Chapter Five
Child Nutrition Programs

State CNP directors were surveyed for this study and asked about the characteristics of data systems used to maintain child nutrition program data at the State level. CNP directors often reside within State Departments of Education and they oversee the CACFP, SFSP, NSLP, and SBP.

A particular concern, for a record linkage project, is whether or not participant-level data are maintained by the State. Prior experience suggested that participant-level data for the child nutrition programs are generally not maintained at the State level. These data are maintained at benefit delivery sites (schools, childcare centers, summer food service sites), with state-level agencies receiving only aggregate data for participant counts and meal counts. This prior experience was confirmed by the findings from this survey.

CACFP and SFSP Program Data

CNP directors were asked about types of data maintained at the State level, hardware and software used to maintain program data, and methods of data delivery from local agencies to the State agency.

Nearly all of the 26 State CNP directors included in the survey maintain an electronic database of CACFP and SFSP sponsors; 22 CNP directors maintain electronic databases of CACFP and SFSP sites; only one CNP director reported that participant data are maintained by the State (figure 9). Table 12 shows that most CNP directors maintain CACFP and SFSP data with Microsoft-Access or Microsoft-Excel on PC servers; only a few States store CACFP and SFSP program data on mainframe computers.

Fewer than half of the CNP directors surveyed indicated that they have a system allowing CACFP and SFSP sponsors to electronically submit applications and/or claims data (figure 10). But more than two-thirds of CNP directors indicated that they are planning system changes or implementation of new technology for the CACFP or SFSP program data within the next two years (figure 11).

Figure 9—Electronic databases maintained by State CNP director
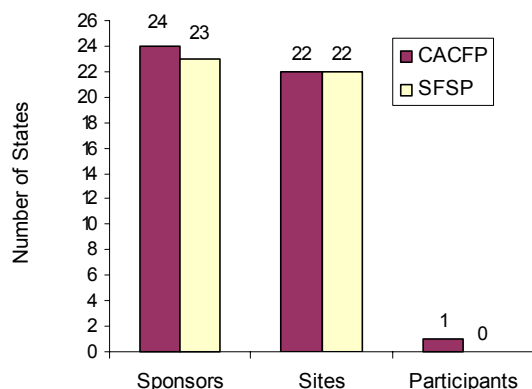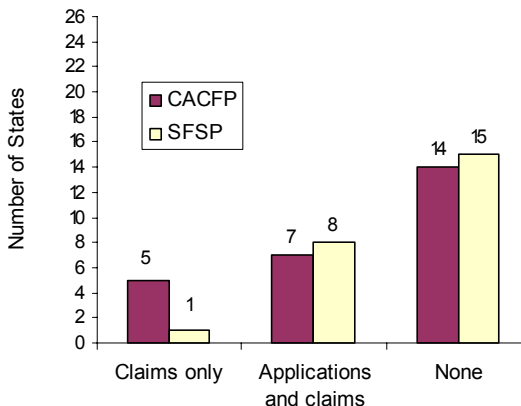

Figure 10—Electronic submission of applications and claims data to State agencies

Note: CACFP information is from 26 States. SFSP information is from 24 States: Colorado did not provide information about the SFSP and the CN director does not administer the SFSP in Michigan.

Table 12—Hardware and software systems used by State agencies to maintain CACFP and SFSP program data
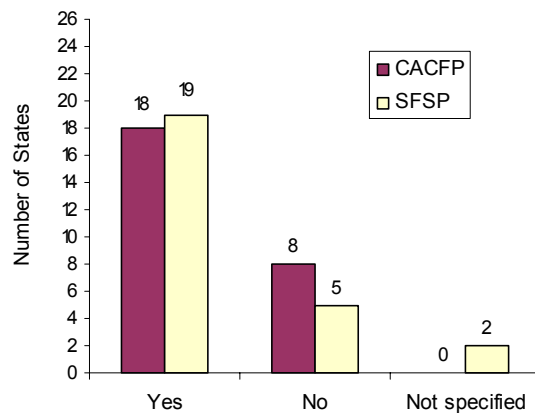
	Child and Adult Care Food Program		Summer Food Service Program[1]	
	Number States	Percent	Number States	Percent
Type of computer used for databases				
Single PC	1	4.0%	4	17.0%
PC server	20	83.0	18	78.0
Mainframe	5	21.0	4	17.0
Other	1	4.0	1	4.0
Type of software used for databases				
MS-Word	1	4.0	5	22.0
WordPerfect	4	17.0	3	13.0
MS-Excel	7	29.0	7	30.0
MS-Access	12	50.0	13	57.0
FoxPro	1	4.0	1	4.0
Paradox	1	4.0	–	–
Rbase	1	4.0	–	–
Oracle	2	8.0	2	9.0
SQL	8	33.0	6	26.0
Custom mainframe system	4	17.0	3	13.0
Other	5	21.0	4	17.0

