many departments may be able to construct critical measures of corrections outcomes that rely on smaller sets of data. For example, if recidivism is measured by the number of offenders who return to prison, then as many as 44 departments may be able to provide electronic data on this issue. These departments have some essential elements of a measure of recidivism (including the date of release from prison, date and type of recommitment, and type of offense), maintain online or archive records of prior commitments into and releases from prison, and can link these records electronically.

The State-Federal Subcommittee is in a position to identify and define several corrections performance indicators and to ask the members of ASCA to provide data on them. This Inventory suggests that many members can do so. The Subcommittee should also ask its members to provide explanations of how their indicators differ from the Subcommittee's. Ultimately, the Subcommittee should define a set of indicators based on its own priorities for measuring corrections performance. This may involve expanding data collection beyond what is now common.

ASCA's objectives include developing performance indicators

For several years, ASCA has been involved in an effort to develop a research agenda for State and Federal departments of corrections. This agenda is designed to address many important topics in corrections research, such as legislative impact assessments, prison population projections, and population and capacity constraints. The underlying purpose, however, is to foster comparative research. A major impediment to achieving this goal is the absence of comparable corrections data.

ASCA's first step was the release of the Research Subcommittee's report, "Cross-Jurisdictional Survey of Correctional Research Offices." This report profiled existing research capabilities in the 40 State corrections departments that responded to the survey. More than half of the respondents were conducting collaborative research, and most respondents (86%) expressed an interest in participating in cross-jurisdictional, collaborative research efforts.

At the same time, the State-Federal Subcommittee initiated two related efforts: identifying performance indicators already in use by corrections departments and determining whether departments maintain a common core of data elements.

In the first project, the State-Federal Subcommittee and the National Institute of Corrections addressed the question of how correctional administrators want to measure performance. The project report, "Reporting on Success: Factors in Measuring Performance," was prepared by Ronald L. Powell and submitted in January 1997. It suggests several ways of developing performance indicators and through examples and quotes from respondents, observes that these indicators must reflect public accountability and public safety. The report concludes that ASCA should define the key corrections performance issues and then develop indicators to measure them. The report lists many of the performance measures that the 38 responding departments provided, and it points to the lack of uniform, common data as a major impediment to reporting on performance.

The second effort is the Inventory of State and Federal Corrections Information Systems, sponsored jointly by the Bureau of Justice Statistics, the National Institute of Justice, and the Corrections Program Office, which led to this report.

The Inventory looks for commonly collected data in important information areas

The Inventory stems from ASCA's concerns about the diverse quality and scope of data elements in corrections information systems. The Inventory is designed to determine whether there is a common core of data elements that most or all departments collect and that can form the nucleus of an effort to improve comparisons among departments.

The State-Federal Subcommittee, other members of ASCA, other corrections officials, corrections researchers, and representatives of the sponsoring agencies identified six high-priority information areas to be inventoried: offender profile, internal order, program effectiveness, public safety, recidivism, and operational costs. Many additional issues — for example, prison crowding, confinement conditions, substance abuse programs, and security — fall within the scope of these six areas.

In its survey, the Inventory asked what data elements the departments' information systems include, whether the data are maintained electronically, and the scope of coverage of offenders. A survey of the obstacles encountered in using data to provide statistical information found problems that management information systems confront. Telephone interviews of key information officers provided important background about systems architecture and capabilities, especially their ability to link and share data electronically.

Officials in each of the 50 departments of corrections in the States, the District of Columbia, and the Federal Bureau of Prisons were contacted for each survey and the telephone interviews. All 52 departments responded to the Inventory and telephone interviews, and 51 returned the obstacles survey.

Corrections departments collect a common core of data elements

In the information systems they use to manage adult, sentenced prisoners, most departments of corrections maintain a common core of data elements. These elements are generally maintained electronically for the large majority of offenders, and they relate primarily to the areas of profiling offenders and, to a lesser extent, public safety and recidivism (Table 1). The majority of core data elements describe who enters prison; what they have done; why they entered prison; how long they can expect to stay there; their risk, needs, and confinement characteristics; their post-commitment movements; and how and to whom they are released from prison.

