United States Department of Agriculture

# *Evaluation of Demonstrations of National School Lunch Program and School Breakfast Program Direct Certification of Children Receiving Medicaid Benefits: Year 1 Report*

**Nutrition Assistance Program Report** **January 2015**

**Food and Nutrition Service**
**Office of Policy Support**

USDA is an Equal Opportunity Provider

United States Department of Agriculture

*Food and Nutrition Service, Office of Policy Support* *January 2015*

# *Evaluation of Demonstrations of National School Lunch Program and School Breakfast Program Direct Certification of Children Receiving Medicaid Benefits: Year 1 Report*


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This study was conducted under Contract number AG-3198-B-12-0006 with the Food and Nutrition Service, United States Department of Agriculture.

This report is available on the Food and Nutrition website: http://www.fns.usda.gov/research-and-analysis

**Suggested Citation:**
Hulsey, L., Gordon, A., Leftin, J., et. al (2015). Evaluation of Demonstrations of National School Lunch Program and School Breakfast Program Direct Certification of Children Receiving Medicaid Benefits: Year 1 Report. Prepared by Mathematica Policy Research, Contract No. AG-3198-B-12-0006. Alexandria, VA: U.S. Department of Agriculture, Food and Nutrition Service, Office of Policy Support, Project Officer: Allison Magness.

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# EXECUTIVE SUMMARY

The Healthy, Hunger-Free Kids Act of 2010 (HHFKA; P.L. 111-296) required the U.S. Department of Agriculture (USDA) Food and Nutrition Service (FNS) to conduct a demonstration that directly certifies students for free school meals based on income eligibility identified through Medicaid data. FNS invited States to participate in the demonstration beginning in school year (SY) 2012-2013. Direct Certification-Medicaid (DC-M) is expected to expand the number of students who are certified without needing to complete an application. DC-M might also increase the total number of students who receive free meals by reaching students who are eligible but not certified for free meals under standard procedures. If DC-M leads to an increase in the number of free meals served, it will have an impact on Federal reimbursement costs. In addition, DC-M will likely affect the costs that States and districts incur for administering the National School Lunch Program (NSLP) and School Breakfast Program (SBP)—potential increases in the administrative costs incurred in directly certifying additional students might be offset by decreases in the burden of processing applications. FNS contracted with Mathematica Policy Research to examine the effects of DC-M on these and other outcomes.

## A. The school meals programs and direct certification

The NSLP is the largest child nutrition assistance program in the United States, providing lunches to nearly 31 million students each day in Federal fiscal year (FY) 2013 (FNS 2014). Along with the SBP, the NSLP is a cornerstone of the government's efforts to provide nutritious meals to schoolchildren. Although USDA subsidizes all school meals that meet program requirements, the subsidies are much larger for meals provided to students certified for free or reduced-price meals. Students can become certified through two main methods: application and direct certification.

- **Certification through application.** Historically, most students who receive free or reduced-price school meals have become certified on the basis of information reported by their households in an application submitted to the school district. To become certified in this way, households must either (1) provide detailed information on household size and income or (2) demonstrate that they are categorically eligible because they participate in one of several public assistance programs, including the Supplemental Nutrition Assistance Program (SNAP), the Food Distribution Program on Indian Reservations (FDPIR), and Temporary Assistance for Needy Families (TANF).[1] The district assesses the information on the application to determine whether the household meets the eligibility requirements.
- **Direct certification.** In recent years, increasing numbers of students have been automatically determined eligible for free meals through direct certification rather than an application. Direct certification typically involves matching administrative records from programs that confer categorical eligibility with student enrollment records.

[1] Students can be certified for free meals based on participation in certain other programs, including Head Start and Even Start, the Migrant Education Program, and programs under the Runaway and Homeless Youth Act. Homeless children, as defined by the McKinney-Vento Homeless Assistance Act, and foster children are also considered categorically eligible for free school meals.

Some school districts use alternative procedures that do not involve certifying individual students each year. Districts participating in Provision 2 or Provision 3 conduct certification in a base year and are reimbursed in later years based on claims from that base year. Under the new Community Eligibility Provision, authorized schools in high-poverty areas claim reimbursement based on data from the prior year on the number of students certified for free meals through means other than applications.

## B. Opportunities for direct certification Medicaid

Direct certification through the Medicaid program would extend the use of direct certification to Medicaid-enrolled students who are from low-income families but not directly certified through SNAP or other programs. Without DC-M, these students are either certified by application or not certified. Students receiving Medicaid are not categorically eligible for free meals, but the DC-M demonstration authorizes selected States and districts to use income and household size information from Medicaid enrollment or eligibility files to determine eligibility and directly certify students found to be eligible for free meals. Thus, DC-M is a departure from typical direct certification in that it certifies students who are eligible for free meals based on their household income rather than on participation in a program that confers categorical eligibility. Under the DC-M demonstration, students are eligible for free meals if they are (1) enrolled in Medicaid and (2) in households with Medicaid gross income not exceeding 133 percent of the Federal poverty level (FPL) for their household size.[2] Other students in a household with a child who meets these criteria can also be directly certified for free meals under DC-M. The potential effect of DC-M on students' access to free school meals is limited, however, because a large proportion of Medicaid enrollees also receive SNAP benefits and thus could already be directly certified for free meals.

## C. The DC-M demonstration evaluation

FNS contracted with Mathematica Policy Research to evaluate a demonstration of DC-M in selected States and school districts. Based on a comparison of districts randomly assigned to either conduct DC-M or use normal certification procedures, the study examines whether DC-M leads to changes in the percentages of students certified and reimbursable meals served and in the certification costs incurred by districts. The study also assesses State-level administrative costs and identifies the challenges that States and districts face when implementing DC-M. This report focuses on the experiences of States and districts in conducting DC-M during SY 2012-2013, the first year of the demonstration.

## D. Demonstration States and districts

FNS solicited applications from States to participate in the DC-M demonstration and selected five—Florida, Illinois, Kentucky, New York, and Pennsylvania—to begin conducting

[2] The HHFKA allows a slightly higher income threshold (133 percent of the FPL) for Medicaid direct certification than is otherwise allowed (130 percent of the FPL). The legislation specifies the use of gross income "before the application of any expense, block, or other income disregard" rather than net income for determining eligibility under DC-M.

DC-M in SY 2012-2013.[3] In three of these States—Florida, Illinois, and New York City—districts were randomly assigned to either a treatment group, which implemented DC-M, or a control group, which did not. Such random assignment of districts facilitates a rigorous analysis of the impacts of DC-M within the set of districts included in the random assignment sample, and the estimates from that analysis are the focus of this report. The two other States—Kentucky and Pennsylvania—implemented DC-M Statewide. All five States are included in analyses of State administrative costs and challenges encountered.

## E. Summary of Year 1 Findings

- **Certification.** Among the two random assignment States that began DC-M early enough in the school year to assess impacts on certification for school meal benefits, statistically significant impacts were found for New York City. No statistically significant impacts were found in Illinois, but not all districts in that State had implemented DC-M by the end of October in the first year of the demonstration, the reference point for certification outcomes. In New York City, DC-M increased the percentage of students directly certified to receive free meals by 7.1 points. The impact on the total percentage of students certified for free meals in New York City is smaller (5.6 percentage points) because some of the students directly certified under DC-M would have been certified by application for free meals in the absence of DC-M.

- **Participation.** DC-M had a positive, statistically significant impact on the percentage of lunches served for free in Illinois and New York City and on the percentage of breakfasts served for free in all three of the random assignment States. The study found impacts of 1.9 and 3.0 percentage points on, respectively, the percentages of lunches and breakfasts served for free in the pooled sample of districts in the random assignment States. DC-M had no statistically significant impact on the average number of lunches served per student per day in any random assignment State, but a negative impact of 1.0 percentage point was found on the average daily number of breakfasts per student in Florida.

- **Federal reimbursement costs.** DC-M had statistically significant impacts on Federal reimbursement cost outcomes in Illinois but not in the other random assignment States. The impact on the average daily reimbursement per student for lunches was four cents in Illinois but was not statistically significant in Florida, New York City, or the pooled sample. DC-M had no statistically significant impact on the average daily reimbursement per student for breakfasts in any State. DC-M had a statistically significant impact on the average reimbursement per meal served for Illinois but not for Florida or New York City. The impacts in Illinois were seven cents per lunch and three cents per breakfast. This resulted in a statistically significant three-cent impact on lunches and four-cent impact on breakfasts for the pooled sample of treatment districts.

- **State administrative costs.** The total cost of implementing DC-M (over and above other direct certification costs) at the State level in Year 1 was about $322,000 across the five

[3] A sixth State, Alaska, was initially selected but withdrew before implementing DC-M. In New York, only New York City participated in the demonstration in SY 2012-2013. For convenience, the five participating entities are referred to as "States" throughout the report.

demonstration States, including $108,000 in the three random assignment States and $213,000 in the two universal implementation States. Costs varied widely by State, as did the proportion of costs incurred by the Medicaid agency. Most State administrative costs were start-up costs.

- **Challenges.** The challenges States encountered while planning and preparing for DC-M included difficulties with staff availability or turnover, understanding Medicaid agency timelines for systems changes, and developing specifications for creating the initial DC-M eligibility file. These challenges resulted in delays in implementation in some States.

## F. Limitations of findings

In interpreting these findings, the limitations of the DC-M demonstration and the Year 1 data should be noted. The findings presented in this report are based on the first year of implementation and should be considered interim findings. A second report to Congress will include findings from the first two years of the demonstration.

The DC-M evaluation is based on a nonrepresentative sample of States and districts. The States that applied to participate differ systematically from other States in the Nation; for example, their interest likely indicates that their data systems and interagency relationships are more conducive to implementing DC-M than those in other States. Within these States, the selection of districts was subject to several constraints outside the control of the evaluation that resulted in excluding some of the largest districts and some of the districts with the highest percentages of students certified for free or reduced-price meals. Thus, the within-State findings presented in this report cannot be considered representative of any State as a whole, and the pooled sample is not representative of the combined set of States or the Nation. The Year 2 sample will be larger, including States and districts that began implementing DC-M in the 2013-2014 school year, but will still not be nationally representative.

There are also limitations related to the data available for this report. Several States struggled to begin DC-M at the start of the school year. Most notably, Florida did not begin until February, after the reference point for certification data, so the measures of certification used in the study could not reflect DC-M outcomes in that State. In addition, data on costs and challenges could not be collected from districts in Year 1, so the analysis presented in this report includes only administrative costs and challenges reported by State-level staff. The later report of findings after Year 2 of the demonstration will address some of these limitations. In the second year of the demonstration, DC-M was conducted at the beginning of the school year in the Year 1 States and districts, so the report will capture a full year of implementation in those locations. Also, the set of outcomes examined in Year 2 will be expanded to include costs incurred and challenges encountered at the district level.

# I. INTRODUCTION

The Healthy, Hunger-Free Kids Act of 2010 (HHFKA; P.L. 111-296) required the U.S. Department of Agriculture (USDA) Food and Nutrition Service (FNS) to conduct a demonstration that adds Medicaid to the list of programs used to directly certify students for free school meals. FNS invited States to participate in the demonstration beginning in school year (SY) 2012-2013. Direct Certification-Medicaid (DC-M) is expected to expand the number of students who are certified without completing an application. DC-M might also increase the total number of students who receive free meals by reaching students who are eligible but not certified under standard procedures. If DC-M leads to an increase in the number of free meals served, it will have an impact on Federal reimbursement costs. In addition, DC-M will likely affect the costs that States and districts incur for administering the National School Lunch Program (NSLP) and School Breakfast Program (SBP). The increased costs from conducting DC-M might be partially offset or more than offset by the reduced costs from processing fewer applications.

FNS contracted with Mathematica Policy Research, and its subcontractor Insight Policy Research, to examine the effects of DC-M on these and other outcomes. This report presents findings from the first year of the demonstration, SY 2012-2013.

## A. The school meals programs and direct certification

The NSLP is the largest child nutrition assistance program in the United States, providing lunches to nearly 31 million students each day in Federal fiscal year (FY) 2013 (FNS 2014). Along with the SBP, the NSLP is a cornerstone of the government's efforts to provide nutritious meals to schoolchildren. These Federal programs are administered by child nutrition agencies[4] at the State level and by local educational agencies (LEAs) and school food authorities (SFAs)—which are typically school districts—at the local level.[5]

**Certification for program benefits.** All students enrolled in schools participating in the school meals programs are eligible to receive subsidized school meals. Those in families with incomes at or below 130 percent of the Federal poverty level (FPL)—$30,615 for a family of four during SY 2013-2014—are eligible for free meals, as are students who participate in one of several public assistance programs (discussed below). Reduced-price meals are provided to students whose families have incomes between 130 and 185 percent of poverty (between $30,615 and $43,568 for a family of four during SY 2013-2014). Students who have not been certified for free or reduced-price meals pay full price for their school meals. Although the

[4] Child nutrition agencies are typically located within State departments of education but are part of departments of agriculture in some States.

[5] The Richard B. Russell National School Lunch Act (NSLA) uses two terms to refer to the local entities that operate the school meals programs. The Child Nutrition and WIC Reauthorization Act of 2004 (P.L. 108-265) amended NSLA by using the term *local educational agency* when referring to the application, certification, and verification functions of the school meals programs. Sections of NSLA that deal with other aspects of the programs—such as meal pattern requirements, meal counting, and reimbursement claiming—use the term *school food authority*, which current regulations define as the governing body that has the legal authority to operate the NSLP/SBP in one or more schools. Because nearly all schools in the NSLP/SBP are parts of entities commonly known as school districts, that term is used throughout this report.

USDA subsidizes all school meals that meet program requirements, the subsidies are much larger for meals provided to students certified for free or reduced-price meals. There are two main methods by which students can become certified: application and direct certification.[6]

- **Certification through application.** Historically, most students who receive free or reduced-price school meals have become certified on the basis of information reported by their households in an application submitted to the school district. To become certified in this way, households must either (1) provide detailed information on household size and income or (2) demonstrate that they are "categorically eligible" because they participate in one of several public assistance programs, including the Supplemental Nutrition Assistance Program (SNAP), the Food Distribution Program on Indian Reservations (FDPIR), and Temporary Assistance for Needy Families (TANF).[7] The district assesses the information on the application to determine whether the household meets the eligibility requirements.
- **Direct certification.** In recent years, increasing numbers of students have been automatically determined eligible for free meals through direct certification rather than an application. Direct certification typically involves matching administrative records from programs that confer categorical eligibility with student enrollment records. All districts participating in the NSLP, including private schools, are required to directly certify students in SNAP households. Beginning in SY 2011-2012, FNS regulations required districts to conduct direct certification with SNAP at least three times each year: at the beginning of the school year, 3 months after the beginning of the school year, and 6 months after the beginning of the school year. Districts are also encouraged, but not required, to directly certify students in TANF and FDPIR households. In some States, the districts conduct direct certification, while in other States, a State agency conducts direct certification and provides the results to the districts.

Nearly 12.3 million students were directly certified for free school meals in SY 2012-2013 (Moore et al. 2013). This number has increased dramatically in recent years because of a combination of an increase in the number of school-age children receiving SNAP benefits, expansion in the use of direct certification across the country, and the improved performance of direct certification systems in States and districts. The 2013 Report to Congress on direct certification shows that the number of States and districts implementing direct certification has increased steadily (Moore et al. 2013). In SY 2004-2005 (prior to the Congressional mandate for direct certification), 56 percent of districts directly certified SNAP participants; by SY 2012-

[6] Some school districts use alternative procedures that do not involve certifying individual students each year. Districts participating in Provision 2 or Provision 3 conduct certification in a base year and are reimbursed in later years based on claims from that base year. Under the new Community Eligibility Provision, schools in high-poverty areas in authorized States claim reimbursement based on data from the prior year on the number of students certified for free meals through means other than applications.

[7] Students can be certified for free meals based on participation in certain other programs, including Head Start and Even Start, the Migrant Education Program, and programs under the Runaway and Homeless Youth Act. Homeless children, as defined by the McKinney-Vento Homeless Assistance Act, and foster children are also considered categorically eligible for free school meals.

2013, 91 percent of districts did so.[8] Those districts enrolled 99 percent of all students in NSLP-participating schools nationwide.

## 1. Opportunities for Direct Certification-Medicaid

Direct certification through the Medicaid program would extend the use of direct certification to Medicaid-enrolled students who are from low-income families but not directly certified through SNAP or other programs. Without DC-M, these students are either certified by application or not certified. Students receiving Medicaid are not categorically eligible for free meals, but the DC-M demonstration authorizes selected States and districts to use income information from Medicaid enrollment or eligibility files to determine eligibility and directly certify students found to be eligible for free meals.

Under the DC-M demonstration, students are eligible if they are (1) enrolled in Medicaid and (2) in households with Medicaid gross income not exceeding 133 percent of the poverty level.[9] Other students in a household with a child who meets these criteria can also be directly certified for free meals under DC-M. The legislation specifies the use of gross income "before the application of any expense, block, or other income disregard" rather than net income for determining eligibility under DC-M. However, the determination of eligibility through DC-M relies on the definition of household used by the Medicaid agency, which may differ from that used on NSLP/SBP applications.

Implementation of the Affordable Care Act (ACA) might enhance opportunities to use Medicaid data to directly certify students for school meals. Key provisions that took effect in 2014 can affect the number of students that stand to benefit and the Medicaid eligibility data available for matching:

- Under the ACA, the mandatory minimum upper income eligibility levels for Medicaid for children ages 6 to 19 are increasing from 100 to 133 percent of the FPL in 2014, increasing the number of school-age children covered by Medicaid and, in turn, potentially eligible for DC-M.
- ACA also changes the financial criteria used for Medicaid eligibility determinations, eliminating the various State-specific income exclusions or disregards formerly used.
- In addition, under the ACA, a household is defined based on the tax filing unit, which may differ from the household composition under prior Medicaid rules.

The potential effect of DC-M on students' access to free school meals is limited because a large proportion of Medicaid enrollees also receive SNAP benefits or assistance from other programs used to directly certify students for free meals. If these children are already directly certified, they will not receive any additional benefit from DC-M. The impact of DC-M also

[8] Of the 9 percent of districts that did not directly certify students in SY 2012–2013, about two-thirds are private, and four-fifths are single-school districts. Private-school districts sometimes are excluded from State-level direct certification matching systems, and smaller public school districts may face technical challenges in developing effective systems. In addition, some of these districts might not have SNAP participants among their students.

[9] The HHFKA allows a slightly higher income threshold (133 percent of the FPL) for Medicaid direct certification than is otherwise allowed (130 percent of the FPL).

depends on the ability of States and school districts to identify students in Medicaid eligibility files.

## B. The DC-M demonstration and evaluation

The DC-M evaluation examines the impacts of DC-M on certification for free school meals; participation in the school meals programs, that is, receipt of school meals; and costs associated with the meals programs. This report focuses on the experiences of States and districts in conducting DC-M during SY 2012–13, the first year of the demonstration.

The DC-M demonstration, mandated in the HHFKA, might expand the number of students who receive free meals by reaching students who are eligible but not yet certified for free meals. The demonstration might also affect the costs that States and districts incur. Although matching students to Medicaid data will likely increase direct certification costs for State agencies and some districts, DC-M can generate cost savings for districts if it leads to fewer families submitting school meal program applications that need to be processed. DC-M will also have an impact on Federal costs if it leads to an increase in the number of free meals served, which could result both from an increase in the number of students certified in that category (whose meals would have been reimbursed at the reduced-price or paid levels otherwise) and from a potential increase in the number of meals those students choose to receive. The evaluation examines the effects of DC-M on these and other outcomes.