– Zero States in category.
1 Colorado did not provide information about the SFSP and the CN director does not administer the SFSP in Michigan.

Source: *Survey of Food Assistance Information Systems*, 2002.

Figure 11—Planned system changes or implementation of new technology in next 2 years

Note: CACFP information is from 26 States; SFSP information is from 24 States. Colorado did not provide information about the SFSP and the CN director does not administer the SFSP in Michigan.

NSLP and SBP Program Data

The 26 States included in the *Survey of Food Assistance Information Systems* contain 72 percent of public school districts in the United States, and 80 percent of public school students. This sample of States has the same percentage of students eligible for free- and reduced-price lunch as the overall United States (39.2 versus 38.7 percent).[46]

Consistent with the overall goals of the survey, CNP directors were asked about state-level databases with information on NSLP/SBP participants. CNP directors were also asked about methods (including record linkage) of establishing direct certification of NSLP eligibility, electronic submission of claims data to the State, and the prevalence of point-of-sale (POS) systems in districts and schools in their State.

CNP directors in all 26 States reported that direct certification is used in their State. Within each State, survey responses from CN directors generally confirmed responses provided by FSP directors; that data was presented in Chapter Three and is not repeated here.

All CNP directors reported that at least some school districts in their State use POS systems. Point-of-sale systems are cashier/check-out systems used in school cafeterias; these systems capture information about actual participation in NSLP/SBP by individual students. Nearly half (12 of 26) of CNP directors, however, were unable to provide data on the prevalence of POS systems in their State (i.e., the numbers of districts and schools using POS). The remaining CNP directors provided estimates of POS prevalence in their State, but only one CNP director maintained a list of SFAs using POS systems. (The estimates of POS prevalence are shown in appendix table A-10).

Electronic submission of meal claims is more prevalent for the school nutrition programs than for CACFP and SFSP. More than half of CN directors (17 of 26) reported that they have a system in place to accept electronic submission of meal claims; 15 States use web-based forms and two States use other methods of file transfer (responses are shown in appendix table A-10).

The remainder of this section provides information about the types of student data maintained at the state-level.
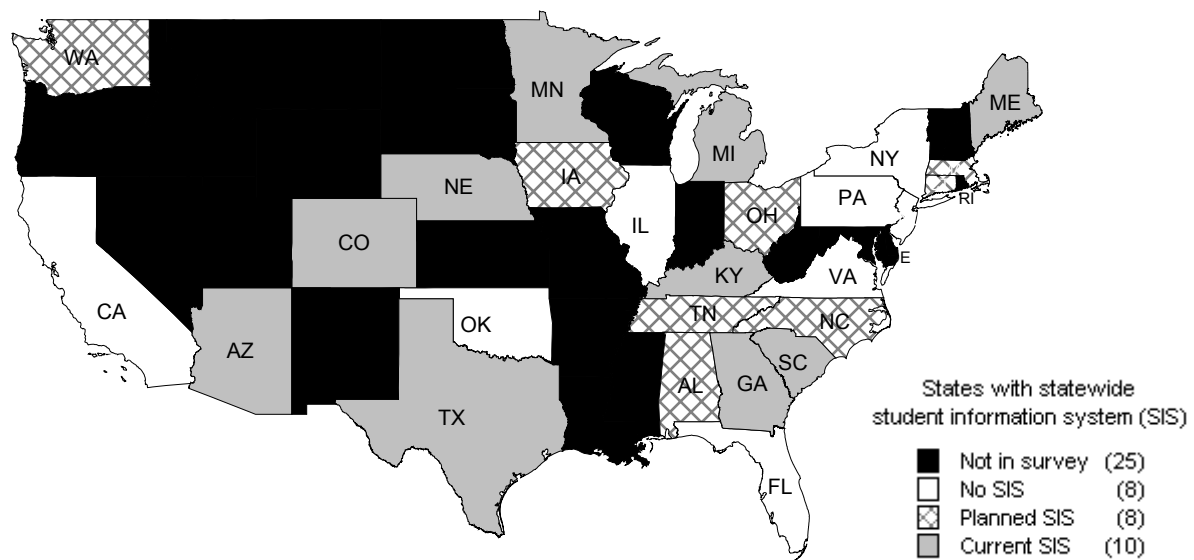
Statewide Student Information Systems