The common core also measures the behaviors of offenders after release, including violations of the conditions of their supervision and whether they returned to prison. Twelve departments do not collect such data; instead, another department (for example, probation or parole) or another information system does.

In other areas there are fewer, if any, core data elements. For example, there is relatively little common information regarding program participation, drug testing results, medical services, misconduct, infractions, responses to misconduct, the crimes and victims of crimes committed by offenders on release in the community, or about offenders' connections with mainstream institutions, such as labor markets.

Departments most commonly collect data about demographic characteristics
Offender profiles describe offenders' demographic characteristics and give an indication of their ties to mainstream institutions outside of prison. These institutions include families, schools, the military, and labor markets. The 11 data elements related to the demographic characteristics of offenders are more commonly collected than the other elements in the offender profile. Data maintained electronically for more than 75% of offenders are characterized as high availability. Fifty-one of 52 departments report that they maintain high-availability data elements in the areas of race and sex, and 50 do so for an offender's date of birth. Only 29 maintain high-availability data about offenders' education, 23 about their military service, and 17 about employment prior to incarceration. While 35 departments maintain high-availability data on the marital status of offenders, only 16 maintain data on the number of offenders' dependents.

Departments commonly collect conviction, sentencing, and commitment data
Data on conviction offenses, sentencing decisions, and assessment, classification, and confinement decisions also belong to the offender profile. In general, corrections departments maintain data in these areas with high availability.

All departments maintain data elements electronically for the type and date of commitment to prison, and 51 maintain data on length of sentences. At least 49 maintain electronically several detailed data elements that describe offenders' conviction offenses and their expected dates of release from prison. At least 46 departments also maintain high-availability data elements for the total length of sentences, dates of sentences imposed, and whether sentences are imposed concurrently or consecutively.

Departments maintain more data elements related to criminal history than to the particular crime for which an offender was convicted. Thirty-one departments can report electronically on the criminal justice status of most offenders entering prison, and 25 can do so for an offender's prior arrests, convictions, and the severity of these offenses. Only 21 departments maintain high-availability data on the date of a particular incident; 13 can report on whether a weapon was involved; and 6 can describe the location of the incident and the number of victims involved. However, many departments maintain data on criminal incidents in paper form. For example, 34 have some data elements on paper that describe criminal incidents.

Most departments (between 37 and 48) collect data that describe offenders' needs, their security classifications, risk assessments, and units in which they are housed. Moreover, most departments that maintain these data elements do so electronically. Only 21 departments report the results of drug tests, and only 12 of these maintain the data electronically.

Most departments can describe prisoner release information, but fewer maintain data elements on programs and internal security
Departments commonly collect data elements regarding post-commitment movements (including transfers and releases from prison), changes in expected release dates (such as good-time or other adjustments), and offender registry. For example, all 52 maintain high-availability data on transfers and methods of release from prison, 41 maintain such data on good-time adjustments, and 32 maintain data about victim notification requirements. Other data elements related to movements and releases are also collected by a majority of depart-ments. These include the reasons for movements, reasons for changes in sentences or good time, and time served in custody.

Data elements that pertain to program participation and outcomes, drug testing, and medical treatment are less commonly collected and maintained in electronic format than those describing offender movements. For example, while up to 42 departments collect data about program participation, only 22 to 32 collect that information in electronic form; the others either do not collect these data elements or collect them in paper form.

Similarly, data elements that describe misconduct and infractions are collected by a majority of departments but often in paper form. For example, while 47 departments maintain data about the most recent instance of misconduct, only 33 maintain them electronically and for a majority of offenders. Even fewer departments maintain data describing the event: between 20 and 24 depart-ments do not indicate whether someone was injured or if drugs or alcohol were involved.