The Participation and Cost Evaluation component of the study measures the impact of DC-M on participation and costs observed over two years of the demonstration (SY 2012-2013 and SY 2013-2014). Based on a comparison of districts randomly assigned to either conduct DC-M or use normal certification procedures, this component of the study examines whether DC-M leads to changes in the percentages of students certified and reimbursable meals served and in the certification costs incurred by districts. It also assesses State-level administrative costs and identifies the challenges that States and districts face when implementing DC-M, based on both States included in the impact analysis and universal implementation States. The Participation and Cost Evaluation will produce two reports to Congress:

- This report (the Year 1 report of the Participation and Cost Evaluation) examines the experiences of States and districts in implementing DC-M during SY 2012-2013, the first year of the demonstration. It focuses on certification, participation, State costs, and challenges.
- The Year 2 report of the Participation and Cost Evaluation will update the Year 1 report with findings from the second year of DC-M implementation in the five States that began conducting DC-M in Year 1, and with findings from the experiences of additional States and districts that began implementation in SY 2013-2014. In addition, the Year 2 report will include an analysis of administrative costs incurred by districts, an exploration of challenges encountered at the district level, and an assessment of a socioeconomic survey certification alternative.

Besides these two reports to Congress, additional reports address other components of the DC-M study. A separate report presents findings from the Access Evaluation component of the study, which assessed the potential impacts of DC-M on students' access to free school meals by

conducting retrospective simulations of DC-M in the year before the demonstration began, and comparing the simulated certification outcomes with districts' actual certifications (Hulsey et al. 2014). Future reports of the demonstration evaluation will present findings from (1) a substudy that will use varying levels of match stringency to independently validate matches made in a small sample of treatment districts, and (2) an exploration of the impacts of DC-M on the Special Milk Program and Afterschool Snack Program.

### 1. Demonstration States and districts

FNS solicited applications from States to participate in the DC-M demonstration and selected five—Florida, Illinois, Kentucky, New York, and Pennsylvania—to begin conducting DC-M in SY 2012–2013.[10] Two of these States—Kentucky and Pennsylvania—implemented DC-M Statewide. In the other States—Florida, Illinois, and New York City, we randomly assigned districts to either a treatment group, which implemented DC-M, or a control group, which did not.[11, 12] Such random assignment of districts permits a rigorous analysis of the impacts of DC-M, and the estimates from that analysis are the focus of this report. The next chapter and Appendix A describe the evaluation sample and methods in detail. One other State, Massachusetts, and additional districts in three of the original States were selected to join the demonstration in SY 2013-2014 and will be included in analyses for the Year 2 report.

### 2. DC-M implementation

The procedures that demonstration States use for conducting DC-M mirror their existing direct certification processes for SNAP and other programs in many ways. In each State, the agency responsible for Medicaid data creates an eligibility file containing children receiving Medicaid who meet the DC-M income requirements, and submits the file to the child nutrition agency. In some States, a single agency produces both the DC-M eligibility file and the DC-SNAP eligibility file (or a combined file), while in other States, the files are produced by different agencies. With the DC-M eligibility file, State child nutrition agencies follow the same procedures as they do with the DC-SNAP eligibility files: either matching the file(s) to a statewide student database or providing the eligibility file(s) to school districts to conduct matching. In random assignment States, only students in treatment districts are certified through DC-M matching. Chapter 6 provides additional details on the DC-M implementation process in each demonstration State.

### 3. Objectives of the Participation and Cost Evaluation

Table I.1 lists the research questions for the Participation and Cost Evaluation. Although most questions will be addressed in both the Year 1 and Year 2 reports, some questions or parts of questions will be addressed only in the Year 2 report, as discussed in subsequent chapters.

[10] A sixth State, Alaska, was initially selected but withdrew before implementing DC-M. In New York, only New York City participated in the demonstration in SY 2012–2013. For convenience, the five participating entities are referred to as "States" throughout the report.

[11] Throughout the report, "we" refers to the DC-M evaluation team at Mathematica and Insight.

[12] In New York, only New York City participated in the first year of the demonstration; the 32 community school districts in the city were randomly assigned to conduct DC-M or not and are considered as districts in the data collection and analysis.

## Table I.1. Research questions for the Participation and Cost Evaluation

1. What is the impact of DC-M on the number of household applications? On the number of students certified for free meals?
2. What is the impact of DC-M by reimbursement category (free, reduced-price, paid) on (a) the number of reimbursable meals served? (b) average daily participation? (c) the participation rate for each of the categories?
3. Based on demonstration data, what is the projected Federal meal reimbursement cost at various assumptions of changes in meal take rates?
4. What is the impact of DC-M on State and local administrative costs and Federal meal reimbursement costs (for lunch, breakfast, and total programs) for the demonstration period, 2012–2013 and 2013–2014, and each of the following 10 years for (a) each Federal fiscal year? (b) each school year (July 1 through June 30)?[a] What is the estimated impact (a) if DC-M were implemented nationwide and (b) if DC-M were implemented in a subset of States where it would be feasible given current data capabilities?
5. What are the quantitative and/or qualitative answers to each of the following?
   (a) What challenges were encountered in implementing the match to Medicaid data in the study States? How was each of these challenges resolved?
   (b) For how many individual students (number and percentage) was the match performed at the State level? The school district level? Both?
   (c) What was the gap between the date of determination of Medicaid income and the date of determination of DC-M eligibility for free school meals? How did this gap differ among different districts and States? What led to particularly short and long gaps?
   (d) How much staff time was required by State and local employees to complete the match? How did the staff time differ among the different districts and States? What led to particularly large and small staff time burdens?[a]
   (e) How did success in matching vary:
   - By State and school district characteristics (including, but not limited to, urban/rural, higher vs. lower percentage of free/reduced-price students, State and local data systems, levels of DC-SNAP as a percentage of free certification)? or
   - By recipient characteristics (including but not limited to race, ethnicity, family/household size and composition, name differences of members of the family/household)?
6. For each of the research questions above, how would the results differ if the acceptable Medicaid income definition did not include the phrase "before the application of any expense, block or other income disregard"?
7. What are the estimated State and local administrative costs by area income levels for current rules and DC-M?[a]

[a]Under Research Question 4, State and Federal costs will be estimated in both Year 1 and Year 2; local costs will be estimated only in Year 2. Federal costs will be extrapolated beyond the demonstration areas in both Year 1 and Year 2; State and local costs will be extrapolated only in Year 2, and future costs will be projected only in Year 2. Under Research Question 5, time spent by State employees will be addressed in both Year 1 and Year 2; local costs will be addressed in Year 2 only. Under Research Question 7, State costs will be estimated in both Year 1 and Year 2; local costs will be estimated in Year 2.

DC-M = Direct Certification-Medicaid; FNS = Food and Nutrition Service; SNAP = Supplemental Nutrition Assistance Program.

To address these questions, the study team collected several types of data for the school year in which DC-M began: (1) certification and participation records for school districts selected for the demonstration, (2) logs of costs incurred by State agencies in implementing DC-M, and (3) qualitative information on challenges State staff encountered during implementation. Impacts are measured by comparing the certification, participation, and cost outcomes of treatment districts to those of control group districts that year.

## 4. Overview of report

This report presents the findings from SY 2012-2013, the first year in which the DC-M demonstration was implemented. Chapter II summarizes the methods used to collect data and conduct analyses. Chapters III through V contain key findings on the impacts of DC-M on certification, participation, and Federal reimbursement outcomes. Chapter VI discusses challenges faced by States during implementation of DC-M, and Chapter VII contains key findings related to State administrative costs. Chapter VIII summarizes our conclusions and the limitations of the findings. Appendices provide additional detail on methodology, supplemental tables, and data collection instruments.

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# II. METHODS

The Participation and Cost Evaluation measures the impact of DC-M on certification, participation, and Federal reimbursement costs, based on a comparison of districts randomly assigned either to conduct DC-M or to use normal certification procedures. It also assesses State-level administrative costs and identifies the challenges faced in implementing DC-M, using cost and interview data from both States included in the impact analysis and those in which DC-M was implemented Statewide. This chapter summarizes the data collection and analysis methods used. Appendix A provides additional details.

## A. Sample

The Year 1 analysis includes samples of school districts in five States. FNS solicited applications from States to participate in the DC-M demonstration and selected Florida, Illinois, Kentucky, New York, and Pennsylvania to begin conducting DC-M in SY 2012-2013.[13]

In the first year of the demonstration, DC-M was conducted in selected districts within three States (Florida, Illinois, and New York City, called random assignment States) and implemented statewide in two other States (Kentucky and Pennsylvania, called universal implementation States).[14] In the random assignment States, we matched districts into pairs based on district characteristics and randomly assigned one district from each pair to conduct DC-M (treatment districts) and the other to carry out normal certification procedures without DC-M (control districts). Appendix A contains additional detail on the random assignment procedures.

The Participation and Cost Evaluation sample includes all treatment and control districts in the random assignment States and a sample of districts in the universal implementation States (see Table II.1).[15]

The DC-M evaluation sample expanded in SY 2013-2014. FNS selected an additional State—Massachusetts—and extended the demonstration into additional districts in the three Year 1 random assignment States.[16] These will be included in the analyses conducted for the Year 2 report, but not in this report.

[13] A sixth State, Alaska, was initially selected but withdrew before conducting DC-M and is not included in any analyses.

[14] FNS determined which States were designated for random assignment and which for universal implementation based on the State's application to participate in the demonstration and subsequent discussions with the applicants.

[15] Because rigorous impact estimates could be estimated only in the random assignment States, we sampled 30 districts in each universal implementation State to maximize the number of random assignment districts that could be included within contractual limits on the total number of districts.

[16] New York City, which entered the demonstration in Year 1, will continue to be considered a separate site from the approximately 300 New York State districts that entered in Year 2. In Florida and Illinois, relatively small numbers of new districts joined in Year 2.

## Table II.1. Sample for Year 1 (SY 2012–2013) Participation and Cost Evaluation

| | Number of districts | | | |
|---|---|---|---|---|
| | Included in sample frame | Conducting DC-M | Included in Year 1 sample (including treatment and control districts)[b] | Included in Year 1 data and analysis |
| **Random assignment States** | | | | |
| Florida | 50 | 25 | 48 | 48 |
| Illinois | 702 | 351 | 678 | 664 |
| New York City | 32 | 16 | 22[c] | 22 |
| **Random assignment State total** | **784** | **392** | **758** | **734** |
| **Universal implementation States** | | | | |
| Kentucky | 122[a] | 174 | 30 | 30 |
| Pennsylvania | 547[a] | 881 | 30 | 30 |
| **Universal implementation State total** | **669** | **1,055** | **60** | **60** |

[a]The numbers of districts in the universal implementation State sample frames are less than the numbers of universal implementation districts conducting DC-M because districts implementing a special operating provision, private districts, and residential programs or other special types of institutions serving as independent School Food Authorities were not eligible for inclusion in the evaluation portion of the demonstration.

[b]Some districts that were matched into pairs and randomly assigned to treatment and control groups were subsequently found to be ineligible for inclusion in the study (because they were implementing a special provision, no longer participating in the NSLP/SBP, closed, or merged with another district), so the matched pairs that included those districts were removed from the study.

[c]In the aftermath of Hurricane Sandy, which struck in late October 2012, community districts in New York City were authorized to serve school meals to all students for free for a period of time that varied by district. The five district pairs in which a district served all meals for free beyond December 2012 (the point at which the authorization ended for most districts) were excluded from the Year 1 analyses, as discussed in Appendix A.

NSLP = National School Lunch Program; SBP = School Breakfast Program.

## B. Data collection

The Participation and Cost Evaluation included the following primary data collection activities in the first year of the demonstration:

- ***Certification and participation data.*** Key data collected fall into two broad categories: (1) information on enrolled students by school meal benefit certification status and basis for certification; and (2) information on monthly participation—that is, meals served—for the NSLP and SBP. We collected these administrative data on certification and meal participation for each treatment and control district in random assignment States and for each sampled district in universal implementation States, for both the first school year of the demonstration, SY 2012-2013, and for the year prior to the demonstration, SY 2011-2012.
- ***State cost data.*** We collected monthly data on the administrative costs of setting up and operating DC-M at the State level—over and above time spent on other direct certification activities—through Excel logs completed by staff for the State child nutrition and Medicaid

agencies. We conducted follow-up telephone conversations to ensure accurate interpretation of the data provided.

- ***Challenges data.*** Our subcontractor, Insight Policy Research, conducted two rounds of semi-structured telephone interviews with State agency staff in SY 2012-2013 to learn about the challenges experienced and lessons learned during DC-M implementation. In most States, we interviewed representatives of both the State child nutrition agency and the State Medicaid agency involved in the demonstration.

## C. Key outcome measures

In Year 1, the Participation and Cost Evaluation examines outcomes measured at the district level in three domains: certification; participation (that is, receipt of school meals); and Federal reimbursement costs. Although valid impact estimates can be computed only for random assignment States (as discussed in detail in Appendix A), these outcomes are measured for districts in all demonstration States and presented in appendix tables. Both random assignment and universal implementation States are included in analyses of State-level administrative costs and challenges. (A future report on Year 2 will also explore district-level administrative costs and challenges).

### 1. Certification outcomes

DC-M offers two potential benefits to students and their families: (1) certification for free meals when they might otherwise be required to pay the full price or a reduced price for school meals obtained and (2) certification without having to complete an application. Aligned with these benefits, our two primary certification measures are as follows:

- ***The total percentage of students certified for free meals,*** defined as the total number of students in the district who are certified for free meals (as of the last operating day in October) divided by the total number of students enrolled.
- ***The percentage of students directly certified for free meals***, defined as the total number of students in the district who are certified without needing to submit an application (as of the last operating day in October) divided by the total number of students enrolled.[17]

These certification outcomes are measured as of the last operating day in October to align with certification data States regularly report to FNS.

### 2. Participation outcomes

Because the number of school meals served to students depends on the size of the district, as well as the certification status and participation behavior of students, we focus on outcome measures that account for size, rather than comparing raw numbers of meals. Our two primary participation measures, each computed separately for the lunch and breakfast programs, are as follows:

[17] Most States provided the number of students not subject to verification as a proxy for the number directly certified. This number includes students directly certified based on information from the SNAP, FDPIR, TANF, or Medicaid agency; children on the homeless liaison list; income eligible participants in Head Start, pre-K Even Start, or residing in RCCIs; and nonapplicants who are approved by local officials.

- ***The average number of meals served per student per school day,*** defined as the total number of reimbursable meals served divided by the product of the total number of students enrolled in schools participating in either the NSLP or the SBP in the district (as of the end of October) and the number of operating days during the relevant time period.[18]
- ***The percentage of meals served for free,*** defined as the total number of meals served for free divided by the total number of reimbursable meals served.

Each of these participation measures is computed based only on months after DC-M began in Year 1, and for the same set of months the year prior to DC-M. Specifically, data are aggregated across months beginning with September for Kentucky, New York City, and Pennsylvania; October for Illinois; and February for Florida. In addition, November and December are excluded from the analysis for New York City because school meals were served to all students for free during those months in the aftermath of Hurricane Sandy.[19]

### 3. Federal reimbursement outcomes

Our primary measures of the impact of DC-M on Federal reimbursements are also defined to control for the number and size of districts:

- ***Reimbursement costs per student per school day (RPSD)*** is defined as total reimbursement costs divided by the product of the total number of students enrolled in the district (as of the end of October) and the number of operating days.
- ***The blended reimbursement rate (BRR)*** is defined as total reimbursement costs divided by the number of meals served. The BRR measures the average reimbursement per meal served.

The two Federal reimbursement outcomes are calculated for Year 1 and the prior year over the same set of months used for the participation outcomes.

### 4. State administrative cost outcomes

Key outcomes for the State administrative cost analysis include total costs of implementing DC-M in each State, and cost per district implementing DC-M. Total costs are broken down by agency (child nutrition or Medicaid) and by start-up versus ongoing costs. Start-up costs were defined as costs up to and including the month when the DC-M was first conducted, except where some start-up costs (such as programming for computer matching) were extended for a short period to allow for refinement and documentation of code after the first match. Ongoing costs were all costs incurred after the first month of DC-M, except as noted.

## D. Analysis methods

The Participation and Cost Evaluation includes both quantitative and qualitative analyses. Quantitative analyses include estimation of impacts in random assignment States and an analysis

[18] In Appendix C, we also show participation rates defined separately for each reimbursement category (free, reduced-price, paid).

[19] As mentioned earlier in this chapter, some community districts in New York City were authorized to serve school meals to all students for free beyond these two months, and were excluded from the Year 1 analyses entirely.

of State administrative costs in both random assignment and universal implementation States. All demonstration States are also included in qualitative analyses of challenges encountered.

### 1. Quantitative analyses

In Florida, Illinois, and New York City, we randomly assigned districts to either a treatment group in which DC-M was conducted or a control group in which DC-M was not conducted. Comparing outcomes for the treatment group with outcomes for the control group allows us to obtain unbiased estimates of the impacts of DC-M on certification, participation, and reimbursement costs. Unbiased estimates cannot be obtained for the two Statewide implementation States (Kentucky and Pennsylvania) in which random assignment was not conducted because all districts from those States are in the treatment group and there is no rigorous method for constructing a valid comparison group of districts. Therefore, our quantitative impact analyses focus on estimates from the three random assignment States.[20]

Impact estimates presented in the report are regression adjusted to improve the precision of the estimates by controlling for purely random differences between the treatment and control groups across district-specific characteristics measured before random assignment. Details of the regression models are included in Appendix A.

To summarize the results from different States, we present "pooled estimates" that are derived by aggregating across the districts from each State. Pooled estimates pertain only to the particular collection of districts included in an analysis; they are not intended to have any broader generalizability. In particular, they do not estimate the likely effects of DC-M if it were implemented throughout the demonstration States or the entire country.

**Extrapolations.** To satisfy a requirement of the evaluation and provide a crude sense of the potential effects on Federal reimbursement costs if DC-M were adopted nationwide, we also present national extrapolations.[21] We derive the national extrapolations by weighting the treatment and control districts in the random assignment States to represent all districts in the country. The weight for each district is estimated using propensity score modeling methods, described in detail in Appendix A. Extrapolations of reimbursements per student day are multiplied by national data on student enrollments and serving days for the full school year to yield an estimate of the total dollar amount of Federal reimbursements.[22] The very severe limitations of the national extrapolations are discussed later in this chapter and in Appendix A.

**Measures of precision.** In addition to the regression-adjusted impact estimates, we have provided 95 percent confidence interval (CI) "half-widths." These indicate the margin of error in the impact estimates. If, for example, an estimated impact of 5 percentage points for the direct certification rate has a margin of error of plus or minus 2 percentage points, it is likely that estimates of the direct certification rate from different samples would fall in the range from 3 to

[20] The data from Kentucky and Pennsylvania—as well as the data from the three random assignment States—are valuable for assessing the challenges and administrative costs associated with implementing DC-M.

[21] In Year 2, the national extrapolations will also include impacts on administrative costs incurred by districts.

[22] Thus, the extrapolated amounts estimate the national costs incurred during a full school year, rather than only the set of months after DC-M implementation occurred in the demonstration States in Year 1.

7 percentage points. The methods used to derive the CI half-widths and important limitations of those methods are discussed in Appendix A.[23]

### 2. Qualitative analyses

Interviews with State agency staff about challenges encountered when implementing DC-M were recorded, transcribed, and imported into NVivo 10, a software program used for coding qualitative data. We developed a draft coding scheme based on the research questions, interview protocols, and a small sample of transcripts, and reviewed and coded each transcript using the scheme. Staff examined coded data to identify patterns relating to the challenges and experiences of State agencies implementing DC-M.

## E. Limitations of the demonstration and evaluation

Several limitations of the DC-M Year 1 demonstration sample, data, and methods should be noted. Appendix A provides a more detailed discussion of these and other limitations.

### 1. Sample

The DC-M evaluation is based on a nonrepresentative sample of States and districts. The States that applied to participate are not a random probability sample and differ systematically from other States in the Nation. Among other characteristics, their interest in participating suggests that their State-level data systems and interagency relationships are conducive to a greater willingness and, likely, a greater ability than in other States to implement DC-M.