In some States, information about NSLP participation is maintained at the State level within Department of Education statewide student information systems (SIS). Only 10 of the 26 CNP directors surveyed reported a statewide SIS in their State. Of the remainder, 8 States expect to implement a statewide SIS within the next five years. Figure 12 shows the States with current and planned student information systems. Five States without a current statewide SIS nonetheless report that they have access to records identifying students certified for free or reduced-price meals.

Table 13 shows some of the characteristics of current statewide SIS. Current systems are largely consistent in terms of software and database structure: 8 of the 10 current systems have a relational

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[46] These percents were calculated from NCES (2002); the number of students eligible for free- and reduced price lunch was not reported by five States overall, and one State in the 26-State sample. Appendix table A-10 shows the numbers of districts, schools, and students for each surveyed State, along with survey responses.

Figure 12 — States with current and planned statewide student information systems

database structure, and most use Oracle or other DBMS software. All but one SIS contains student demographic data (as interpreted by the respondent), four of the 10 current systems contain student transcript data, six contain student transfer data, and two contain immunization data. Three of the 10 SIS databases are maintained through a statewide computer network, as evident from the file transfer methods indicated in table 13 (network and server upload); the remaining seven statewide systems receive data from school districts via file submission, mainly via the internet (web uploads). The frequency of file submissions to the State varies from 'every 10 days' to 'once per year'.

Statewide SIS contain information identifying all students in the State school system. Table 14 shows that all 10 current SIS contain data fields for student name, grade, date of birth, gender, and race/ethnicity. Some, but not all systems maintain data for: address (6), phone (4), SSN (6), parent/guardian name (5). Only half of the 10 statewide SIS identify NSLP eligibility of individual students, and only one SIS contains information for NSLP certification date. Six of the ten States with a statewide SIS indicated that upgrades to their system are planned for the next two years.

Program Data Maintained by School Food Authorities

As discussed above, only five of 26 States maintain State-level data systems with information on students eligible for the NSLP. In all other States, those data are maintained only by School Food Authorities. It was not within the scope of this study to survey a representative sample of SFAs to determine the characteristics of their data systems. Instead, three SFAs were surveyed in each State to identify candidate sites for data collection for phase II of the study.[47] The three SFAs surveyed in

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[47]   Phase II of the study will not collect data from SFAs. At its Spring 2001 meeting, the Education Information Advisory Council (EIAC) recommended the overall concept paper for this project. At its Spring 2002 meeting, however, the committee did not recommend the child nutrition component of phase II of this project, which will investigate the feasibility of linking administrative records for estimation of multiple program participation rates in four volunteer sites.

Table 13—Characteristics of State Department of Education statewide student information systems (SIS)

	Type of software	File structure	Types of data				Data transfer method	File submission method	Frequency of data transfer
			Demographics	Transcripts	Transfer records	Immunization records			
Arizona	Other DBMS	Relational	—	—	✔	—	File submission	Web upload	Every 10 days
Colorado	Legacy, Oracle	Relational	✔	—	—	—	File submission	Web upload	Once per year
Georgia	Other	Flat file	✔	✔	✔	—	File submission	Web/email/physical media	Once per year
Kentucky	Oracle	Relational	✔	✔	✔	✔	Server upload	—	Every 10 days
Massachusetts	Oracle	Relational	✔	—	✔	—	File submission	Web upload	Per quarter/semester
Michigan	Legacy system	Relational	✔	—	✔	—	Network & files	Web upload	Twice per year
Minnesota	Other	Flat file	✔	—	—	—	File submission	Web upload	Monthly
North Carolina	Oracle	Relational	✔	—	✔	✔	Network	—	—
South Carolina	Other DBMS	Relational	✔	✔	—	—	File submission	Modem	Once per year
Texas	DB2	Relational	✔	—	—	—	File submission	Web upload	Per quarter/semester