Some departments do not collect data on public safety or recidivism
Data elements about public safety are beyond the scope of 14 information systems, and 12 departments do not collect any data about the behavior of offenders after they are released from prison. Most of the 40 departments that do gather data on recidivism focus on data elements that describe the nature of the violation and the criminal justice response. For example, nearly all of the 40 departments can describe the type of supervision and reason for termination, and between 34 and 35 maintain the data electronically. However, if offenders commit crimes while on release, relatively few of the departments can describe the nature of the crime or the victims. Between 17 and 27 departments do not collect such data, and the few that do maintain most of them on paper.

Of the 40 departments that collect data about released offenders, most do not collect data about whether offenders are employed, whether their employers were notified of their status, or where they live.

Limited measures of recidivism may be relatively widely collected
Despite the limitations of the scope of the information systems in 12 departments, many departments can provide some data on recidivism measured as a return to prison. Many departments maintain archived records of offenders' commitments to prison and the reasons for those commitments, and many can link the records of offenders who return to prison repeatedly. These departments may be able to count the number of times a person returns to prison and the length of time between each stay. Fewer departments are able to provide data on recidivism as measured by rearrest or reconviction.

Staffing and software pose obstacles to providing statistical information

Corrections departments encounter several barriers to using data to produce statistical information about offenders. These include the availability of data in electronic form; the staffing, software, and hardware available to the information system; and the institutional and legal restrictions on the information system.

A few departments maintain all or most core data elements electronically
No department maintains all the data elements about offenders in electronic format. However, several maintain all or most of the core data elements electronically for the majority of offenders. Such departments score at or near 100% on an availability index. For example, Colorado's department of corrections scored 100% for all core data elements, and six other State departments scored at or over 80% (Table 2a). A third tier of departments rates fairly high on the availability index for the core data. These seven departments score above 70% in at least three areas but not below 60% in any area. As for profiles of offenders, nine departments received a perfect score for the demographics data elements and two did so for the data on commitment to prison. There were two perfect availability scores in the area of public safety; and eight in recidivism.

Table 2a. Percent of full availability of core data elements from departments that collect information on released offenders

Department	Demographics	Offenses and commitments	Releases and public safety	Recidivism and violations under supervision
Alabama	79%	94%	92%	95%
Alaska	52	25	19	14
Arizona	100	98	96	100
Arkansas	52	67	60	52
California	82	74	48	79
Colorado	100	100	100	100
Delaware	73	55	59	39
District of Columbia	73	46	24	0
Florida	82	98	80	95
Idaho	73	54	43	48
Illinois	91	79	73	95
Indiana	85	77	75	77
Iowa	100	95	92	100
Kansas	82	76	47	53
Kentucky	48	80	65	85
Louisiana	67	82	57	77
Massachusetts	94	71	81	35
Michigan	45	55	67	55
Minnesota	58	62	45	44
Mississippi	48	74	49	50
Missouri	100	98	88	95
Montana	100	74	39	100
Nebraska	73	47	48	45
New Mexico	64	43	27	50
New York	79	67	60	100
North Carolina	100	100	96	100
North Dakota	91	67	60	68
Ohio	61	82	100	59
Oklahoma	76	71	80	71
Oregon	70	83	56	64
South Carolina	97	84	91	38
South Dakota	79	83	80	55
Tennessee	82	91	56	100
Texas	82	89	92	94
Utah	88	93	57	100
Vermont	61	58	33	27
Virginia	82	75	65	55
Washington	91	81	76	44
Wisconsin	64	75	77	68
Wyoming	94	65	68	33

The Federal Bureau of Prisons scores above 85% in the three areas for which it maintains data (Table 2b). Several other departments (Georgia, New Hampshire and Rhode Island) score above 75% in these areas.