Within these States, the selection of districts was subject to several constraints. Because of a Congressionally imposed limit on the number of students certified for free and reduced-priced meals in DC-M districts, some of the largest districts—with substantial fractions of the State student populations—had to be excluded from the demonstration and evaluation.[24] In addition, other districts had to be excluded because of their role in another evaluation being conducted by FNS, and New York City only included schools with electronic point-of-sale systems in the demonstration sample.

These limitations on the selection of the samples severely limit the ability to define a meaningful universe of districts to which the demonstration sample and evaluation findings might generalize. The estimated impacts presented in this report for the States should not be interpreted as indicative of the likely effects of statewide adoption of DC-M. Furthermore, the estimates for the sample of districts pooled across the demonstration States pertain to that specific sample only and do not generalize more broadly to the combined set consisting of those States or to the Nation as a whole. Finally, although the national extrapolations attempt to estimate the potential effects of DC-M if its implementation were expanded nationwide, the Year

[23] One important limitation is that the methods are valid only when applied to random samples. However, the States are not a random sample, although they are treated as such for the derivation of the confidence interval half-widths.

[24] The HHFKA specified that districts conducting DC-M in SY 2012–2013 in States where DC-M is conducted only in selected districts collectively must include no more than 2.5 percent of all students certified for free and reduced-price meals in the Nation, or approximately 688,000 certified students.

1 sample includes only three random assignment States.[25] Thus, the national extrapolations are highly imprecise; that is, they have very large margins of error, even when the States and districts are assumed to be random samples, which is an invalid assumption that leads to understatement of the error in the estimates. Furthermore, given the limitations on how the sample could be selected, there is no valid basis grounded in statistical sampling theory for generalizing beyond those districts to a broader collection of districts, such as all districts in the Nation.

## 2. Data

This report focuses on data from the first year of DC-M implementation, during which several States struggled to begin the demonstration at the beginning of the school year. Most notably, Florida did not begin until February, after the reference point for certification data, so the measures of certification used in the study cannot reflect the effects of DC-M in that State. Even in other States, where DC-M began before the end of October, some districts may have implemented DC-M in later months, and start-up challenges may have affected implementation.

Data on costs and challenges could not be collected from districts in Year 1, so the analysis presented in this report includes only State-level administrative costs and challenges reported by State staff. Finally, the States were unable to provide some requested data elements for some evaluation sample districts or months. Details on the prevalence of missing data and how it was addressed are provided in Appendix A.

A later report of findings from the Year 2 analysis will address some of these limitations. The sample will be expanded somewhat by including States and districts that began implementing DC-M in the 2013-2014 school year, and the set of outcomes examined will be expanded to include costs incurred and challenges encountered at the district level. In addition, in the second year of implementation, DC-M was conducted at the beginning of the school year in the Year 1 States and districts.

[25] Moreover, the New York sample includes only one city district with a nonrepresentative sample of schools.

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# III. IMPACTS ON CERTIFICATION OUTCOMES

DC-M aims to increase access to free meals among eligible students while easing the burden of the certification process on families and school districts by reducing the number of applications for school meal benefits. To assess progress toward these goals in the first year of the demonstration, the study team examined two key certification outcomes—the percentage of students directly certified for free meals and the total percentage of students certified for free meals—as of the end of October 2012, the point in the school year at which certification outcomes are typically reported to FNS.

This chapter begins with a discussion of the impact of DC-M on certification outcomes in the three random assignment States. Next, these results are compared with findings from the Access Evaluation report based on simulations of DC-M. The chapter ends with an exploration of how certification outcomes changed between the prior year and the first year of DC-M.

## A. Impacts in random assignment States

Among the three random assignment States, one showed significant impacts, one did not, and the third could not be evaluated because DC-M was implemented too late to be reflected in the certification measures. The only significant impacts are for New York City (Table III.1). Specifically, controlling for baseline characteristics, DC-M had a 7.1 percentage point impact on the percentage of students directly certified to receive free meals in New York City. The impact on the total percentage of students certified for free meals is also statistically significant in New York City, but smaller (5.6 percentage points) because some of the students directly certified under DC-M would have been certified for free meals by application in the absence of DC-M.

No statistically significant impact on either certification outcome was found in Illinois. Illinois began DC-M in late October, shortly before the certification outcomes are measured, and thus is included in this analysis. However, State agency staff reported anecdotally that many districts in Illinois did not implement DC-M immediately, so the October measures of certification reflect only partial implementation in that State, which might explain why the estimated impacts are small and not statistically significant.[26] Florida is not included in the certification analysis, because certification outcomes were measured before DC-M was conducted in that State (in February).[27]

## B. Comparisons with findings from the Access Evaluation

To examine the potential impacts of DC-M before results from the demonstration itself were available, simulations were conducted of DC-M matching procedures using data for SY 2011-2012, the year before the demonstration began. Simulating DC-M involved (1) matching student

[26] The State could not report which, or even approximately how many, districts had implemented DC-M in October. The estimates for Illinois are reported here because the State had implemented DC-M by the time that certification was measured, and information on the extent of delays at the district level is unavailable. However, these results should be interpreted with caution, as they may understate the full certification impact in Illinois once all districts incorporated DC-M.

[27] However, the study team did examine the data for Florida and, as expected, found no statistically significant difference between treatment and control group districts in that State.

enrollment and Medicaid data using individual identifiers, such as name and birth date, and (2) for each match, assessing the school meal eligibility category suggested by the income information in the Medicaid file. The simulated result for each student was compared with the student's actual certification status to determine the potential impact of DC-M. Additional details on the methodology can be found in the Access Evaluation report (Hulsey et al. 2014).

### Table III.1. Regression-adjusted impacts of DC-M on key certification outcomes in SY 2012–2013[a]

| | Percentage of students | | | | | |
|---|---|---|---|---|---|---|
| | Directly certified[b] for free meals | | | Total certified for free meals[c] | | |
| State | Treatment districts | Control districts | Difference (CI) | Treatment districts | Control districts | Difference (CI) |
| Florida[d] | -- | -- | -- | -- | -- | -- |
| Illinois[e] | 22.7 | 22.2 | 0.5 (±1.3) | 37.1 | 37.2 | -0.1 (±1.6) |
| New York City | 45.6 | 38.5 | 7.1* (±0.8) | 52.8 | 47.2 | 5.6* (±1.1) |
| **Pooled sample (Illinois and New York City)** | **26.0** | **24.5** | **1.5* (±1.2)** | **39.4** | **38.6** | **0.7 (±1.3)** |

Source: October certification data provided by the States.

[a]The variables included in the regression adjustments are listed in Appendix A.

[b]Includes all students certified to receive free meals but not subject to verification, including those directly certified based on information from the SNAP, FDPIR, TANF, or Medicaid agency, children on the homeless liaison list, income eligible Head Start and pre-K Even Start participants, residential students in RCCIs, and nonapplicants who are approved by local officials.

[c]Including by application, direct certification, or other categorical eligibility.

[d]Certification outcomes are measured as of the end of October 2012, at which time Florida had not yet implemented DC-M.

[e]State staff in Illinois reported partial implementation of DC-M among some treatment districts as of the time certification outcomes are were measured.

*Percentage for treatment districts is significantly different from the percentage for control group districts at the 0.05 level.

CI = 95 percent confidence interval half-width; DC-M = Direct Certification-Medicaid; FDPIR = Food Distribution Program on Indian Reservations; RCCI = Residential Child Care Institution; SNAP = Supplemental Nutrition Assistance Program; TANF = Temporary Assistance for Needy Families.

A key finding from the simulations was that DC-M could have increased the percentage of students who were directly certified to receive free meals in October 2011, but the magnitude of the estimates varied by State. The simulated impacts were highest in Illinois—for example, the percentage of students directly certified under DC-M was 18.3 points higher than under actual procedures in Illinois, compared with an effect of 7.2 percentage points in the other States (which included the other two random assignments States—Florida and New York City—as well as the two Statewide implementation States—Kentucky and Pennsylvania).

Table III.2 presents the simulated impacts for the year prior to the start of the demonstration for Illinois and New York City, the States for which impacts for the first year of the demonstration are available. For New York City, the findings from the two study components are roughly similar: both yielded positive and statistically significant estimates of impacts on

certification outcomes. The Access Evaluation obtained a simulated impact of 8.9 percentage points on the percentage of students directly certified, compared with an impact of 7.1 percentage points from the Participation and Cost Evaluation.

### Table III.2. Comparisons of estimated impacts of DC-M in SY 2012–2013 with findings from the Access Evaluation simulations

| | Estimated impact of DC-M on percentage of students | | | |
|---|---|---|---|---|
| | Directly certified[a] for free meals | | Total certified for free meals[b] | |
| State | Based on DC-M as implemented in SY 2012–2013 (CI) | Based on simulation using SY 2011–2012 data (CI) | Based on DC-M as implemented in SY 2012–2013 (CI) | Based on simulation using SY 2011–2012 data (CI) |
| Illinois[c] | 0.5 (±1.3) | 18.3* (+/-1.6) | -0.1 (±1.6) | 10.2* (+/-0.7) |
| New York City | 7.1* (±0.8) | 8.9* (+/-1.0) | 5.6* (±1.1) | 4.1* (+/-0.5) |

Source: October 2012 certification data and October 2011 certification, enrollment, and Medicaid data provided by the States.

[a]Includes all students certified to receive free meals but not subject to verification, including those directly certified based on information from the SNAP, FDPIR, TANF, or Medicaid agency; children on the homeless liaison list; income eligible Head Start and pre-K Even Start participants; residential students in RCCIs; and nonapplicants who are approved by local officials.

[b]Including by application, direct certification, or other categorical eligibility.

[c]State staff in Illinois reported partial implementation of DC-M among some treatment districts as of the time certification outcomes were measured.

*Percentage for treatment districts is significantly different than the percentage for control group districts at the 0.05 level.

CI = 95 percent confidence interval half-width; DC-M = Direct Certification-Medicaid; FDPIR = Food Distribution Program on Indian Reservations; RCCI = Residential Child Care Institution; SNAP = Supplemental Nutrition Assistance Program; TANF = Temporary Assistance for Needy Families.

For Illinois, however, the Access Evaluation simulations produced notably higher estimated impacts on certification than the Participation and Cost Evaluation analyses, which found no statistically significant impacts in Year 1 of the demonstration. The differences between the Access Evaluation simulations and the impact estimates in Illinois are most likely due to the fact that, as noted above, not all treatment districts in that State had implemented DC-M by the time the Year 1 certification outcomes were measured. This would tend to weaken the impact observed at that point. Differences in the methods used in the two study components could also contribute to the differences in the findings, as could potential limitations in the data available for the simulations (Hulsey et al. 2014).

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# IV. IMPACTS ON PARTICIPATION OUTCOMES

DC-M aims to increase access to school meals by directly certifying more eligible students for free meals, thereby lowering the cost of and barriers to participation. DC-M might increase overall participation—that is, the total number of meals served—if more students are certified to receive free meals and those students chose to obtain school meals more often in response to the reduction in price from full or reduced-price to free. Even if the behavior of students does not change and overall participation does not rise, however, the proportion of meals served for free might increase if students who had been participating at full or reduced-price continue to participate but now receive free meals.

The participation analysis focuses on two main outcomes:

1. The average number of meals served per student per day (MPSD). This can be thought of as the average daily percentage of enrolled students that choose to take a reimbursable meal.
2. The percentage of meals that were served for free.

Both measures are based on the months after DC-M began in each State. Supplemental tables in Appendix C present numbers of meals served and alternative participation measures.

**MPSD.** DC-M had no statistically significant impact on the average number of lunches served per student per day in any of the three random assignment States (Table IV.1). In the pooled sample across the three States, the MPSD was 52.3 percent in both treatment districts and control districts. For the SBP, the MPSD was 19.7 percent and 20.4 percent, respectively, in treatment and control districts. DC-M had a negative 1.0 percentage point impact on average daily breakfasts per student in Florida but no statistically significant impact on the MPSD for breakfasts in either of the other States. The available data do not provide an explanation for this finding for Florida.

**Percentage of meals served for free.** Despite the lack of significant impacts on MPSD, the impact of DC-M on the percentage of meals served for free was statistically significant across the pooled sample of districts in the random assignment States. DC-M had a 1.9 percentage point impact on the percentage of lunches served for free and a 3.0 percentage point impact on the percentage of breakfasts that were free (Table IV.1). The pooled impacts reflect statistically significant differences between treatment districts and control districts for lunch in Illinois and New York City and for breakfast in Florida and Illinois. The significant impacts on the percentages of lunches served for free in New York City are consistent with the significant impact on the percentage of students certified for free meals reported in the previous chapter. Although no statistically significant impacts on certification outcomes were found in Illinois, State staff reported that many districts in Illinois did not implement DC-M early enough for its effects to be captured in the certification data for October. However, measuring participation from October through the end of the school year, we do find significant impacts on the percentages of meals served for free in Illinois. No statistically significant impacts were found on lunch participation in Florida or on breakfast participation in New York City.

## Table IV.1. Regression-adjusted impacts of DC-M on key participation outcomes in SY 2012–2013[a]

| State | Average number of meals served per student per day | | | Percentage of meals served for free | | |
|---|---|---|---|---|---|---|
| | Treatment districts | Control districts | Difference (CI) | Treatment districts | Control districts | Difference (CI) |
| **NSLP** | | | | | | |
| Florida | 54.5 | 55.2 | -0.7 (±1.8) | 69.8 | 69.7 | 0.0 (±0.9) |
| Illinois | 51.3 | 50.7 | 0.7 (±0.9) | 57.0 | 52.9 | 4.1* (±0.4) |
| New York City | 45.1 | 44.2 | 0.9 (±2.9) | 80.6 | 79.4 | 1.2* (±1.1) |
| **Pooled sample (All random assignment districts)** | **52.3** | **52.3** | **-0.0 (±1.0)** | **64.7** | **62.8** | **1.9* (±0.5)** |
| **SBP** | | | | | | |
| Florida | 19.7 | 20.7 | -1.0* (±1.0) | 81.5 | 78.2 | 3.3* (±3.2) |
| Illinois | 20.6 | 20.8 | -0.2 (±0.9) | 81.2 | 78.5 | 2.6* (±0.7) |
| New York City | 15.9 | 16.7 | -0.8 (±2.2) | 77.3 | 75.0 | 2.3 (±2.3) |
| **Pooled sample (All random assignment districts)** | **19.7** | **20.4** | **-0.7* (±.7)** | **81.1** | **78.1** | **3.0* (±1.7)** |

Source: Monthly administrative claims data provided by the States.

Note: The results reported in this table are obtained by aggregating across the months after each demonstration State implemented DC-M: September for New York City; October for Illinois; and February for Florida. In addition, November and December are excluded from the analysis for New York City because school meals were served to all students for free during those months in the aftermath of Hurricane Sandy.

[a]The variables included in the regression adjustments are listed in Appendix A.

*Percentage for treatment districts is significantly different than the percentage for control districts at the 0.05 level.

CI = 95 percent confidence interval half-width; NSLP = National School Lunch Program; SBP = School Breakfast Program; SY = school year.

# V. IMPACTS ON FEDERAL REIMBURSEMENT COSTS

If DC-M influences the number of students certified for free meals, it could change the number of free, reduced-price and paid meals served, thereby affecting Federal reimbursement costs. This chapter examines the impact of DC-M on Federal reimbursement costs. First, the impacts of DC-M on the reimbursement cost per student, per day (RPSD) and the blended reimbursement rate (BRR), which measures the reimbursement rate per meal, are assessed for the random assignment States in the demonstration. Then, estimates are presented of the effect of DC-M on total reimbursement costs in SY 2012–2013 (Year 1 of the demonstration) if DC-M had been implemented (1) nationally or (2) for a subset of States that are most likely to be able to implement DC-M. Later, Chapter VII discusses the impacts of DC-M on State administrative costs.

## A. Federal reimbursement cost types, amounts, and measures

The NSLP and SBP reimbursement rates are published in the *Federal Register*. They increase annually based on the Food Away From Home series of the Consumer Price Index for All Urban Consumers (CPI-U). Rates are highest for free meals, slightly less for reduced-price meals, and much less for paid meals, and they are higher for lunches than for breakfasts. Districts or schools that qualify for needs-based NSLP rates or severe needs SBP rates receive slightly higher reimbursements.[28] In addition, starting in October 2012, districts or schools that met new school nutrition regulations received an extra six cents per lunch served. The standard (non needs-based) NSLP rates in SY 2012–2013 were $2.86 for free lunches, $2.46 for reduced-price lunches, and 27 cents for paid lunches, excluding the extra six cents for qualifying schools. Free breakfasts were reimbursed at a standard rate of $1.55, reduced-price breakfasts at $1.25, and paid breakfasts at $0.27. The full sets of rates for school years 2011–2012 and 2012–2013 are presented in Appendix A.[29]

Because the reimbursement to a district varies with the number of meals served in the district, which, in turn, varies with the number of students in the district, it is useful to examine outcome measures that standardize reimbursements by district size. Accordingly, the focus is on two outcomes measures:

1. ***Reimbursement costs per student per day (RPSD)***—This gives the average daily reimbursement per student enrolled.
2. ***Blended reimbursement rates (BRR)—***This gives the average reimbursement per meal served.

The BRR reflects the distribution of meals served across the free, reduced-price, and paid categories. The RPSD equals the BRR multiplied by the average number of meals served per

[28] For the NSLP, entire districts may qualify for needs-based rates if at least 60 percent of the lunches served in the previous year were free or reduced-price. For the SBP, severe needs rate eligibility varies by school.

[29] In addition to cash payments, USDA provides commodity foods to districts participating in the NSLP. These commodity payments are not included in the reimbursement measures in the analysis.

enrolled student per day and, thus, also reflects any change in the total number of meals per students caused by DC-M.

## B. Year 1 impacts in demonstration areas

DC-M had a statistically significant positive impact on the average daily reimbursement per student for lunches in one of the three random assignment States, Illinois (Table V.1). For the sample of districts in Illinois, DC-M increased the RPSD for the NSLP from 94 cents in the control districts to 99 cents in the treatment districts, a statistically significant impact of 4 cents. No statistically significant impact was found for breakfasts, however. For the other two random assignment States (Florida and New York City) and for the pooled sample of districts in the random assignment States, no statistically significant impact of DC-M on the average daily reimbursement per student for lunches or breakfasts served was found.

### Table V.1. NSLP and SBP regression-adjusted Federal reimbursement costs per student per day in SY 2012–2013[a]

| | Federal reimbursement costs per student per day (dollars) | | | | | |
|---|---|---|---|---|---|---|
| | NSLP | | | SBP | | |
| State | Treatment districts | Control districts | Difference (CI) | Treatment districts | Control districts | Difference (CI) |
| Florida | 1.27 | 1.29 | -0.02 (±0.04) | 0.32 | 0.33 | -0.01 (±0.01) |
| Illinois | 0.99 | 0.94 | 0.04* (±0.02) | 0.32 | 0.32 | 0.00 (±0.01) |
| New York City | 1.17 | 1.14 | 0.03 (±0.07) | 0.25 | 0.26 | -0.01 (±0.03) |
| **Pooled sample (All random assignment districts)** | **1.13** | **1.12** | **0.01 (±0.02)** | **0.31** | **0.32** | **0.00 (±0.01)** |

Source: Monthly administrative claims data provided by the States.

Note: The results reported in this table are aggregated across months after each demonstration State implemented DC-M: September for New York City; October for Illinois; and February for Florida. In addition, November and December are excluded from the analysis for New York City because school meals were served to all students for free during those months in the aftermath of Hurricane Sandy.

[a]The variables included in the regression adjustments are listed in Appendix A.

*Percentage for treatment districts is significantly different than the percentage for control districts at the 0.05 level.

CI = 95 percent confidence interval half-width; NSLP = National School Lunch Program; SBP = School Breakfast Program.

Considering the average reimbursement rate per meal served, DC-M was found to have a statistically significant impact for lunches and breakfasts in Illinois and for the pooled sample but no impact in Florida or New York City for either meal (Table V.2). In particular, the BRR for lunches was seven cents higher in treatment districts than in control districts in Illinois and three cents higher in the pooled sample of treatment districts than in the pooled sample of control districts. For breakfasts, DC-M had a statistically significant impact of three cents and four cents, respectively, on the BRR for the sample of districts in Illinois and in the pooled sample.