Table 14—Student identifiers in statewide student information systems (SIS)[1]

	Student identifiers											
	Name	Grade	Address	Phone number	Gender	Date of birth	SSN	Race/ethnicity	Primary language	NSLP cert. date	NSLP cert. type (free or reduced)	Parent/ guardian name
Arizona	✔	✔	—	—	✔	✔	—	✔	✔	—	—	✔
Colorado	✔	✔	—	—	✔	✔	—	✔	✔	—	—	—
Georgia	✔	✔	✔	✔	✔	✔	✔	✔	✔	—	✔	✔
Kentucky	✔	✔	✔	✔	✔	✔	✔	✔	✔	—	—	✔
Massachusetts	✔	✔	—	—	✔	✔	—	✔	✔	—	—	—
Michigan	✔	✔	✔	✔	✔	✔	—	✔	✔	—	—	✔
Minnesota	✔	✔	—	—	✔	✔	✔	✔	✔	✔	—	—
North Carolina	✔	✔	✔	✔	✔	✔	✔	✔	✔	—	—	✔
South Carolina	✔	✔	✔	—	✔	✔	✔	✔	—	—	✔	—
Texas	✔	✔	✔	—	✔	✔	✔	✔	✔	—	✔	—

1 Tables show only States reporting a statewide student information system (SIS).
✔ Indicates SIS contains data field; — indicates SIS does not contain data field.

Source: *Survey of Food Assistance Information Systems*, 2002. Completed by program administrators in 26 States: Alabama, Arizona, California, Colorado, Connecticut, Florida, Georgia, Illinois, Iowa, Kentucky, Maine, Massachusetts, Michigan, Minnesota, Nebraska, New Jersey, New York, North Carolina, Ohio, Oklahoma, Pennsylvania, South Carolina, Tennessee, Texas, Virginia, Washington.

each State were nominated by the State CNP director as agencies that are likely to comprehensively track NSLP data on application, certification, and participation. Surveys were mailed to 78 SFAs. Responses were received from 68 SFAs (87 percent response rate), although some surveys were incomplete.

SFAs were asked about the school meals programs offered (lunch only or breakfast and lunch), the type of software used to manage the school meals programs, the networking of schools in the district, the presence of POS, the capability of POS to track participation in NSLP/SBP, and the student identifying information contained in the data system. The main purpose of the SFA survey was to determine if SFA data systems identify school meal participants, if student data are centralized at the SFA level, and if available data are sufficient for linking records of NSLP participants to FSP to determine rates of multiple program participation.[48] The SFAs included in the survey appear in appendix table A-11.

The data from the survey of SFAs are illustrative of the characteristics of data systems maintained by school food authorities, but these data are not representative of any larger population because the sample was purposively selected. Table 15 shows the characteristics of the responding SFAs. Nearly all (65 of 68) surveyed SFAs are unified school districts. They vary in size from less than 5,000 students to over half a million students; 64 of the 68 SFAs serve USDA breakfast and lunch.

Over half of the surveyed agencies reported that all schools in the SFA are networked, providing centralized access to data. Nearly all surveyed agencies reported POS systems, as expected, because the SFAs were purposively selected as those with POS. Table 15 shows that 66 of the 68 surveyed SFAs have POS systems and 65 of these systems identify the students who receive meals each day (i.e., program participation is measured for individual students). SFAs with POS systems do not necessarily use them in all schools: only 30 percent of SFAs reported POS systems in all schools, while one-quarter of the surveyed SFAs reported POS in less than half their schools.