Table 2b. Percent of full availability of core data elements from departments that do not collect information on released offenders				
Department	Demographics	Offenses and commitments	Releases and public safety	Recidivism and violations under supervision
Federal system	100%	94%	89%	N/A
Connecticut	64	82	48	N/A
Georgia	76	87	89	N/A
Hawaii	82	69	36	N/A
Maine	85	67	76	N/A
Maryland	48	68	59	N/A
Nevada	82	71	59	N/A
New Hampshire	94	77	79	N/A
New Jersey	88	80	69	N/A
Pennsylvania	100	72	63	N/A
Rhode Island	100	78	89	N/A
West Virginia	97	58	61	N/A

Most departments have some capacity to link and retrieve archived data electronically

Most departments archive records of repeated events, such as commitments to prison, behavior in custody, and releases from custody. Of these departments, most are able to link them and to retrieve them electronically. For example, 46 departments maintain an online history of an offender's commitments into prison. Thirty-one also archive these records. Of the 31 that archive the records, 28 can retrieve and link them electronically.

Lack of experienced programming staff is a severe problem

Departments face several other obstacles to providing comparable statistical information about offenders, the most severe of which arise from staffing and software. Twenty-eight departments report critical or very severe staffing problems, including a lack of experienced programmers and a lack of resources to train them. In addition, 14 reported critical or severe software problems, such as poor query capabilities. Staffing and software problems are inter-related. Having sophisticated statistical software without enough trained staff to operate it does not eliminate the software obstacles. Similarly, having staff but not providing them with adequate software means that customized programs may have to be written for all new queries.

The reported difficulties related to staffing and software suggest that lack of adequate resources for operating a corrections information system may be the major obstacle to overcome.

Table 3. Severity of problems in departments' information systems

	Number of departments with problems described as—				
Problem area	Critical	Very severe	Moderate	Very little	None
Staffing	8	20	18	6	0
Data	4	8	22	16	2
Software	2	12	20	13	5
Legislative and institutional	0	5	25	19	3
Hardware	0	1	11	26	14

Eight departments rate staffing problems as "critical" (Table 3). The 14 depart-ments that rate software factors as "very severe" to "critical" problems focus on the ability to integrate data, data file structure, and the capability of statistical utilities and packages. Hardware is the least severe difficulty for most depart-ments, and no department rates it as critical. Data storage, system reliability, and the ability to access historical data are some of the obstacles included in the hardware category.

ASCA should set priorities for measuring corrections performance

The State-Federal Subcommittee should consider taking several steps in devel-oping comparative corrections data: It should ask departments that are lacking information in the core areas to expand their data collection. It should develop priorities for expanding data collections into new areas. And it should proceed with the goal of developing common corrections performance indicators by defining several indicators and requesting departments to provide measures of them.

Getting all departments to provide some core data elements
The Subcommittee should consider asking all departments that do not maintain core data elements electronically for all or most offenders to augment their infor-mation systems to include them. The common core contains about 100 data elements, and these represent a reasonable starting point for expanding the collection of data.

Developing priorities for expanding core data elements
In the long run, the Subcommittee should develop priorities for expanding the collection of data elements. It is not immediately obvious, however, which of the elements not commonly collected should have the highest priority. For example, data on the socio-economic status of offenders, family relations of offenders, and criminal history of offenders (Table 1) are not commonly collected, but each of these data sets can be used to construct important measures of corrections performance. For example, data about criminal history may be important for understanding recidivism, while data about family relations may suggest how successfully offenders can be reintegrated into society. To

decide which of these noncore areas into which to expand, the Subcommittee should develop more specific priorities about how it wants to measure corrections performance.

Developing performance indicators
The Subcommittee should identify and define several corrections performance indicators and then ask the members of ASCA to provide it with data on them. In providing data, the members of ASCA should explain how their measures of performance differ from those defined by the Subcommittee. The Subcommittee should begin with indicators that are based on the commonly collected data elements.

Eventually, the Subcommittee should expand the number of indicators, as determined by its priorities for performance measurement.