**Table V.2. Impacts of DC-M on regression-adjusted blended reimbursement rates in SY 2012–2013[a]**

| State | Blended reimbursement rates (dollars) | | | | | |
|---|---|---|---|---|---|---|
| | NSLP | | | SBP | | |
| | Treatment districts | Control districts | Difference (CI) | Treatment districts | Control districts | Difference (CI) |
| Florida | 2.33 | 2.33 | 0.00 (±0.02) | 1.63 | 1.59 | 0.05 (±0.05) |
| Illinois | 1.92 | 1.85 | 0.07* (±0.01) | 1.56 | 1.53 | 0.03* (±0.01) |
| New York City | 2.58 | 2.57 | 0.01 (±0.02) | 1.56 | 1.53 | 0.03 (±0.04) |
| **Pooled sample (All random assignment districts)** | **2.17** | **2.13** | **0.03* (±0.01)** | **1.60** | **1.56** | **0.04* (±0.02)** |

Source: Monthly administrative claims data provided by the States.

Note: The results reported in this table are aggregated across months after each demonstration State implemented DC-M: September for New York City; October for Illinois; and February for Florida. In addition, November and December are excluded from the analysis for New York City because school meals were served to all students for free during those months in the aftermath of Hurricane Sandy.

[a] The variables included in the regression adjustments are listed in Appendix A. The blended reimbursement rate is the per-meal reimbursement rate.

*Percentage for treatment districts is significantly different than the percentage for control districts at the 0.05 level.

CI = 95 percent confidence interval half-width; NSLP = National School Lunch Program; SBP = School Breakfast Program.

## C. National extrapolations

To provide a sense of the potential effects of DC-M if it were adopted more broadly than in the demonstration, national extrapolations of the dollar impact of DC-M on total NSLP reimbursement costs, total SBP reimbursement costs, and total combined costs for all of SY 2012–13 were developed. Separate extrapolations were computed under two different assumptions: (1) that all States implemented DC-M and (2) that only a subset of States that are most likely to be able to implement DC-M did so. The subset includes the 22 States that meet any of the following criteria: (1) are included in the DC-M demonstration in either SY 2012–2013 or SY 2013–2014, (2) submitted an intent to apply for the DC-M demonstration, indicating that they had the ability to conduct DC-M, (3) use Medicaid data to conduct direct verification, or (4) have performed modified adjusted gross income conversions with their own data, which suggests that they have the ability to measure income in their Medicaid files using the definition relevant for DC-M. Both sets of extrapolations also assume that DC-M was implemented for the full school year. Appendix A describes our extrapolation method and discusses the limitations of the extrapolations.

If all States had implemented DC-M for all of SY 2012–2013, it is estimated that NSLP costs would have been about $89 million higher and SBP costs would have been about $136 million higher than if no districts had implemented DC-M, for a total combined cost impact of

slightly over $225 million (Table V.3). If only a subset of 22 States had implemented DC-M, it is estimated that the NSLP and SBP cost impacts would have been about $56 million and $78 million respectively, for a combined total of nearly $134 million. For comparison, total national reimbursement costs were approximately $10.9 billion for the NSLP and $3.5 billion for the SBP in SY 2012–2013.

### Table V.3. National extrapolations of impacts of DC-M on Federal reimbursement costs in SY 2012–2013, under different assumptions

| | Difference in total Federal reimbursement costs with and without DC-M ($000s) | |
|---|---|---|
| | Assuming all States adopt DC-M | Assuming a subset of States adopt DC-M[a] |
| State | Difference (CI) | Difference (CI) |
| NSLP | 89,012 (±818,231) | 55,698 (±436,937) |
| SBP | 135,995 (±490,753) | 77,861 (±289,299) |
| **Total** | **225,007 (±352,274)** | **133,559 (±160,446)** |

Source: Monthly administrative claims data provided by the States.

[a] States were identified for this subgroup based on the following criteria: (1) inclusion in the DC-M demonstration in either SY 2012–2013 or SY 2013–2014, (2) submission of an intent to apply for the DC-M demonstration, indicating that they had the ability to conduct DC-M, (3) use of Medicaid data to conduct direct verification, or (4) performing modified adjusted gross income conversions with their own data, which suggests that they have the ability to measure income in their Medicaid files using the definition relevant for DC-M. The following 22 States met one or more of these criteria: Arizona, Florida, Illinois, Indiana, Kentucky, Maine, Massachusetts, Minnesota, Mississippi, Missouri, New Mexico, New York, Nebraska, Nevada, Ohio, Pennsylvania, South Carolina, Texas, Utah, Washington, Wisconsin, and Wyoming.

*Percentage for treatment districts is significantly different than the percentage for control districts at the 0.05 level.

CI = 95 percent confidence interval half-width; NSLP = National School Lunch Program; SBP = School Breakfast Program; SY = school year.

Among their limitations, these estimates are highly imprecise. For the extrapolated values, the margin of error is extremely large and includes $0 as well as negative values, indicating that DC-M would have had no effect on reimbursement costs or might have reduced reimbursement costs. For example, for the NSLP, the estimate of approximately $93 million with a margin of error of plus or minus $952 million suggests that estimated impacts from different samples would usually fall between negative $859 million and positive $1,045 million. Moreover, the imprecision is probably even greater than this because the estimated margin of error does not take into account error in the propensity score models used to derive the weights for extrapolating from the sample to the entire nation. In any case, to the extent that these models do not effectively correct for the lack of representativeness of the sample, the national extrapolations might substantially misrepresent the effects of DC-M were it to be implemented nationwide.

# VI. CHALLENGES

In addition to estimating impacts of DC-M, the Participation and Cost Evaluation examines the challenges experienced by States and districts implementing the demonstration. The Year 1 Participation and Cost Evaluation analysis relies on information on implementation experiences drawn from interviews with staff of State child nutrition and Medicaid agencies across the five States (Florida, Illinois, Kentucky, New York City, and Pennsylvania) during SY 2012–2013; Year 2 of the Participation and Cost Evaluation will include interviews with both State and district-level staff implementing DC-M during SY 2013–2014. This chapter first summarizes the DC-M process in each of the five Year 1 States then describes the challenges encountered and lessons learned during the first year of the demonstration.

## A. State DC-M operations

Although the general steps for DC-M matching are similar across States, there are State-specific differences that affect the implementation and timing of DC-M. These differences include whether matching is conducted centrally by the States or by their school districts; the technological capabilities of the States and districts; and the number and types of participating agencies.

In each State, the agency responsible for the Medicaid data creates a DC-M eligibility file, which contains the list of children receiving Medicaid that meet the NSLP/SBP income requirements for the demonstration—that is, the child is a member of a family with an income (as measured by the Medicaid program before the application of any expense, block, or other income disregard) that does not exceed 133 percent of the Federal poverty level for its household size. In some States, this file is combined with the direct certification file(s) for SNAP and TANF, which matches prior to Medicaid if a child is enrolled in multiple programs. The Medicaid agency then securely transmits the file to another agency (typically the State Department of Education), which either 1) matches the eligibility file to its student information system that contains a list of enrolled students, or 2) distributes the eligibility file to districts for matching. A summary of the matching process in each State is provided in Table VI.1 and described in brief below.

***Florida.*** Three agencies are involved in the demonstration in Florida due to a State policy change that shifted responsibility of the NSLP/SBP from the Department of Education to the Department of Agriculture and Consumer Services. The Department of Children and Families creates the DC-M eligibility file (and, separately, a SNAP and TANF eligibility file) each month, and sends both to the Department of Education for reformatting and cleaning. The Department of Education then uploads the direct certification files to its servers, where each district can access the files for its county. The Department of Agriculture and Consumer Services notifies districts when the direct certification files are available.

## Table VI.1. Interagency operations in DC-M demonstration States, SY 2012–2013

| Participating agency | Summary of agency roles in DC-M |
|---|---|
| **Florida** | |
| Department of Children & Families | Creates DC-M eligibility file. Data are sent by secure FTP to ED. |
| Department of Education (ED) | Removes duplicates, reformats file, and uploads it to ED's server. |
| Department of Agriculture & Consumer Services | Notifies districts that the SNAP/TANF and Medicaid direct certification (DC) files are available for download and matching. Each school district is responsible for matching its DC file. Districts can match their DC files to their enrollment lists using electronic matching software or a manual process. |
| **Illinois** | |
| Department of Human Services | Medicaid data are securely transmitted to HFS's data warehouse. |
| Department of Healthcare & Family Services | Queries its data warehouse to create the DC-M eligibility file, and transmits it to ED. |
| State Board of Education | Matches the DC-M eligibility file to its student information system. If needed, school districts can also upload an enrollment file for matching. Single child look-ups can also be conducted using the Statewide student information system. |
| **Kentucky** | |
| Cabinet for Health & Family Services | Creates DC-M eligibility file. Data are sent by secure FTP to ED. |
| Department of Education | Maintains site for districts to download data. Each school district is responsible for matching its DC file. Districts can match by (1) importing their DC files into a purchasable module for Kentucky's student information system for which all districts have software, (2) using their own electronic matching software, or (3) using a manual process. |
| **New York City** | |
| New York City Human Resources Administration | Creates DC-M eligibility file. Data are provided to ED on a CD until a secure FTP is established. |
| New York City Department of Education | Matches the DC-M file to its student information system on a daily basis. Matches are then populated into New York City's student database, which schools can access. |
| **Pennsylvania** | |
| Department of Public Welfare (DPW) | Creates DC-M eligibility file. Data are imported into DPW's Statewide benefit system. |
| Department of Education | Responds to districts' questions. Each school district is responsible for matching its DC file. To conduct the match, districts can (1) upload their enrollment lists into the Statewide benefit system for matching, (2) download the eligibility file and perform the matching themselves, or (3) match manually. They can also conduct single child look-ups using the Statewide benefit system. |

Source: Semi-structured interviews with State officials.

Note: The DC-M eligibility file contains a list of children receiving Medicaid who meet the income requirements specified for the demonstration (that is, the child is a member of a family with an income—as measured by the Medicaid program before the application of any expense, block, or other income disregard—that does not exceed 133 percent of the Federal poverty level).

DC-M = Direct Certification-Medicaid; FTP = file transfer protocol; SNAP = Supplemental Nutrition Assistance Program; SY = school year; TANF = Temporary Assistance for Needy Families.

Districts download the direct certification files and match them either manually or through electronic matching software. Unlike other DC-M States, Florida lacks a Statewide information system that can be used for matching, so districts rely completely on their own IT systems for matching. State staff noted that some districts have the capability to conduct automated electronic matching, but others have to conduct manual matching for some or all of their students and are more likely to see an increased burden as a result of DC-M. Florida's recent direct certification implementation grant to develop a Statewide information system will help alleviate the burden on these districts.

***Illinois*.** Due to the technical limitations of the agency administering the Medicaid program in Illinois, three agencies are involved in direct certification. The Department of Human Services determines Medicaid eligibility, and sends the information to a data warehouse managed by the Department of Healthcare and Family Services, which creates the DC-M eligibility file containing only Medicaid recipients each month (separate DC-SNAP and TANF files are created by another agency). The data are then sent to the State Board of Education, where all direct certification files are matched to the Statewide student information system using four variables (first name, last name, date of birth, and gender). A list of exact and partial or near matches is distributed to districts. Districts are responsible for determining which partial matches should be accepted and then integrating the final list of matches into their local systems. Participant addresses are provided to districts to aid them in verifying the accuracy of the State's matches.

Illinois updates its student information system in October with new enrollees for the school year.[30] If a district wants to match using its own enrollment list, it may do so by uploading it to the State's server for matching against the State's direct certification files. Single-child lookups can also be completed using the student information system. Illinois relies on districts to extend benefits to other children in households and to track student transfers (by either conducting an individual lookup or updating the State's student information system so the transfer student will be included in the next Statewide match).

***Kentucky*.** The Cabinet for Health and Family Services creates the direct certification file, which includes both Medicaid and SNAP/TANF recipients, each month and sends the data to the Department of Education. This agency uploads the data to its servers, at which point districts receive an automated email notifying them that new files for their geographic area are available for download.

Districts match using a manual process or their own electronic matching software. Districts that purchase a module for the Statewide student information system also have the option of importing their direct certification files into this system for matching.[31] This process yields a list of exact matches and non-matches for review.

[30] After October, schools are required to document changes in enrollment in the State's student information system throughout the school year.

[31] Kentucky's Statewide student information system, Infinite Campus, has a point-of-sale module available for purchase that is capable of conducting matches. Districts often purchase this module if they are participating in the Community Eligibility Provision to help meet Federal and State reporting requirements.

***New York City.*** Direct certification is conducted at the district level in New York State, but only New York City is included in Year 1 of the demonstration, and State-level agencies have no role in the DC-M process there. The city's Human Resources Administration creates the direct certification files and delivers them to the city's Department of Education. An automated daily match occurs between these files and the student information system using a student ID number or last name, first name, date of birth, gender, and address. The resulting matches are available for schools to download. New York City relies on schools to regularly update student information in the city's system, and uses this information to identify other children in a household and capture movement of the city's highly transitory population into and out of treatment schools.

***Pennsylvania.*** The Department of Public Welfare, in coordination with its IT contractor, creates a direct certification file including both Medicaid and SNAP/TANF recipients each month. This agency then imports the combined file into its Statewide benefit system. An automated email is sent to districts notifying them when a new file is available for download, and the Department of Education is available to assist them as needed.

Pennsylvania districts can download the eligibility file for their geographic area and conduct a match, using electronic matching software or a manual process. Alternatively, districts can upload their enrollment lists into the Statewide benefit system for matching against the direct certification file, and can choose up to five counties or the entire State to match against. For unmatched cases, the benefit system provides a list of potential-match and no-match students. Districts are responsible for processing lists of unmatched cases. Individual student lookups may also be conducted using the State's system.

## B. Start-up challenges

Most agencies involved in the demonstration in each State had worked together in the past, and the technology systems and memorandums of understanding (MOUs) necessary for DC-SNAP/TANF in those States served as a foundation for DC-M. Although this prior experience helped facilitate the demonstration in these States, several challenges were encountered while planning and preparing for DC-M. As detailed below and in Appendix Table E.1, these challenges included difficulties with staffing, understanding agency timelines, and creating the initial DC-M eligibility file.[32]

**Difficulties with staffing.** State staff often had to balance work demands with staffing availability, which caused some start-up delays. Medicaid staff in some States were overburdened with preparations for changes associated with the Affordable Care Act, whereas some State child nutrition agency and district staff were busy implementing new meal pattern requirements (and certifying districts meeting the new requirements to receive additional six-cent reimbursements per meal). In Kentucky, for instance, staffing shortages and work demands delayed the planning of the demonstration. As one staff member said, "locating staff, meeting with them, and obtaining their buy-in and permission" took more than a month.

[32] Less common challenges (that is, those encountered by a single State) are described in Appendix Table F.2Luplio

Shifts in agency responsibility for the NSLP/SBP and staff turnover within those agencies also resulted in delays in Florida. The Department of Education and Department of Children & Families were amending their existing MOU for SNAP and TANF data to include Medicaid data when a statute shifted the responsibilities for NSLP/SBP to the Department of Agriculture & Consumer Services. As a result, a new MOU had to be drafted. Although none of the States described difficulty drafting the MOU itself, it was a time-consuming process in Florida due to the need for legal counsel in each agency to review the MOU, as well as staff turnover among those involved in the review process. As one staff member noted, "When you have three agencies and three different sets of attorneys looking at things and wanting to change this language [and] that language, and then when you have staff turnover within those agencies—it kind of has to reset the cycle again…. That's what takes the longest."

**Understanding agency timelines.** Start-up delays also resulted from States underestimating the amount of time necessary to review the requirements for the DC-M eligibility file, program the data extract, and test it to ensure it contained the correct Medicaid enrollees. For example, Kentucky's Cabinet for Health & Family Services works on a three-month production cycle for Medicaid data and schedules projects in advance of this cycle. Because the State's Department of Education was unaware of this timeline, the DC-M start-up was slightly delayed. Illinois also did not anticipate the amount of time necessary to conduct a thorough review of the DC-M eligibility file. As one of the two States conducting matching centrally, Illinois had to test and adjust its system to develop and run the matching program, remove duplicates, and use the correct sequence of matching (that is, matching first on SNAP, then TANF, and then on Medicaid).[33]

**Creating DC-M eligibility file.** Problems in creating an accurate DC-M eligibility file also arose during project start-up. In two States, the initial DC-M eligibility file sent to the districts did not contain the correct groups of children. Teen mothers were inadvertently excluded in Kentucky because the program did not take into account that the head of household could be a child. This group of children has since been identified and was eventually incorporated into the DC-M eligibility file. In Pennsylvania, some children who would not be eligible for Medicaid based on family income can qualify as a household of one under a special provision of the State's Medicaid program. These children were included in the initial DC-M eligibility file, but they are not considered a household of one according to NSLP/SBP guidelines. As one Pennsylvania State staff member noted, "We had a good amount of backlash as a result of that because, understandably, people were very upset that families making large amounts of money…were now being eligible for free meals." The file containing these children was ultimately retracted, and this subcategory of children was identified and removed from the DC-M eligibility file.

[33] This delay created additional complications because Illinois law requires students with incomes at or below the Free Lunch or Breakfast Program guidelines to receive a waiver for textbooks and other fees. Because students were not matched under Medicaid until October during the first year of the demonstration, they had already paid their school fees and the State had to determine how to handle these students. State staff reported that this issue has since been resolved, and the demonstration was implemented on time during its second year.

## C. Implementation challenges

States experienced a number of difficulties during project implementation. Challenges with State-level and district-level matching were common but not unique to DC-M. Other challenges were specific to DC-M, due in part to how its eligibility criteria differ from DC-SNAP/TANF. These challenges include miscommunication and differences in household definitions. Each of these challenges is discussed below and in Appendix Table E.2. States were generally able to resolve the issues they encountered, or had plans to improve their systems to address problems that could not be immediately resolved.

**Matching difficulties.** Although States' prior experience with DC-SNAP/TANF served as a foundation for DC-M, they reported several factors that created difficulties for States or their districts matching the DC-M eligibility file to student enrollment lists. Discrepancies between the Medicaid and student enrollment data (such as, name spellings, transposed numbers, and outdated addresses) existed in all States, and were similar to the types of inconsistencies found in conducting DC-SNAP/TANF matching. For instance, in New York City, schools were responsible for entering and updating their students' information in the city's student information system; this yielded occasional errors such as the misspelling of names. Different variable lengths and formats between the two files can also be problematic. For instance, last names were truncated in Kentucky's Medicaid data, creating matching difficulties with districts' student enrollment files, which have no character limit.[34]

Difficulties matching can also stem from the overlap of different direct certification efforts. This problem occurred in Illinois where two separate agencies provide the direct certification files for SNAP/TANF and Medicaid. As a result, children enrolled in SNAP or TANF cannot be removed from the Medicaid file prior to the file being sent for matching. This was problematic because students enrolled in multiple programs must be directly certified through SNAP or TANF instead of Medicaid, and Illinois had to develop a filter to ensure that students were matched according to this hierarchy. The filter is said to be working most of the time, but occasionally a student will match under multiple programs. Local staff have been trained to prioritize the cases when this occurs so that the SNAP information is considered first.

**Manual matching.** DC-M increases the number of cases a district or State will need to match to determine eligibility for NSLP/SBP. States reported that this burden is minimal for most districts and outweighed by the added benefit of certifying additional children and reducing NSLP/SBP applications. However, for districts lacking access to matching software, the burden can be greater than anticipated.