Table 16 shows that the student identifying information maintained by SFAs varies considerably across agency. All SFAs responding to this question reported that student names are in their database, but no other data item was universally reported. Most agencies (59 or 66) have address information for students; more than half of SFAs have SSN and/or FSP case number in their electronic database. While the amount and type of student data maintained by SFAs varies, it is evident that many SFAs maintain sufficient student information, centralized at the SFA-level, to support a record linkage study.

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[48] Students are identified as eligible for free- or reduced-price meals during the application process. Participation in the program, however, involves actual receipt of meals. Identification of participants is made possible by electronic POS systems.

Table 15—Characteristics of School Food Authorities (SFAs) responding to the survey of information systems

	School Food Authorities[1]	
	Number SFAs	Percent
Type of school district[2]		
Unified	65	96.0%
Elementary	3	4.0
Number of schools[2]		
Less than 11	16	24.0
11-40	17	25.0
41-85	18	26.0
86-195	16	24.0
695	1	1.0
Number of students[2]		
Less than 5,000	12	18.0
5,000-25,000	21	31.0
25,001-50,000	18	26.0
50,001-157,000	16	24.0
Approx. 720,000	1	1.0
USDA meals served		
Breakfast and lunch	64	97.0
Lunch only	2	3.0
Not reported	2	3.0
Direct certification used for NSLP eligibility determination		
Yes	59	87.0
No	9	13.0
Portion of SFA schools connected to same computer system		
All	39	57.0
Some	10	15.0
None	17	25.0
Not reported	2	3.0
Any schools use POS?		
Yes	66	97.0
No	2	3.0
Percent of SFA schools using POS		
None	–	–
Less than 50%	17	25.0
50-75%	6	9.0
76-99%	24	35.0
100%	21	31.0
Does POS identify students receiving meals each day?		
Yes, all	65	96.0
Yes, some	1	1.0
No	–	–
Not reported	2	3.0

– Zero SFAs in category.

1 Three SFAs were surveyed in each of 26 States. SFAs responding to the survey are not representative of all school food authorities in the 26 states.

2 Data for type of district, number schools, and number students are from the Common Core Data files for SY2000-01.

Source: *Survey of Food Assistance Information Systems*, 2002.
Survey was completed by program administrators in 26 States: Alabama, Arizona, California, Colorado, Connecticut, Florida, Georgia, Illinois,Iowa, Kentucky, Maine, Massachusetts, Michigan, Minnesota, Nebraska, New Jersey, New York, North Carolina, Ohio, Oklahoma, Pennsylvania, South Carolina, Tennessee, Texas, Virginia, Washington.

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Table 16—Student identifying information maintained in SFA information systems

	School Food Authorities[1]	
	Number SFAs	Percent
Student name		
Yes	66	100.0%
No	–	–
Student grade level		
Yes	65	98.0
No	1	1.0
Student address		
Yes	59	89.0
No	7	10.0
Student phone number		
Yes	49	74.0
No	17	25.0
Student date of birth		
Yes	44	67.0
No	22	32.0
Student Social Security Number		
Yes	34	52.0
No	32	47.0
Student food stamp case number		
Yes	36	55.0
No	30	44.0
Student TANF case number		
Yes	31	47.0
No	35	51.0
Student gender		
Yes	30	45.0
No	36	53.0
Parent or guardian name		
Yes	48	73.0
No	18	26.0
Parent or guardian SSN		
Yes	34	52.0
No	32	47.0
Certification date		
Yes	47	71.0
No	19	28.0
Type of certification: free vs. reduced-price		
Yes	60	91.0
No	6	9.0

– Zero SFAs in category.

1 Two responding SFAs did not respond to the items in this table. Three SFAs were surveyed in each of 26 States. SFAs responding to the survey are not representative of all school food authorities in the 26 states.

Source: *Survey of Food Assistance Information Systems*, 2002.
Survey was completed by program administrators in 26 States: Alabama, Arizona, California, Colorado, Connecticut, Florida, Georgia, Illinois,Iowa, Kentucky, Maine, Massachusetts, Michigan, Minnesota, Nebraska, New Jersey, New York, North Carolina, Ohio, Oklahoma, Pennsylvania, South Carolina, Tennessee, Texas, Virginia, Washington.