**Communication.** In contrast to SNAP and TANF, children receiving Medicaid are not categorically eligible for NSLP/SBP. This distinction resulted in questions from districts and parents regarding the eligibility criteria for DC-M. In Florida and Pennsylvania, parents of some students certified through DC-M were uncertain about why their children qualified for free meals. In response to these questions, Pennsylvania provided additional training to its districts

[34] Kentucky staff indicated that names will not be truncated once the State adopts its new Medicaid system, the Kentucky Health Benefit Exchange.

and Florida developed a prototype letter for districts to distribute to families explaining the demonstration's eligibility criteria. In Kentucky, a small number of local public aid offices miscommunicated that all children on Medicaid were eligible for DC-M. The State responded quickly and encouraged district personnel to clarify the income requirements for DC-M with their local offices. States indicated that questions had diminished over the course of the demonstration, suggesting that there is a learning curve for participating districts.

**Household definitions.** The definition of a household used by the Medicaid agency can differ from the definition used on NSLP/SBP applications or for programs that confer categorical eligibility. As a result, income for a particular individual who might be included in the household on an NSLP application may be excluded from the Medicaid case and thus not counted toward NSLP/SBP eligibility for students directly certified through Medicaid. This income would *not* be excluded if the Medicaid recipient were to submit a regular NSLP/SBP application. For instance, the income of a stepparent would be included if he or she were to fill out an NSLP/SBP application for a stepchild, but might be excluded if the stepchild qualified through Medicaid. Pennsylvania was the only State to identify this as a challenge in how the demonstration was received by districts. Differences in household definitions likely exist in the other demonstration States and may become more common with implementation of the Affordable Care Act.

## D. Timing of DC-M

The creation of the DC-M eligibility file was largely an automated process, and the file was typically delivered to each State's Department of Education, and eventually to the districts, at a specific time each month. The amount of time between the date a child enrolled in Medicaid and the date the DC-M eligibility file or list of matches was available to districts largely depended on when the child enrolled in Medicaid during the month, as well as how quickly the State moved in processing and distributing the data. As shown in Appendix Table E.3, the gap between these two dates ranged between 1 and 46 days in the sample month of October. For instance, if a child enrolled in Medicaid on October 31 in Kentucky, he or she would appear in the State's DC-M eligibility file during the first week of November because Kentucky's file includes children enrolled in Medicaid for the entire month prior to its distribution. If that same child lived in Illinois, he or she would appear on a list of matches provided by the State at the beginning of December because the file contains Medicaid children through the 15th of the month prior. Based on preliminary results from the Year 2 interviews with district staff, districts typically certified students within one to two business days after receiving the DC-M eligibility file or list of matches.

Kentucky and Pennsylvania had shorter gaps between enrollment in Medicaid and distribution of the DC-M eligibility file than the other States did. This was because they transmitted their monthly DC-M eligibility files to districts at the beginning of each month. Their files included children enrolled in Medicaid through the end of the previous month.

In Illinois and New York City (which both do the matches centrally), the Medicaid data were approximately two weeks old by the time the State received the DC-M eligibility file, conducted the match, and sent it to the districts. New York City, however, was unique in that it matched its monthly direct certification files against its student enrollment system on a daily

basis to track student movement. Daily matching helped New York City capture its highly transitory population, and tracked student movement among schools within the city.

In Florida, the DC-M eligibility file was sent to the State's Department of Education within the first week of the month. Cleaning, reformatting, and uploading the data to the State's servers added an extra day before the file was sent to districts, as did sending out the notification that the file was ready for download. Florida is following a similar path as New York City in its ability to match on a daily basis with its recent direct certification implementation grant. The State will use the grant to construct a Statewide enrollment database, which will allow it to match on a daily basis using districts' rosters. This is expected to significantly reduce the gap between enrollment in Medicaid, SNAP, or TANF and certification for NSLP/SBP.

## E. State staff time requirements

State staff reported a number of DC-M activities that required significant time and effort. Consistent with the findings presented in the next chapter, these major burdens (Appendix Table E.4) were largely associated with start-up tasks and were not expected to continue. For example, in Illinois, Kentucky, and New York City, the largest burden on staff time was developing, testing, and reviewing the creation of the DC-M eligibility file or the process for matching that file against the State's student enrollment data. A related task that required more calendar time than expected was clarifying the eligibility requirements for DC-M and the DC-M eligibility file. In some States, meetings were difficult to schedule between the involved agencies, and multiple meetings were sometimes necessary to clarify the criteria for DC-M.

Following the start-up of the demonstration, tasks were notably less time consuming (Appendix Table E.5). Kentucky and Pennsylvania identified providing customer service to districts as somewhat taxing at the beginning of the school year, but both States received fewer questions from districts as the year progressed. Ongoing tasks, such as production of the DC-M eligibility file and notifying districts of its availability, required minimal staff time and effort.

## F. Factors facilitating implementation

States identified several factors contributing to their decision to pursue, and their ability to implement, DC-M including the following: prior experience with direct certification; robust technology systems; training and orientation; and interagency cooperation. Each is described below and in Appendix Table E.6. State recommendations on the components necessary to successfully implement the demonstration are presented in Appendix Table E.7.

**Experience.** States identified successful experiences with direct certification efforts prior to the demonstration as a major factor in their decisions to pursue DC-M, as well as its successful implementation. In addition, the agencies responsible for developing the Medicaid data queries in each State had the capability of identifying the correct Medicaid enrollees for the demonstration. As one Florida staff member described, "We have 79 Medicaid categories...those different categories have different eligibility limits, dollar limits on income. We're using the ones that are 133 percent of poverty or less. That way, I know that everybody…is under the required income limits." Although the correct children were identified in each State, categories of children were mistakenly omitted from (Kentucky) or included in (Pennsylvania) the initial query, as discussed previously.

The DC-M eligibility file created by the Medicaid agencies also contains the same data elements as the DC-SNAP/TANF file, and the processes used by a State or district to conduct matching are the same whether direct certification is conducted with SNAP, TANF, or Medicaid. All States noted that the quality of the Medicaid data was, at the very least, equivalent to the SNAP and TANF data, and did not expect their matching success rate with Medicaid to vary from the rates of other direct certification efforts. New York City observed that its Medicaid data was somewhat more current and accurate than its SNAP data, which may lead to higher matching success rates in its treatment schools.

**Technology.** All demonstration States had technology systems in place to conduct direct certification with SNAP and TANF, and these systems could easily accommodate the Medicaid data files. Although new programming was necessary to produce the DC-M eligibility file, the States' certification systems were designed to accept new program files. In addition, a Statewide student or benefit information system was used to conduct or facilitate matching in four States. Florida—the only State without a Statewide information system—is currently pursuing one.

**Training and orientation.** Training was provided in Florida, Illinois, Kentucky, and Pennsylvania in order to introduce districts to the project, respond to questions, and/or provide instructions on how to format and upload files for matching with State systems.[35] Pennsylvania reported more matches in districts that used the State's benefit information system, and training districts to upload their data to this system has increased direct certification matches across all programs due to its accuracy and ability to match against multiple counties or Statewide. Florida held a meeting with the State's electronic matching software vendors to encourage them to assist districts with the demonstration. This was particularly important in Florida because the State currently lacks a student information system.

**Cooperation.** A preexisting, cooperative relationship between the agency responsible for the Medicaid data and the agency administering NSLP/SBP was beneficial to New York City, Kentucky, and Pennsylvania. Cooperation between the agencies facilitated the drafting of an MOU, the programming and management of data extracts for DC-M, and the ability to troubleshoot issues as they arose.

[35] Training was not referenced by New York City in the Year 1 interviews, likely because matching is an automated process conducted centrally.

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# VII. IMPACTS ON STATE ADMINISTRATIVE COSTS

One of the objectives of this evaluation is to determine the impact of DC-M on administrative costs at the State and district levels. At the State level, DC-M generates administrative costs for both Medicaid and child nutrition agencies. Medicaid agencies produce files of eligible children enrolled in Medicaid, and child nutrition agencies incorporate this new data source into existing direct certification matching processes and provide training and technical assistance to districts. However, the hope of policymakers is that districts will see savings in administrative costs (due to a reduced need to process household applications) that would more than offset these State costs (and any administrative costs incurred by districts in implementing DC-M).

This chapter presents data on State administrative costs for implementing DC-M, including both start-up and ongoing costs. For Year 2 of the demonstration, the evaluation will measure the impact of DC-M on district administrative costs by estimating cost differences between treatment and control districts in the random assignment States.

States were not randomly assigned to conduct DC-M or not, so we do not have an experimental design from which to estimate the impacts of DC-M on State-level administrative costs. Instead, because DC-M was a new task for the States, the analysis of State administrative costs for both random assignment States and universal implementation States is based on staff reports of the incremental costs of DC-M, beyond costs associated with already-existing State work on direct certification through other programs such as SNAP.

We collected data from both State child nutrition agencies and the State agencies that provided the Medicaid data to the child nutrition agencies. Data were collected via quarterly cost logs (an example of which is included in Appendix H) provided as Excel workbooks. In general, the main evaluation contact at each State agency completed the cost logs, collecting data from other staff about time spent. To resolve questions, follow-up telephone interviews and emails were used as needed. Because the State agencies did not receive additional funding for DC-M implementation, State staff were not required to account for the time spent directly on this activity. Therefore, they were asked to estimate time spent on a set of standardized DC-M implementation activities in each month of the quarter (and not include activities related to the evaluation). These estimates of time spent should be considered approximate.[36]

This analysis focuses on the total incremental costs to State agencies to implement DC-M, the type of agencies that incur these costs, and the percentage of costs that are start-up costs (costs to initiate the DC-M matching process, such as completing interagency agreements and developing programs for matching student records to Medicaid records) versus ongoing costs (costs to maintain DC-M over time, such as running the matching programs monthly). In addition, data on hours spent by State agency staff are provided, to explore variations in burdens on State staff (a topic also discussed in Chapter VI).

[36] Our approach to collecting data on salaries and other costs is described in Appendix A.

In Year 2, when district-level data are available for assessing the administrative costs of implementing DC-M, State-level costs will be allocated to treatment-group districts in random assignment States to assess the overall effects of DC-M on administrative costs per district in these States. To set the stage for that later work, this chapter also examines, in each State, the State-level administrative costs per district implementing DC-M.

## A. State administrative costs

**Total costs.** Our estimate of the total additional (start-up and ongoing) cost of implementing DC-M at the State level in Year 1 was about $322,000 across the five demonstration States, including $108,000 in the three random assignment States and $213,000 in the two universal implementation States (Figure VII.1; see Appendix Table G.1 for additional details). Given the number of students certified for free or reduced-price meals in the districts implementing DC-M in the five States (approximately 1.6 million) and the number directly certified (just under 1.0 million), the State administrative cost per student certified for free or reduced-price meals averaged around $0.20, and State administrative cost per student directly certified averaged approximately $0.33, which is small relative to the reimbursement cost of *one* free school lunch.

Costs varied considerably by State, as did the proportion of costs incurred by the Medicaid agency. One State, Pennsylvania, incurred costs of $198,000, more than 60 percent of the total administrative costs. Most of Pennsylvania's costs (89 percent) were from the Medicaid agency (the Department of Public Welfare) and were paid to their data systems contractor to add Medicaid data to their existing direct certification process. Pennsylvania also had the largest number of districts (881) implementing DC-M.

The State with the second highest cost, Illinois, which reported costs of $85,000 (27 percent of the total), was also second in the number of districts implementing DC-M. However, Illinois reported higher costs than the remaining States largely because of the extensive time State child nutrition staff spent providing training and technical assistance to district staff.[37] Although Illinois conducts DC matching at the State level, the Statewide student database was not updated at the beginning of the school year, which led some districts to conduct their own matching or review process as a supplement to or replacement for the State match. Districts also had questions about how to handle the fact that students who were newly certified for free meals were also exempted from certain school fees, resulting in a need to refund fees that had already been paid in some districts. The remaining States—Florida, Kentucky, and New York City—had estimated administrative costs lower than $20,000 in Year 1. Together, these three States accounted for only 13 percent of total State administrative costs.

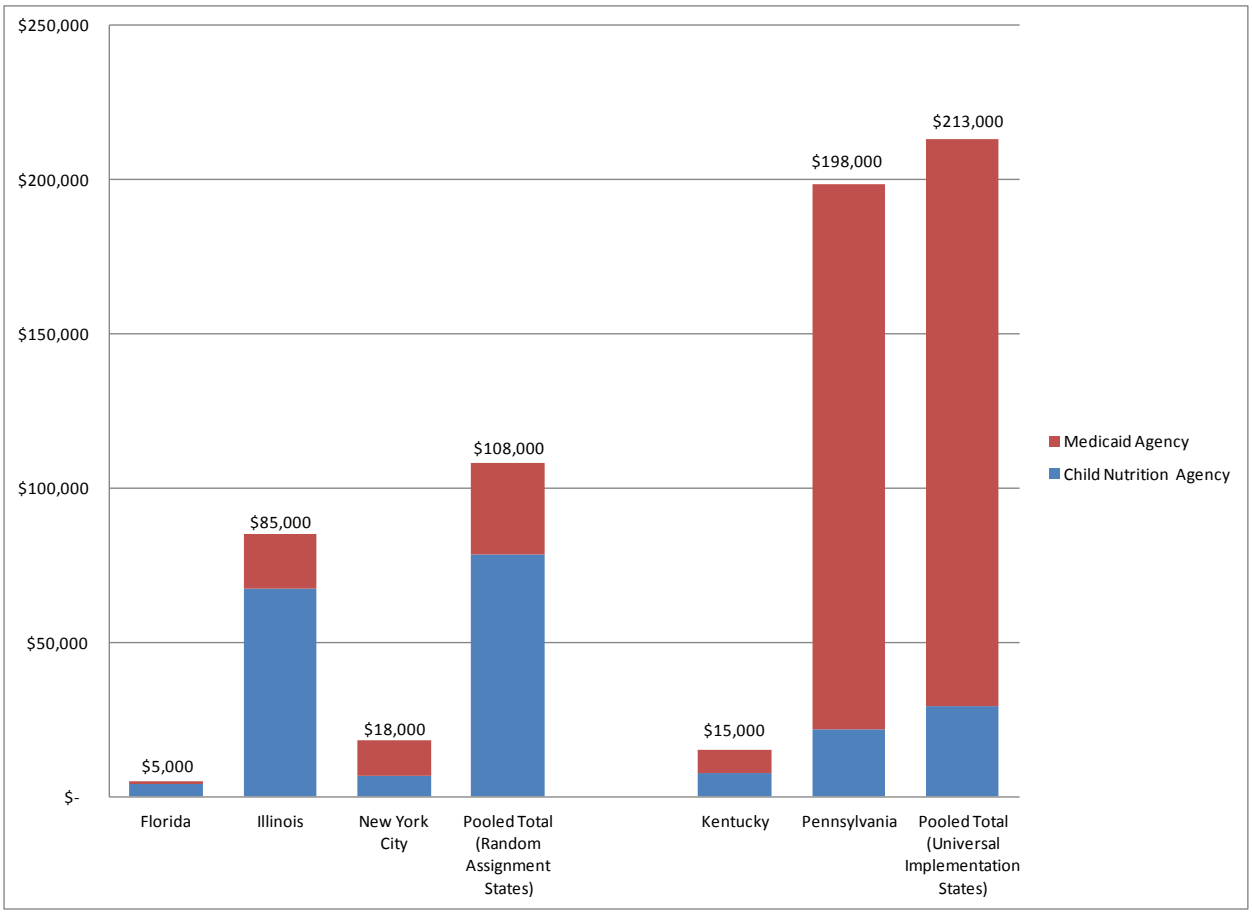
**Costs by agency type.** Because of the contractor costs incurred by Pennsylvania's Medicaid data provider, most costs overall were incurred by State Medicaid agencies. However, the proportion of costs incurred by the Medicaid agency varied considerably among other States;

[37] Illinois also spent a lot of staff time explaining to districts what data were needed for the evaluation, and working with them to obtain these data. Time for these activities was difficult to separate from time helping with DC-M implementation, so staff advised us to assume half of their time was spent on implementation activities, and our estimates were made accordingly.

costs for the Medicaid agency were about two-thirds of all costs reported in New York City, about half of Kentucky's costs, and much less than half of State administrative costs in Florida and Illinois (Figure VII.1; Appendix Table G.1). Child nutrition agency costs were largest by far in Illinois (about $67,000; 79 percent of that State's costs), second largest in Pennsylvania (nearly $22,000), and low (less than $8,000) in the other three States.

**Timing of costs.** For each State, most administrative costs were in the first two quarters—that is, July 2012 through December 2012 (Appendix Table G.1). Three States—New York City, Kentucky, and Pennsylvania—had costs heavily concentrated in the first quarter, because they conducted their first round of DC-M matching in that quarter. Illinois had similar costs in each of the first two quarters, because it first conducted DC-M in the second quarter (October 2012) and fielded questions from districts for several months afterward. Florida had most of its costs in the first quarter but had slightly higher costs in the third quarter than in the second quarter, most likely because the State did not conduct DC-M until February 2013.

**Figure VII.1 State administrative costs of implementing and conducting DC-M in 2012–2013, by State and agency**



**Start-up and ongoing costs.** As noted above, start-up costs are the costs involved in planning and putting in place the procedures and matching programs needed to conduct DC-M, whereas ongoing costs are those involved in conducting monthly or quarterly matches once the basic process has been set up. For the purposes of this study, most State agency *start-up costs* are defined as costs that occur up to and including the DC-M implementation month (the month of the first DC-M match), whereas costs that occur throughout the following months are classified as *ongoing*. However, for the Kentucky and New York City Medicaid agencies, some costs incurred within the first quarter after the implementation month were defined as start-up costs. For example, because the matching process in the first quarter in Kentucky was not fully integrated with the automated direct certification procedures for other programs at the time of the initial match, Kentucky's Department for Medicaid Services spent time on developing and testing programs for a fully integrated extract in the second quarter. These costs were counted as start-up costs, despite that Kentucky first conducted DC-M at the end of the first quarter. Processes were fully integrated (with no additional costs) by the end of the second quarter.

Consistent with the findings presented in the previous chapter and the quarterly cost pattern, most State administrative costs were start-up costs (see Appendix Table G.1). In particular, more than 85 percent of costs were start-up costs in Florida, New York City, and Pennsylvania. In Illinois, start-up costs were 66 percent of the total, and in Kentucky, they were 51 percent. Modest ongoing costs in later quarters were reported by all of the child nutrition agencies. Among the Medicaid agencies, those in New York City and Pennsylvania reported no costs past the second quarter of Year 1, because the merging of Medicaid data with other data used for direct certification was completely automated, after initial start-up. In Florida, Illinois, and Kentucky, ongoing costs were 11 percent, 36 percent, and 41 percent of total Medicaid agency costs, respectively.

**Labor costs.** Administrative costs reported by State agencies were almost all labor costs (see Appendix Table G.2). The main exception was the Pennsylvania contractor cost discussed previously; Kentucky also reported a small amount of nonlabor costs. None of the States reported how indirect costs were allocated, but the labor costs were generally small enough that indirect costs would be small also. Most State work involved either managers or information technology staff (not shown in tables); hours varied substantially across the States in roughly the same patterns as overall costs (see Appendix Table G.3).

## B. State administrative costs per district implementing DC-M

State agency costs per district for DC-M in Year 1 provide an indication of the resources needed to implement DC-M at the State level, and the average savings at the district level that would be needed to offset them. State costs are divided by the number of treatment districts in the random assignment States and by the total number of districts in the universal implementation States. In the random assignment States, State administrative costs per treatment district (assumed to be zero for control districts) seem likely to be larger than if DC-M were

implemented Statewide, because some portion of these costs are fixed, and the costs are spread over less than the full set of districts in the State.[38]

Among the States in our sample, costs per district were more similar than total costs (Table VII.1). As expected, the State agency costs per district in the random assignment States were higher than in the universal implementation States ($240 per district versus $202 per district). Florida, Illinois, and Pennsylvania had similar costs per district (ranging from $195 to $243). The lowest cost per district ($86) was in Kentucky.[39]

In Year 2, the evaluation will have access to data on both State- and district-level administrative costs. In the random assignment States, the impact of DC-M on district administrative costs will be estimated by comparing costs in treatment and control districts. To assess the impact on total administrative costs per district, State costs per treatment district as well as the treatment-control difference in district-level costs will be considered.

### Table VII.1. State administrative costs of DC-M per district implementing DC-M in 2012–2013, by State and agency type

| | Year 1 (July 2012–June 2013) costs per district (dollars) | | |
|---|---|---|---|
| State | Child nutrition agency[a] | Medicaid agency | Total |
| Florida (25 districts) | 163 | 32 | 195 |
| Illinois (351 districts) | 192 | 51 | 243 |
| **Random assignment States pooled** | **190** | **49** | **240** |
| Kentucky (174 districts) | 44 | 41 | 86 |
| Pennsylvania (881 districts) | 25 | 201 | 225 |
| **Universal implementation States pooled** | **28** | **174** | **202** |

Source: Cost tracking logs completed quarterly by State administrators.

Notes: Pooled estimates are the ratio of total costs for States in each group (summed) to the total number of DC-M implementing districts for States in that group. New York City is omitted from this table because, although 16 of 32 community districts were randomly assigned to DC-M, all certification activities are conducted centrally, so certification costs per community district are not meaningful.

[a]In most States, a single child nutrition agency—typically, the State department of education—coordinates DC-M. In Florida, however, both the Florida Department of Education and the Florida Department of Agriculture are involved. Reported costs include those from both agencies.

[38] Nonetheless, some administrative costs, such as technical assistance to districts, probably increase with the number of districts.

[39] Costs per district are not presented for New York City, because the community districts within the city are not independent entities and do not play a role in administering the school meal programs.

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# VIII. CONCLUSIONS AND LIMITATIONS

Allowing direct certification based on income eligibility identified through Medicaid data has the potential to expand the number of eligible students who are certified without needing to submit applications, increase the numbers of school meals served, and affect the administrative costs incurred in the certification process. The evaluation of the DC-M demonstration is assessing the magnitude of these changes in selected States and districts, and examining challenges encountered in the implementation process. This chapter summarizes key findings, notes important limitations, and looks ahead to upcoming components of Year 2 (SY 2013–2014) of the DC-M evaluation.

## A. Summary of findings

- **Certification.** Among the two random assignment States that began DC-M early enough in the school year to assess impacts on certification for school meal benefits, statistically significant impacts were found for New York City. No statistically significant impacts were found in Illinois, but not all districts in that State had implemented DC-M by the end of October in the first year of the demonstration—the reference point for certification outcomes. In New York City, DC-M increased the percentage of students directly certified to receive free meals by 7.1 points. The impact on the total percentage of students certified for free meals in New York City is smaller (5.6 percentage points) because some of the students directly certified under DC-M would have been certified for free meals by application in the absence of DC-M.
- **Participation.** DC-M had a positive, statistically significant impact on the percentage of lunches served for free in Illinois and New York City and on the percentage of breakfasts served for free in all three of the random assignment States. The study found impacts of 1.9 and 3.0 percentage points on, respectively, the percentages of lunches and breakfasts served for free in the pooled sample of districts in the random assignment States. The impact on lunches was largest in Illinois, and the impact on breakfasts was largest in Florida. No statistically significant impact on the percentage of lunches served for free was found in Florida. DC-M had no statistically significant impact on the average number of lunches served per student per day in any random assignment State, but a negative impact was found on the average number of breakfasts served per student per day in Florida.
- **Federal reimbursement costs.** DC-M had statistically significant impacts on Federal reimbursement cost outcomes in Illinois, but not in the other random assignment States. Specifically, the impact on the average daily reimbursement per student for lunches was four cents in Illinois, but was not statistically significant in Florida, New York City, or the pooled sample. The analysis found no statistically significant impact on the average daily reimbursement per student for breakfasts in any State. DC-M had a statistically significant impact on the average reimbursement per meal served for Illinois but not for Florida or New York City. The impacts in Illinois were seven cents per lunch and three cents per breakfast. This resulted in a statistically significant three-cent impact on lunches and four-cent impact on breakfasts for the pooled sample of treatment districts.

- **State administrative costs.** The total cost of implementing DC-M (over and above other direct certification costs) at the State level in Year 1 was about $322,000 across the five demonstration States, including $108,000 in the three random assignment States and $213,000 in the two universal implementation States. Costs varied widely by State, as did the proportion of costs incurred by the Medicaid agency. Most State administrative costs were incurred for start-up activities.
- **Challenges.** States encountered challenges while planning and preparing for DC-M, including difficulties with staff availability or turnover, understanding Medicaid agency timelines for systems changes, and developing specifications for creating the initial DC-M eligibility file. These challenges resulted in delays in implementation in some States.

## B. Limitations of findings

Limitations of the DC-M sample, the demonstration design, and the data available necessitate caution in interpreting the findings. Chapter II and Appendix A provide a more detailed discussion of limitations.

The DC-M evaluation is based on a nonrepresentative sample of States and districts. The States that applied to participate differ systematically from other States in the nation. For example, their interest likely indicates that their data systems and interagency relationships are more conducive to implementing DC-M than in other States. Within these States, the selection of districts was subject to several constraints outside the control of the evaluation that resulted in excluding some of the largest districts, and some of the districts with the highest percentages of students certified for free or reduced-price meals. These sample exclusions limit the ability to define a meaningful universe of districts to which the demonstration and evaluation findings might generalize. The within-State findings presented in this report cannot be considered representative of any State as a whole, and the pooled sample is not representative of the combined set of States or the nation.

There are also limitations related to the data available for the evaluation. Some States were unable to provide specific data elements or data for some evaluation sample districts. Details on the prevalence of missing data and how it was addressed are provided in Appendix A. In addition, several States struggled to begin DC-M at the start of the school year, which limited the data available from the first year of implementation. Most notably, Florida did not begin until February, after the reference point for certification data, so the measures of certification used in the study could not reflect DC-M outcomes in that State. Finally, data on costs and challenges could not be collected from districts in Year 1, so the analysis presented in this report includes only administrative costs and challenges reported by State-level staff.

A later report of findings from Year 2 of the DC-M demonstration will address some of these limitations. The sample will be increased somewhat by including States and districts that began implementing DC-M in the 2013-2014 school year, and the set of outcomes examined will be expanded to include costs incurred and challenges encountered at the district level. Also, in the second year of the demonstration, DC-M was conducted at the beginning of the school year in the Year 1 States and districts, so the report will capture a full year of implementation in those locations.

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# APPENDIX A

# METHODS

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This appendix describes the Participation and Cost Evaluation sample as well as the data collection and analysis methods used for the DC-M Year 1 (SY 2012-2013) report.

## A. Sample

**Demonstration States.** FNS solicited applications from States to participate in the DC-M demonstration and selected five—Florida, Illinois, Kentucky, New York, and Pennsylvania—to begin implementing DC-M in SY 2012–2013 (Year 1).[40] DC-M is conducted in randomly selected districts within some of the demonstration States (random assignment States) and implemented Statewide in others (universal implementation States). Of the five States participating in SY 2012–2013, three (Florida, Illinois, and New York City) are random assignment, and the other two (Kentucky and Pennsylvania) are universal implementation. An additional State, Massachusetts, was selected for SY 2013–2014 (Year 2) and will be included in the later components of the study.[41] Whether a State was designated for random assignment or universal implementation was determined by FNS and the State based on the State's application to participate in the demonstration and subsequent discussions between the State and FNS.

**DC-M evaluation districts.** The demonstration sample frame for each State was based on the list of districts in the State's DC-M application submitted to FNS. To refine the sample frame based on the objectives of the evaluation, certain types of entities were excluded from the States' lists, including private schools; residential programs; those that did not appear in the Verification Summary Report (VSR, FNS Form 742) data; and districts implementing Provision 2 or 3 in more than 20 percent of their schools. Each of the following additional exclusions affected only some of the States:

- HHFKA specified that districts selected for the demonstration in random assignment States in SY 2012–2013 collectively must include no more than 2.5 percent of all students certified for free and reduced-price meals in the nation, or approximately 688,000 certified students. This resulted in the exclusion of very large districts—the five largest in Florida and Chicago Public Schools in Illinois—from the sample frame of districts to begin DC-M in SY 2012–2013.
- Districts implementing the CEP in any schools were excluded from the evaluation. At the time the SY 2012–2013 sample was selected, Illinois Kentucky, and New York were the only States in the DC-M demonstration where CEP was authorized. In addition, FNS requested the exclusion of CEP-eligible districts in Illinois identified as potential comparison districts for a study of the CEP. Because CEP eligibility depends on the percentage of students identified as eligible for free meals without completing an application, these exclusions resulted in a sample with a lower percentage eligible for free meals than in the State as a whole.

[40] A sixth State, Alaska, was initially selected but withdrew before implementing DC-M.

[41] The demonstration also expanded into new districts in three of the Year 1 states. New York City, which entered the demonstration in Year 1, continues to be considered a separate "State" from the rest of New York State, which entered in Year 2 with approximately 300 districts. In Florida and Illinois, smaller numbers of new districts joined in Year 2.

- In New York, only New York City participated in Year 1 of the demonstration. The 32 Community School Districts in the city were randomly assigned to conduct DC-M or not and are considered as districts in the data collection and analysis.[42] Although none of the community districts was excluded from the sample frame, the State's application limited the schools that could be included in the demonstration and evaluation to those that (1) were not participating in Provision 2 and (2) had electronic point-of-sale systems. This second criterion resulted in a sample with a higher proportion of high schools than the city as a whole.

These exclusions make the resulting samples less representative of each State as a whole and, for some States, less representative of any well-defined and policy-relevant subset of districts in the entire State. Also, the differential effects of exclusions across States make cross-State comparisons less meaningful.

For each of the three random assignment States, districts from the final sampling frame were matched into pairs based on district characteristics.[43] For each pair, one of the districts was randomly assigned to the treatment condition (DC-M) and the other to a control condition (no DC-M). All treatment and control districts in these States are included in the DC-M evaluation. The two universal implementation States include treatment districts only (and no control districts) because DC-M was implemented Statewide. For each of the random assignment States, we compared the values of the outcome variables measured for the year before DC-M began (SY 2011–2012) for districts in the treatment group to those of the control group and found no statistically significant differences at baseline (Tables A.1a and A.1b).

**Participation and Cost Evaluation districts.** Table II.1 shows the sample for the Participation and Cost Evaluation for Year 1 of the demonstration. The sample includes all treatment and control districts in the three random assignment States (Florida, Illinois, and New York City) and a sample of 30 districts in each of the two universal implementation States (Kentucky and Pennsylvania).

In the aftermath of Hurricane Sandy in 2012, community districts in New York City were authorized to serve school meals to all students for free for a period of time that varied by district. All community districts served all meals for free during November and December.[44] Some districts continued serving all meals for free beyond December and were excluded (along

[42] Community school districts are administrative units within the New York City Department of Education that do not play any role in the NSLP/SBP certification process.

[43] The matching process was designed to minimize the pairwise differences between treatment and control group districts along six variables: (1) the percentage of students eligible for free meals; (2) the percentage of students eligible for free or reduced-price meals; (3) the percentage of students eligible for free meals that were certified based on an application; (4) the overall participation rate, that is, the average number of meals served daily divided by enrollment; (5) the blended reimbursement rate, a weighted average of the percentages of free, reduced-price, and full-price meals served, where the weights are the per-meal reimbursement rates for lunches; and (6) the number of students eligible for free or reduced-price meals (on a logarithmic scale).

[44] Participation and reimbursement data from those months are excluded from our analyses.

## Table A.1a. Baseline characteristics of treatment and control districts in SY 2011–2012 (before DC-M demonstration), unweighted

| | NSLP | | | SBP | | |
|---|---|---|---|---|---|---|
| | Treatment districts | Control districts | Difference | Treatment districts | Control districts | Difference |
| **Florida** | | | | | | |
| Percentage of students directly certified[a] for free meals | 33.5 | 32.6 | 0.9 | 33.5 | 32.6 | 0.9 |
| Total percentage of students certified for free meals | 51.6 | 50.8 | 0.8 | 51.6 | 50.8 | 0.8 |
| Average number of meals served per student per day | 60.7 | 58.8 | 1.9 | 25.5 | 22.3 | 3.2 |
| Percentage of meals served for free | 68.6 | 68.0 | 0.6 | 81.4 | 77.7 | 3.7 |
| Federal reimbursement costs per student per day (dollars) | 1.3 | 1.3 | 0.0 | 0.4 | 0.4 | 0.1 |
| Blended reimbursement rate[b] (dollars) | 2.2 | 2.2 | 0.0 | 1.6 | 1.5 | 0.1 |
| **Illinois** | | | | | | |
| Percentage of students directly certified[a] for free meals | 19.6 | 19.9 | -0.4 | 19.6 | 19.9 | -0.4 |
| Total percentage of students certified for free meals | 33.9 | 34.6 | -0.8 | 33.9 | 34.6 | -0.8 |
| Average number of meals served per student per day | 60.4 | 59.8 | 0.6 | 20.9 | 20.6 | 0.3 |
| Percentage of meals served for free | 42.6 | 43.7 | -1.1 | 68.2 | 69.5 | -1.38 |
| Federal reimbursement costs per student per day (dollars) | 0.9 | 0.9 | -0.0 | 0.3 | 0.3 | 0.0 |
| Blended reimbursement rates[b] (dollars) | 1.5 | 1.5 | -0.0 | 1.4 | 1.4 | -0.0 |
| **New York City** | | | | | | |
| Percentage of students directly certified[a] for free meals | 43.5 | 43.6 | -0.0 | 43.5 | 43.6 | -0.0 |
| Total percentage of students certified for free meals | 47.7 | 49.4 | -1.7 | 47.7 | 49.4 | -1.7 |
| Average number of meals served per student per day | 45.7 | 50.3 | -4.6 | 17.3 | 20.3 | -3.0 |
| Percentage of meals served for free | 81.5 | 81.6 | -0.1 | 75.1 | 76.7 | -1.6 |
| Federal reimbursement costs per student per day (dollars) | 1.1 | 1.3 | -0.1 | 0.3 | 0.3 | -0.1 |
| Blended reimbursement rates[b] (dollars) | 2.5 | 2.5 | 0.0 | 1.5 | 1.5 | -0.0 |

Sources: October certification data and monthly administrative claims data provided by the States.

Notes: To facilitate comparisons across years, the results reported in this table are aggregated across the same set of months used in the Year 1 tables.

[a]Includes all students certified to receive free meals but not subject to verification, including those directly certified based on information from the SNAP, FDPIR, TANF, or Medicaid agency, children on the homeless liaison list, income eligible Head Start, pre-K Even Start, residential students in RCCIs, and nonapplicants who are approved by local officials.

[b]The blended reimbursement rate is the per-meal reimbursement rate.

*Estimate for treatment districts is significantly different from estimate for control group districts at the 0.05 level. There are no statistically significant differences in this table.

DC-M = Direct Certification-Medicaid; FDPIR = Food Distribution Program on Indian Reservations; RCCI = Residential Child Care Institution; SNAP = Supplemental Nutrition Assistance Program; SY = school year; TANF = Temporary Assistance for Needy Families.

## Table A.1b. Baseline characteristics of treatment and control districts in SY 2011–2012 (before DC-M demonstration), weighted

| | NSLP | | | SBP | | |
|---|---|---|---|---|---|---|
| | Treatment districts | Control districts | Difference | Treatment districts | Control districts | Difference |
| **Florida** | | | | | | |
| Percentage of students directly certified[a] for free meals | 30.4 | 31.2 | -0.9 | 30.4 | 31.2 | -0.9 |
| Total percentage of students certified for free meals | 47.7 | 45.9 | 1.8 | 47.7 | 45.9 | 1.8 |
| Average number of meals served per student per day | 59.4 | 54.4 | 5.0 | 22.0 | 17.7 | 4.4 |
| Percentage of meals served for free | 67.9 | 66.1 | 1.7 | 82.1 | 78.8 | 3.3 |
| Federal reimbursement costs per student per day (dollars) | 1.3 | 1.2 | 0.1 | 0.4 | 0.3 | 0.1 |
| Blended reimbursement rates[b] (dollars) | 2.2 | 2.1 | 0.1 | 1.6 | 1.6 | 0.1 |
| **Illinois** | | | | | | |
| Percentage of students directly certified[a] for free meals | 19.7 | 18.9 | 0.7 | 19.7 | 18.9 | 0.7 |
| Total percentage of students certified for free meals | 35.2 | 34.7 | 0.5 | 35.2 | 34.7 | 0.5 |
| Average number of meals served per student per day | 53.0 | 52.7 | -0.3 | 15.3 | 17.1 | -1.89 |
| Percentage of meals served for free | 49.5 | 50.0 | -0.5 | 76.1 | 76.3 | -0.2 |
| Federal reimbursement costs per student per day (dollars) | 0.9 | 0.9 | -0.0 | 0.2 | 0.3 | -0.0 |
| Blended reimbursement rates[b] (dollars) | 1.7 | 1.7 | -0.0 | 1.5 | 1.5 | -0.0 |
| **New York City** | | | | | | |
| Percentage of students directly certified[a] for free meals | 36.6 | 39.5 | -2.9 | 36.6 | 39.5 | -2.9 |
| Total percentage of students certified for free meals | 41.2 | 46.0 | -4.8 | 41.2 | 46.0 | -4.8 |
| Average number of meals served per student per day | 43.7 | 49.6 | -5.9 | 16.7 | 16.7 | -0.1 |
| Percentage of meals served for free | 78.6 | 80.4 | -1.9 | 73.7 | 76.9 | -3.3 |
| Federal reimbursement costs per student per day (dollars) | 1.1 | 1.2 | -0.2 | 0.2 | 0.3 | -0.0 |
| Blended reimbursement rates[b] (dollars) | 2.4 | 2.5 | -0.0 | 1.5 | 1.5 | -0.1 |

Sources: October certification data and monthly administrative claims data provided by the States.

Notes: To facilitate comparisons across years, the results reported in this table are aggregated across the same set of months used in the Year 1 tables.

[a]Includes all students certified to receive free meals but not subject to verification, including those directly certified based on information from the SNAP, FDPIR, TANF, or Medicaid agency, children on the homeless liaison list, income eligible Head Start, pre-K Even Start, residential students in RCCIs, and nonapplicants who are approved by local officials.

[b]The blended reimbursement rate is the per-meal reimbursement rate.

*Estimate for treatment districts is significantly different from the estimate for control group districts at the 0.05 level. There are no statistically significant differences in this table.

DC-M = Direct Certification-Medicaid; FDPIR = Food Distribution Program on Indian Reservations; RCCI = Residential Child Care Institution; SNAP = Supplemental Nutrition Assistance Program; SY = school year; TANF = Temporary Assistance for Needy Families.

with the districts to which they were matched for random assignment) from our Year 1 analyses.[45]

## B. Data collection

For the Participation and Cost Evaluation, we collected three key types of data in the first year of the demonstration: (1) district-level administrative data on certification and NSLP and SBP participation, (2) State agency administrative cost data pertaining to start-up and ongoing DC-M activities, and (3) State agency views on DC-M implementation challenges.[46]

### 1. Certification and participation data

Administrative data on certification and meal participation were collected for each district in the treatment and control groups in random assignment States and for each sampled district in universal implementation States. The data were collected from each State in the study for both the first school year of the demonstration, SY 2012–2013 and the year prior to the demonstration (SY 2011–2012) to (1) help improve the precision of our estimates of the impacts of DC-M on certification and participation and (2) enable pre-post comparisons. District-level data collected for each period fall into two broad categories: (1) information on enrolled students by certification status and basis for certification and (2) monthly participation (that is, meals served) information for the NSLP and SBP.[47] The specific data elements collected align with the district-level data that States typically collect from districts for administrative reporting.

***Certification data.*** The reference date for the certification data collected is the last operating day in October because districts must report certification statistics to FNS on Form 742 as of that date and thus have these data available.[48] The data elements collected include the following:

- Total number of students certified for free meals
- Total number of students certified for reduced-price meals
- Number of students certified by each method of certification, such as:
  - Application, by whether based on categorical eligibility or income
  - Direct certification[49]
- Total number of students enrolled in the district

[45] Five pairs of community districts were excluded. The method used for matching districts is described below.

[46] In Year 2, data are also being collected from districts on administrative costs and implementation challenges.

[47] Data on participation in the NSLP Afterschool Snack Program (ASP) and Special Milk Program (SMP) were collected at the same time but will be analyzed in a separate report.

[48] This detail of the study design was based on the assumption that DC-M would begin at the beginning of the school year. However, as discussed in the limitations section, some States and districts had not implemented DC-M by the end of October, so the effects of DC-M in those locations are not captured by this outcome measure.

[49] Most states provided the number of students certified to receive free meals but not subject to verification as a more readily available proxy for the number directly certified. In addition, although we also requested the number of students directly certified by source of direct certification (Medicaid, SNAP, etc.), that information was not available from any DC-M State in Year 1.

***NSLP/SBP participation data.*** Data were collected from States on the total numbers of reimbursable lunches and breakfasts served, by reimbursement category (free, reduced-price, paid) in each month during SY 2011–2012 and SY 2012–2013, for each district in the evaluation sample. To facilitate analyses of Federal reimbursement costs, we also requested data on not only the numbers of free, reduced-price, and paid meals, but also the numbers of meals reimbursed at the slightly higher "needs-based" NSLP rates or "severe-needs" SBP rates for which some districts or schools qualify.[50] In addition, starting in October 2012, districts that are certified as meeting new school meal pattern and nutrition regulations receive an extra six cents per lunch served. All rates for SY 2011–2012 and SY 2012–2013 are detailed in Table A.2 below.

## Table A.2. NSLP and SBP Federal reimbursement rates, SY 2011–2012 and SY 2012–2013

| | NSLP Federal reimbursement rates (dollars) | | | SBP Federal reimbursement rates (dollars) | | |
|---|---|---|---|---|---|---|
| | Free | Reduced-price | Paid | Free | Reduced-price | Paid |
| **SY 2011–2012** | | | | | | |
| Standard rate | 2.77 | 2.37 | 0.26 | 1.51 | 1.21 | 0.27 |
| Needs-based or severe-needs rate | 2.79 | 2.39 | 0.28 | 1.80 | 1.50 | 0.27 |
| **SY 2012–2013** | | | | | | |
| Without six-cent performance-based increase | | | | | | |
| Standard rate | 2.86 | 2.46 | 0.27 | 1.55 | 1.25 | 0.27 |
| Needs-based or severe-needs rate | 2.88 | 2.48 | 0.29 | 1.85 | 1.55 | 0.27 |
| With six-cent performance-based increase | | | | | | |
| Standard rate | 2.92 | 2.52 | 0.33 | n.a. | n.a. | n.a. |
| Needs-based or severe-needs rate | 2.94 | 2.54 | 0.35 | n.a. | n.a. | n.a. |

Sources: SY 2012–2013 Rates: http://www.fns.usda.gov/cnd/Governance/notices/naps/NAPs12-13.pdf
SY 2011–2012 Rates: http://www.fns.usda.gov/cnd/Governance/notices/naps/NAPs11-12.pdf

Note: These rates exclude additional commodity payments for school lunches.

n.a. = Not applicable; NSLP = National School Lunch Program; SBP = School Breakfast Program; SY = school year.

Schools operating under the CEP or Provision 2 or 3 for the NSLP or SBP were excluded from data collected for those programs. Any schools that do not participate in the SBP, or that operate under Provision 2 or 3 for breakfast only, were excluded from the data collected on breakfast participation.

### 2. State cost data

Data on the administrative costs of setting up and running DC-M at the State level were collected from State agency staff both for the agency providing the Medicaid data and for the child nutrition agency. We asked about time spent on DC-M over and above that spent on other direct certification activities. Based on the study team's work with the States during the early phases of the demonstration, the team became familiar with the main activities in which State

[50] For the NSLP, entire districts may qualify for needs-based rates. For the SBP, severe-needs rate eligibility varies by school.

agency staff were involved (such as negotiating data-sharing agreements, developing specifications for Medicaid extracts to be used in matching, developing and testing the programs that created the extracts, developing specifications and programming for matching Medicaid and student data). An Excel workbook (a set of spreadsheets) was created for the Medicaid and child nutrition agencies that was distributed quarterly (included as Appendix H). The workbooks recorded time spent (hours per month) on each activity (with separate activity lists for the Medicaid and child nutrition agencies). Hours could be recorded for each staff member. Staff were listed by job title, and a separate page in the workbook collected salary and fringe benefit information. If a site considered the salary of specific individuals to be sensitive information, the average salary for the position was accepted. Additional pages in the workbook were provided for other direct costs and indirect costs, but these items tended not to be relevant to the incremental costs of the program. Workbooks were sent to each agency in the first month of each quarter with the request that they fill them out each month and return them to us by the end of the month after the quarter for which data were being collected. Because the State agencies were not required to track their time spent on the demonstration in their accounting systems, data provided were approximate, particularly when the forms were filled out substantially later than the relevant quarter, which happened in at least two States. Ultimately, the study team received workbooks for all of Year 1 from the relevant agencies in all five States.

We conducted follow-up interviews with State agency staff who completed the cost workbooks to clarify the roles of the various staff and the way they understood the activities on the list. One or two interviews were completed with each agency. The initial interviews asked for feedback on the workbook, how the data were compiled, the roles of the various individuals participating in the implementation of DC-M, and the activities in which they were engaged. (A copy of the protocol is also included in Appendix H.) For some agencies, a second interview was conducted after the second quarterly workbook was received; for others, emails were exchanged. Additional follow-up was not needed, because the same respondents also provided information through the challenge interviews, and their responses were usually clear and involved relatively few hours spent after the first or second quarter. Some additional e-mail questions were sent to respondents during the analysis period when the information was compiled for each State. Data were also compared to the findings from the challenge interviews.

### 3. Implementation challenges data

Insight Policy Research, Mathematica's subcontractor for the DC-M evaluation, conducted two rounds of semi-structured telephone interviews with State agency staff in SY 2012–2013 to learn about the challenges experienced and lessons learned during DC-M implementation. In most States, representatives from both the child nutrition agency and the Medicaid agency involved in the demonstration were interviewed (see Table VI.1 for specific agencies). The sample was limited to nine respondents to comply with OMB guidelines concerning the maximum number of individuals who can be contacted without receiving approval. Thus, in one State (New York City), only one respondent, a representative of the child nutrition agency, was interviewed.[51] The first round of interviews took place soon after DC-M began in each State, typically in fall 2012,

[51] In the second year of the demonstration, SY 2013–2014, representatives of each State agency involved in DC-M, as well as staff from a sample of school districts were interviewed.

and the second round was conducted in the spring.[52] Interviews averaged about one hour in length.

The interview protocols (see Appendix F) were developed to elicit respondents' experiences with DC-M in their State. They were designed to gather information pertaining to the research questions on topics such as (1) start-up and implementation challenges, including time burdens on staff, (2) time between enrollment in Medicaid and DC-M, (3) the variation in matching success, and (4) lessons learned.

The interview team was composed of Insight's Project Director and a Senior Researcher. At the start of each interview, the interviewer asked for the respondent's permission to record the interview for transcription purposes. Interviewers followed the semi-structured protocols, but changed the order and wording of questions as needed to facilitate the conversations.

## C. Key outcome measures

### 1. Certification outcomes

DC-M offers two potential benefits to students and their families: (1) certification for free meals when they might otherwise pay the full or a reduced price and (2) certification without having to complete an application. Aligned with these benefits, our two primary certification measures are:

- Total percentage of students certified for free meals, defined as the total number of students in the district who are certified for free meals (as of the last operating day in October) divided by the total number of students enrolled
- Percentage of students directly certified for free meals, defined as the number of students in the district who are certified without needing to submit an application (as of the last operating day in October) divided by the total number of students enrolled[53]

Appendix B shows the reduced-price and paid certification rates, defined similarly as percentages of the number of students enrolled.

### 2. Participation outcomes

Because the number of school meals served depends on the size of the district, as well as the certification statuses and participation behavior of students, the focus is on outcome measures that account for size, rather than comparing raw numbers of meals. Our primary participation measure, computed separately for the lunch and breakfast programs, is the average number of meals served per student per day, defined as the total number of reimbursable meals served divided by the product of the total number of students enrolled in schools participating in either

[52] The number of interviews with each respondent varied due to the delayed start of the demonstration in some States.

[53] As noted earlier, most states provided the number of students not subject to verification (as required for Form 742) as a proxy for the number directly certified. This includes students directly certified based on information from the SNAP, FDPIR, TANF, or Medicaid agency; children on the homeless liaison list, income eligible Head Start and pre-K Even Start participants, residential students in RCCIs, and non-applicants who are approved by local officials.

the NSLP or the SBP in the district (as of the end of October) and the number of operating days during the relevant time period.[54] The number of meals served per student per day can be conceptualized as the percentage of students who received a school meal on a typical school day. A second key participation outcome is the percentage of meals that were served for free. Appendix C also shows the number of meals served per student per day separately for each reimbursement category (free, reduced-price, paid).

Each of these participation measures is computed based only on months after DC-M began in Year 1, and for the same set of months the year prior to DC-M. Specifically, data are aggregated across months beginning with September for Kentucky, New York City, and Pennsylvania; October for Illinois; and February for Florida.[55] In addition, November and December are excluded from the analysis for New York City because school meals were served to all students for free during those months after Hurricane Sandy.[56]

The level of detail in the data States provided for the participation analysis varied. For example, most States provided separate counts of serving days for the NSLP and SBP, but Illinois and New York City provided a single number of operating days, which was used for both meal programs.

### 3. Federal reimbursement outcomes

Because the reimbursement to a district varies with the number of meals served in the district, which, in turn, varies with the number of students in the district, it is useful to examine outcome measures that standardize by district size. Accordingly, our primary measures of the impact of DC-M on Federal reimbursements are reimbursement costs per student per day (RPSD) and the blended reimbursement rate (BRR). (Tables in Appendix D show the total reimbursement costs used in computing these measures.)

RPSD is defined as total reimbursement costs divided by the product of the total number of students enrolled in the district (as of the end of October) and the number of operating days during the time period. The denominator is the same as that used for calculating the number of meals served per student per day. BRR is defined as total reimbursement costs divided by the number of meals served. In other words, this measures the average reimbursement per meal served.[57] Both outcomes are calculated in 2011–2012 and 2012–2013 over the months after DC-M began in Year 1 in each State.

[54] Although the numerator and the number of operating days vary by meal program, the same district enrollment number is used for both the NSLP and the SBP participation rates. Thus, in deriving the participation rate for the SBP, for example, the total enrollment of schools participating in the SBP is not used as the denominator even though sometimes fewer schools in a district participate in the SBP than in the NSLP.

[55] Because the data on certification status is as of October, before DC-M began in Florida, that State is excluded from the breakdown of participation rates by certification status presented in Appendix Tables C.4a-b.

[56] As mentioned earlier in this appendix, some community districts in New York City were authorized to serve school meals to all students for free beyond these two months. Those five district pairs were excluded from the Year 1 analyses entirely.

[57] The RPSD and the BRR are related as follows: RPSD = BRR * participation rate.

In some States, the data provided for the reimbursement cost analysis was limited or incomplete, and assumptions had to be made. For example, Pennsylvania did not provide data on which districts received the extra two-cent needs-based NSLP payments or which districts received the extra six-cent performance-based payments for SY 2012–2013. As a result, the percentage of free or reduced-price lunches for students was used to impute which districts received the additional needs-based payment, and we assumed that no districts in the State received the extra performance-based payment. In Florida, one large district was entirely Provision 2 for the SBP in SY 2011–2012 (and thus excluded from the SBP data for that year) but not Provision 2 in SY 2012–2013. We imputed the SY 2011–2012 breakfast counts, based on the assumption of a constant ratio of breakfasts to lunches.

### 4. State administrative cost outcomes

The key outcomes for the State administrative cost analysis are total costs of implementing DC-M in each State during Year 1, and breakdowns by agency (child nutrition or Medicaid) and by start-up versus ongoing costs. Costs per district that implemented DC-M are also presented. Start-up costs were defined as costs up to and including the month when DC-M was first conducted, except where some start-up costs (such as programming for computer matching) extended a short time after (because the program code was refined and documented after the first match occurred) and then ended. Ongoing costs were all costs incurred after the first month of DC-M, except as noted. Tables in Appendix G summarize the State administrative cost data.

## D. Analysis methods

### 1. Quantitative analyses

**Comparing treatment and control districts.** In Florida, Illinois, and New York City, randomly assigning one district from each matched pair to a treatment group and the other to a control group allows us to obtain unbiased estimates of the impacts of DC-M on certification, participation, and costs. For these random assignment States, regression models—as described below—are estimated to compare the certification, participation, and cost outcomes of the treatment group districts with the outcomes of the control group districts to generate estimates of the impacts of DC-M. Districts in which no schools participate in the SBP are excluded from SBP analyses.

**Pooled estimates.** To summarize the results obtained across the demonstration States and districts, "pooled estimates" that are derived by aggregating across the districts from each State are presented. Pooled estimates pertain only to the particular collection of districts included in the Participation and Cost Evaluation; they are not intended to have any broader generalizability. In particular, they do not estimate the likely effects of DC-M if it were implemented throughout the demonstration States or the entire country.

**Regression adjustment.** To improve the precision of the estimates and control for random differences in baseline (SY 2011–2012) characteristics, regression-adjusted impact estimates and the corresponding adjusted treatment and control group means were computed using Stata analytic software. To generate State-specific estimates and pooled estimates for each outcome, a linear district-level regression model was fitted that included the following covariates:

- Indicator for treatment status (1 if a treatment district; 0 if a control district)

- State indicator variables
- Baseline values for the following:
  - Percentage of students directly certified
  - Percentage of students certified for free meals
  - Percentage of students certified for free or reduced-price meals
  - Percentage of meals served for free[58]
  - Average number of meals served per student per day
  - Reimbursement per student, per day
  - Blended reimbursement rate
  - Log of enrollment
- Interactions between the State indicator variables and the treatment status indicator
- Interactions between the State indicator variables and the baseline certification, participation, reimbursement, and enrollment variables

All regressions were weighted using the denominator of the outcome ("dependent") variable as a weight. For example, for the percentage of students directly certified (and several other outcomes), the weighting variable was enrollment. When deriving pooled estimates, States were designated as strata for obtaining confidence interval half widths.

**Extrapolations.** To satisfy the requirement of estimating potential effects on Federal reimbursement costs[59] if DC-M were adopted across a broader set of jurisdictions, separate extrapolations are presented under each of two assumptions: (1) that all States adopt DC-M and (2) that only a subset of States most likely to be able to conduct DC-M adopt it.[60] Both sets of extrapolations also assume that DC-M was implemented for the full school year. To generate national extrapolations of reimbursement impacts, an additional weighting factor is included in the regression models that is intended to adjust the model such that it generalizes (for the treatment districts and, separately, the control districts), to all districts in the country, at least in terms of the characteristics taken into consideration in the weighting. The weights used for extrapolations are developed using procedures described in Stuart et al. (2011) and Hulsey et al. (2014). We fit four separate (logistic) propensity models to produce weights for the treatment and control districts under each of the two assumptions described above.[61] For the models for

[58] In regressions with dependent variables related to the SBP, the covariates measuring percentage of meals served for free, MPSD, RPSD, and BRR were also based on breakfasts. In the other regressions, these covariates were based on lunches.

[59] In Year 2, the national extrapolations will also include impacts on administrative costs incurred by districts.

[60] In addition to the 50 states, the District of Columbia, Guam, and Puerto Rico are assumed to implement DC-M under the first assumption.

[61] Districts from all States are included in the logistic regression under the assumption that all States adopt DC-M. Under our other assumptions, only districts from the States that are most likely to be able to conduct DC-M are included in the regression. In both instances, we exclude districts of private schools, districts in which more than 20

treatment districts, we regressed an indicator variable that was 1 if the district was a treatment district and 0 otherwise on a set of predictors that were available for all districts nationwide from the FNS 742: percentage of students certified for free meals, percentage of students certified for free or reduced-price meals, percentage of students certified via application, number of students certified for free or reduced-price meals, and district enrollment. We used stepwise regression in model fitting so that only significant predictors were included in the final model. We took the inverse of the estimated model prediction (or propensity) for each treatment district and used it as a weighting factor in the extrapolations.[62] Similar procedures were conducted for the models for weighting control districts, except the indicator variable was 1 if the district was a control district (and 0 otherwise). This approach to generating national extrapolations is crude and has severe limitations for this application, as discussed later in this appendix. National extrapolations of reimbursements per student, per day (RPSD) from the regressions are multiplied by national data on student enrollments and annual serving days to yield estimates of the total dollar amount of Federal reimbursements with and without DC-M for the entire school year.[63] The calculated difference between costs with DC-M (based on treatment districts) and without DC-M (based on control districts) is the extrapolated impact of DC-M.

**Measuring the precision of estimates.** In addition to the regression-adjusted impact estimates, 95-percent confidence interval (CI) "half widths" are also provided. These indicate the margin of error around the estimates due to having samples of districts—rather than all districts—in each State and due to any model adjustments. If, for example, an estimated impact of 5 percentage points on the direct certification rate has a margin of error of plus or minus 2 percentage points, it is likely that estimates of the direct certification rate from different samples would fall in the range from 3 to 7 percentage points. Stata analytic software's survey (svy) procedure was used to generate the confidence interval half-widths, treating States as strata when deriving pooled estimates and clusters when deriving national extrapolations.

As noted elsewhere, the impact estimates and confidence intervals should be interpreted with caution because of several important limitations. One important limitation is that the samples are not random, although they are treated as such for the derivation of the confidence intervals. Furthermore, for the national extrapolations, the confidence intervals do not account for the effects of sampling error in estimating the propensity models used to derive weights and, in particular, the extent to which the models are estimated on a sample that is not representative

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percent of schools operate under Provision 2 or 3, districts participating in the Community Eligibility Option (CEO), and residential programs or other special types of institutions serving as independent School Food Authorities.

[62] In a regression for estimating a regression-adjusted impact, the weight for a particular treatment district is the product of this extrapolation factor and the weight that the district would have received were we not doing extrapolations. The latter factor is the denominator of the outcome under consideration. For the RPSD, the denominator is the number of student days (that is, the product of the number of students enrolled and the number of days on which meals were served). To derive confidence interval half widths for the national extrapolations, we designate States as clusters, instead of strata, to account for the fact that we are making inferences beyond the States in the demonstration.

[63] To account for higher reimbursement rates in Alaska/Hawaii, an adjustment factor, similar to the one used in FNS's projections, is applied. This adjustment is only applied to the estimates developed under the assumption that all States conduct DC-M because neither Alaska nor Hawaii is in the subset of States included under the second assumption.

of the population to which we are attempting to generalize. If this sample differs in important ways from the national population of districts, as is likely the case, the true impact of DC-M if implemented more broadly may fall well outside of the confidence intervals reported here.

**Comparing Year 1 with prior year.** The random assignment design used in three States (Florida, Illinois, and New York City) allows for the derivation of internally valid causal estimates of impacts. Internally valid causal estimates cannot be obtained, however, for the two universal implementation States—Kentucky and Pennsylvania. For these States, changes between outcomes for the school year before DC-M was conducted and outcomes for the first year of DC-M implementation can be compared. However, this pre-post analysis cannot provide unbiased estimates of an impact of DC-M, because factors other than DC-M, including unobservable factors, may contribute to the observed change (see discussion of limitations later in this appendix). For example, Year 1 of DC-M implementation coincided with new NSLP nutritional requirements. These changes, unrelated to DC-M, likely affect the outcome measures examined in this evaluation of DC-M. Thus, differences observed between years cannot be attributed to DC-M.

As an example, Appendix Table B.2 shows key certification outcomes for October 2011 in the school year before DC-M began, and October 2012, in the first year of implementation.[64] Focusing first on the random assignment States, for both Illinois and New York City, the differences between outcomes the prior year and the first year of DC-M for treatment district are somewhat larger than the differences between treatment and control districts in the first DC-M year, suggesting that other factors besides DC-M contributed to the pre-post differences.[65] For example, in Illinois, the difference between the percentage of students directly certified in treatment districts in SY 2011-12 and SY 2012-2013 is 3.1 percentage points (Appendix Table B.2), compared to an unadjusted difference of 0.7 percentage points (not shown) between the percentage of students directly certified in treatment and control districts. The difference between the unadjusted impact of 0.7 and the year-to-year change of 3.1 is not attributable to DC-M. It is likely that the differences between outcomes across years in universal implementation States are also influenced by the same factors (and potentially other factors specific to those States) and cannot be considered impacts of DC-M.

## 2. Qualitative analyses

Interviews with State agency staff about challenges were recorded, transcribed, and imported into NVivo 10, a software program used for coding qualitative data. Insight Policy Research staff developed a draft coding scheme based on the research questions, interview protocols, and a small sample of transcripts. The Senior Researcher who conducted the interviews trained two additional staff on the coding scheme, and a sample of four transcripts was used to conduct first-cycle coding. The results of this coding exercise were used to refine the scheme to improve accuracy among coders and include additional identified themes. Staff

[64] Appendix Tables B.1a and B.1b contain the aggregated numbers of students used to compute the percentages in Appendix Table B.2. Appendices C and D include similar tables for participation and Federal reimbursement cost outcomes.

[65] In Florida, differences between certification outcomes in October 2011 and October 2012 are entirely due to other factors because (as noted earlier) DC-M had not yet begun in October 2012 in that State.

reviewed and coded each transcript using the revised scheme and discussed potential coding issues as they arose. Three transcripts were double coded to check inter-coder reliability.

Staff responsible for conducting the interviews also analyzed the data, providing an extra measure of accuracy. Each coded theme relating to the research questions was systematically analyzed across and within States. Staff examined data to identify patterns relating to the challenges and impact of the demonstration on States and their agency staff. This process was also used to determine the underlying reasons behind any differences between States, and how these differences may relate to the context in which the demonstration was conducted. Key themes, such as the importance of inter-agency cooperation to the success of DC-M, were then translated into research findings.

## E. Limitations

Several limitations of the DC-M demonstration sample, the evaluation subsample, the available data, and the study design and methods should be noted. The findings in this report should be interpreted cautiously in light of these limitations.

### 1. Sample limitations

The DC-M evaluation is based on nonrepresentative samples of States and districts. The States that applied to participate are not a random probability sample and differ systematically from other States in the nation. Among other characteristics, their interest in participating in the demonstration suggests that their State-level data systems and interagency relationships are conducive to a greater willingness and, likely, a greater ability than exists in other States to implement DC-M. Within these States, the selection of districts was subject to several constraints, as detailed earlier in this appendix. Because of a Congressionally-imposed limit on the number of students certified for free and reduced-priced meals in DC-M districts, some of the largest districts—with substantial fractions of the State student populations—had to be excluded from the demonstration and evaluation. In addition, other districts had to be excluded because of their role in another evaluation being conducted by FNS, and one district (New York City) excluded schools without electronic point-of-sale systems from the demonstration sample. Because these sample exclusions affected States differently, comparisons of results across States are less reliable.

These limitations on the selection of the samples within each demonstration State severely limit the ability to define a meaningful universe of districts to which the demonstration sample and evaluation findings might generalize. The estimated impacts presented in this report for the States should not be interpreted as indicative of the likely effects of Statewide adoption of DC-M. Furthermore, the estimates for the sample of districts pooled across the demonstration States pertain to that specific sample only and do not generalize more broadly to the combined set of States or to the nation as a whole.

Finally, although the national extrapolations attempt to estimate the potential effects of DC-M if its implementation were expanded nationwide, the evaluation includes only three

random assignment States.[66] Because the samples in Florida and New York City are relatively small, approximately 90 percent of the total weight given to districts for obtaining the national extrapolations is assigned to the districts from just one State, Illinois. Therefore, if Illinois is atypical in any important way, the national extrapolations could be highly misleading. In any case, with so few States, the national extrapolations are highly imprecise. That is, they have very large margins of error, even when the States and districts are assumed to be random samples, which is an invalid assumption that leads to understatement of the error in the estimates. Furthermore, given the limitations on how the evaluation sample was selected, there is no basis in statistical sampling theory for generalizing beyond those districts to a broader collection of districts, such as all districts in the nation.

### 2. Data and methods limitations

This report focuses on data from the first year of DC-M implementation (SY 2012–13), during which several States struggled to begin the demonstration at the beginning of the school year. Most notably, Florida did not begin until February, after the reference point for certification data, so the measures of certification used in the study would not reflect the effects of DC-M in that State. Even in other States, where DC-M did begin before the end of October, some districts may have implemented DC-M later than others, and start-up challenges may have affected implementation. Year 2 findings may differ substantially from those presented here.

Data on costs and challenges could not be collected from districts in Year 1, so the analysis presented in this report includes only State-level administrative costs and challenges reported by State staff. The Year 2 analysis will include cost and challenges data from districts.

There are several additional limitations related to the data available for the evaluation:

- Although we requested data for all evaluation sample districts, adequate data were not provided for 14 of the 678 districts in Illinois. The districts for which data were available might differ systematically from nonresponding districts.
- As described in greater detail above, some States were unable to provide certain specific data elements for any districts. For example, in Pennsylvania, imputation of which districts received needs-based Federal reimbursement rates had to be done as well as making assumptions regarding the receipt of performance-based reimbursement rates.
- One goal of the qualitative interviews was to provide information on the variation by district- and student-level characteristics in the level of success of matching children in Medicaid records with school enrollment data. However, at the time of the State interviews, few staff were able to provide information on their matching success rates or describe how results might vary based on other factors.

[66] The sample in New York includes only 32 community districts in New York City with nonrepresentative samples of schools. As noted earlier, the community districts in New York City are treated as separate districts in the demonstration and analysis.

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# APPENDIX B

# SUPPLEMENTAL TABLES RELATED TO CERTIFICATION OUTCOMES

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## Table B.1a. Distribution of students, by NSLP certification category in SY 2011–2012 (before DC-M demonstration)

| State | Number of students | | | | |
|---|---|---|---|---|---|
| | Directly certified[a] | Total certified for free meals[b] | Certified for reduced-price meals | Paid | Enrolled in schools |
| **Treatment districts in random assignment States** | | | | | |
| Florida treatment | 162,311 | 254,855 | 37,733 | 241,871 | 534,459 |
| Illinois treatment | 125,180 | 223,983 | 36,999 | 375,785 | 636,767 |
| New York City treatment | 41,592 | 46,845 | 6,786 | 60,087 | 113,718 |
| **Total for treatment districts in random assignment States** | **329,083** | **525,683** | **81,518** | **677,743** | **1,284,944** |
| **Control districts in random assignment States** | | | | | |
| Florida control | 219,405 | 322,287 | 45,531 | 334,445 | 702,263 |
| Illinois control | 108,294 | 198,241 | 34,258 | 339,189 | 571,688 |
| New York City control | 35,781 | 41,669 | 5,210 | 43,708 | 90,587 |
| **Total for control districts in random assignment States** | **363,480** | **562,197** | **84,999** | **717,342** | **1,364,538** |
| **Universal implementation States** | | | | | |
| Kentucky | 88,328 | 143,226 | 22,752 | 158,474 | 324,452 |
| Pennsylvania | 31,722 | 45,621 | 6,243 | 95,219 | 147,083 |
| **Total for universal implementation State sample** | **120,050** | **188,847** | **28,995** | **253,693** | **471,535** |

Source: October certification data provided by the States.

[a]Includes all students certified to receive free meals but not subject to verification, including those directly certified based on information from the SNAP, FDPIR, or TANF agency, children on the homeless liaison list, income eligible Head Start and pre-K Even Start participants, residential students in RCCIs, and non-applicants who are approved by local officials.

[b]Including by application, direct certification, or other categorical eligibility.

DC-M = Direct Certification-Medicaid; FDPIR = Food Distribution Program on Indian Reservations; NSLP = National School Lunch Program; RCCI = Residential Child Care Institution; SNAP = Supplemental Nutrition Assistance Program; SY = School Year; TANF = Temporary Assistance for Needy Families.

## Table B.1b. Distribution of students, by NSLP certification category in SY 2012–2013 (Year 1 of DC-M demonstration)

| State | Number of students | | | | |
|---|---|---|---|---|---|
| | Directly certified[a] | Total certified for free meals[b] | Certified for reduced-price meals | Paid | Enrolled in schools |
| **Treatment districts in random assignment States** | | | | | |
| Florida treatment[c] | 171,417 | 259,104 | 37,572 | 232,853 | 529,529 |
| Illinois treatment | 144,351 | 235,685 | 35,290 | 362,939 | 633,914 |
| New York City treatment | 49,949 | 57,091 | 7,201 | 47,481 | 111,773 |
| **Total for treatment districts in random assignment States** | **365,717** | **551,880** | **80,063** | **643,273** | **1,275,216** |
| **Control districts in random assignment States** | | | | | |
| Florida control | 217,825 | 318,833 | 43,593 | 323,476 | 685,902 |
| Illinois control | 125,915 | 211,699 | 32,949 | 324,860 | 569,508 |
| New York City control | 34,868 | 43,378 | 5,847 | 38,702 | 87,927 |
| **Total for control districts in random assignment States** | **378,608** | **573,910** | **82,389** | **687,038** | **1,343,337** |
| **Universal implementation States** | | | | | |
| Kentucky | 109,863 | 151,297 | 21,838 | 155,652 | 328,787 |
| Pennsylvania | 36,111 | 47,635 | 5,625 | 93,695 | 146,955 |
| **Total for universal implementation State sample** | **145,974** | **198,932** | **27,463** | **249,347** | **475,742** |

Source: October certification data provided by the States.

[a]Includes all students certified to receive free meals but not subject to verification, including those directly certified based on information from the SNAP, FDPIR, or TANF agency, children on the homeless liaison list, income eligible Head Start and pre-K Even Start participants, residential students in RCCIs, and non-applicants who are approved by local officials.

[b]Including by application, direct certification, or other categorical eligibility.

[c]Certification outcomes are measured as of the end of October 2012, at which time Florida had not yet conducted DC-M.

DC-M = Direct Certification-Medicaid; FDPIR = Food Distribution Program on Indian Reservations; NSLP = National School Lunch Program; RCCI = Residential Child Care Institution; SNAP = Supplemental Nutrition Assistance Program; SY = School Year; TANF = Temporary Assistance for Needy Families.

## Table B.2. Key certification outcomes in SY 2011–2012 and SY 2012–2013

| State | Percentage of students | | | | | |
|---|---|---|---|---|---|---|
| | Directly certified[a] for free meals | | | Total certified for free meals[b] | | |
| | SY 2011–2012 | SY 2012–2013 | Difference | SY 2011–2012 | SY 2012–2013 | Difference |
| **Treatment districts in random assignment States** | | | | | | |
| Florida treatment[c] | 30.4 | 32.4 | 2.0 | 47.7 | 48.9 | 1.3 |
| Illinois treatment | 19.7 | 22.8 | 3.1 | 35.2 | 37.2 | 2.0 |
| New York City treatment | 36.6 | 44.7 | 8.1 | 41.2 | 51.1 | 9.9 |
| **Pooled random assignment treatment districts** | **25.6** | **28.7** | **3.1** | **40.9** | **43.3** | **2.4** |
| **Control districts in random assignment States** | | | | | | |
| Florida control | 31.2 | 31.8 | 0.5 | 45.9 | 46.5 | 0.6 |
| Illinois control | 18.9 | 22.1 | 3.2 | 34.7 | 37.2 | 2.5 |
| New York City control | 39.5 | 39.7 | 0.2 | 46.0 | 49.3 | 3.3 |
| **Pooled random assignment control districts** | **26.6** | **28.2** | **1.5** | **41.2** | **42.7** | **1.5** |
| **Universal implementation States** | | | | | | |
| Kentucky | 27.2 | 33.4 | 6.2 | 44.1 | 46.0 | 1.9 |
| Pennsylvania | 21.6 | 24.6 | 3.0 | 31.0 | 32.4 | 1.4 |
| **Pooled universal implementation sample** | **25.5** | **30.7** | **5.2** | **40.1** | **41.8** | **1.8** |

Source: October certification data provided by the States.

[a]Includes all students certified to receive free meals but not subject to verification, including those directly certified based on information from the SNAP, FDPIR, or TANF agency, children on the homeless liaison list, income eligible Head Start and pre-K Even Start participants, residential students in RCCIs, and non-applicants who are approved by local officials.

[b]Including by application, direct certification, or other categorical eligibility.

[c]Florida had not yet conducted DC-M by the point at which certification outcomes were measured (the end of October).

DC-M = Direct Certification-Medicaid; FDPIR = Food Distribution Program on Indian Reservations; RCCI = Residential Child Care Institution; SNAP = Supplemental Nutrition Assistance Program; SY = School Year; TANF = Temporary Assistance for Needy Families.

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# APPENDIX C

# SUPPLEMENTAL TABLES RELATED TO PARTICIPATION OUTCOMES

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## Table C.1a. Total reimbursable lunches served, by certification category in SY 2011–2012 (before DC-M demonstration)

| State | Total number of reimbursable lunches served | | | |
|---|---|---|---|---|
| | Free | Reduced-price | Paid | Total |
| **Treatment districts in random assignment States** | | | | |
| Florida treatment | 16,901,130 | 2,155,025 | 5,797,918 | 24,854,073 |
| Illinois treatment | 23,907,201 | 3,672,536 | 20,624,592 | 48,204,329 |
| New York City treatment | 4,994,370 | 471,945 | 892,077 | 6,358,392 |
| **Control districts in random assignment States** | | | | |
| Florida control | 19,449,656 | 2,455,914 | 7,523,444 | 29,429,014 |
| Illinois control | 21,750,640 | 3,414,786 | 18,258,566 | 43,423,992 |
| New York City control | 4,598,033 | 399,440 | 721,325 | 5,718,798 |
| **Universal implementation States** | | | | |
| Kentucky | 19,430,501 | 2,753,000 | 11,959,955 | 34,143,456 |
| Pennsylvania | 7,206,101 | 1,019,541 | 6,589,573 | 14,815,215 |

Source: Monthly administrative claims data provided by the States.

Notes: To facilitate comparisons across years, the results reported in this table are aggregated across the same set of months used in the Year 1 tables.

DC-M = Direct Certification-Medicaid; SY = school year.

## Table C.1b. Total reimbursable lunches served, by certification category in SY 2012–2013 (Year 1 of DC-M demonstration)

| State | Total number of reimbursable lunches served | | | |
|---|---|---|---|---|
| | Free | Reduced-price | Paid | Total |
| **Treatment districts in random assignment States** | | | | |
| Florida treatment | 16,645,497 | 1,908,768 | 4,994,751 | 23,549,016 |
| Illinois treatment | 26,456,249 | 2,718,851 | 17,428,371 | 46,603,471 |
| New York City treatment | 4,824,628 | 403,379 | 811,693 | 6,039,700 |
| **Control districts in random assignment States** | | | | |
| Florida control | 19,282,268 | 2,236,752 | 6,431,468 | 27,950,488 |
| Illinois control | 22,020,630 | 3,199,113 | 16,126,223 | 41,345,966 |
| New York City control | 4,299,906 | 399,934 | 666,489 | 5,366,329 |
| **Universal implementation States** | | | | |
| Kentucky | 19,837,893 | 2,500,356 | 10,595,600 | 32,933,849 |
| Pennsylvania | 7,119,407 | 858,848 | 5,695,740 | 13,673,995 |

Source: Monthly administrative claims data provided by the States.

Notes: The results reported in this table are aggregated across months after each demonstration State implemented DC-M: September for Illinois, New York City, and Pennsylvania; October for Kentucky; and February for Florida. In addition, November and December are excluded from the analysis for New York City, because school meals were served to all students for free during those months, in the aftermath of Hurricane Sandy.

DC-M = Direct Certification-Medicaid; SY = school year.

## Table C.1c. Average daily reimbursable lunches served, by certification category in SY 2011–2012 (before DC-M demonstration)

| State | Average daily number of reimbursable lunches served | | | |
|---|---|---|---|---|
| | Free | Reduced-price | Paid | Total |
| **Treatment districts in random assignment States** | | | | |
| Florida treatment | 215,404 | 27,621 | 74,350 | 317,376 |
| Illinois treatment | 166,177 | 25,549 | 143,748 | 335,475 |
| New York City treatment | 39,086 | 3,690 | 6,960 | 49,735 |
| **Total for treatment districts in random assignment States** | **420,667** | **56,860** | **225,058** | **702,586** |
| **Control districts in random assignment States** | | | | |
| Florida control | 252,602 | 31,856 | 97,329 | 381,787 |
| Illinois control | 151,371 | 23,775 | 127,606 | 302,753 |
| New York City control | 36,158 | 3,134 | 5,661 | 44,953 |
| **Total for control districts in random assignment States** | **440,131** | **58,766** | **230,596** | **729,492** |
| **Universal implementation States** | | | | |
| Kentucky | 120,627 | 17,161 | 74,459 | 212,247 |
| Pennsylvania | 41,831 | 5,914 | 38,192 | 85,937 |
| **Total for universal implementation States sample** | **162,458** | **23,075** | **112,650** | **298,184** |

Source: Monthly administrative claims data provided by the States.

Note: To facilitate comparisons across years, the results reported in this table are aggregated across the same set of months used in the Year 1 tables.

DC-M = Direct Certification-Medicaid; SY = school year.

## Table C.1d. Average daily reimbursable lunches served, by certification category in SY 2012–2013 (Year 1 of DC-M demonstration)

| State | Average daily number of reimbursable lunches served | | | |
|---|---|---|---|---|
| | Free | Reduced-price | Paid | Total |
| **Treatment districts in random assignment States** | | | | |
| Florida treatment | 211,744 | 24,366 | 63,836 | 299,945 |
| Illinois treatment | 183,978 | 18,942 | 121,642 | 324,562 |
| New York City treatment | 37,685 | 3,148 | 6,320 | 47,153 |
| **Total for treatment districts in random assignment States** | **433,406** | **46,455** | **191,798** | **671,659** |
| **Control districts in random assignment States** | | | | |
| Florida control | 253,695 | 29,395 | 84,341 | 367,431 |
| Illinois control | 153,760 | 22,379 | 113,025 | 289,164 |
| New York City control | 33,793 | 3,135 | 5,229 | 42,157 |
| **Total for control districts in random assignment States** | **441,249** | **54,910** | **202,594** | **698,752** |
| **Universal implementation States** | | | | |
| Kentucky | 123,316 | 15,602 | 66,097 | 205,016 |
| Pennsylvania | 42,309 | 5,105 | 33,586 | 81,000 |
| **Total for universal implementation States sample** | **165,625** | **20,707** | **99,683** | **286,015** |

Source: Monthly administrative claims data provided by the States.

Note: The results reported in this table are aggregated across months after each demonstration State implemented DC-M: September for Illinois, New York City, and Pennsylvania; October for Kentucky; and February for Florida. In addition, November and December are excluded from the analysis for New York City, because school meals were served to all students for free during those months, in the aftermath of Hurricane Sandy.

DC-M = Direct Certification-Medicaid; SY = school year.

## Table C.2a. Total reimbursable breakfasts served, by certification category in SY 2011–2012 (before DC-M demonstration)

| State | Total number of reimbursable breakfasts served | | | |
|---|---|---|---|---|
| | Free | Reduced-price | Paid | Total |
| **Treatment districts in random assignment States** | | | | |
| Florida treatment | 7,402,401 | 624,320 | 985,619 | 9,012,340 |
| Illinois treatment | 9,110,056 | 878,449 | 1,983,452 | 11,971,957 |
| New York City treatment | 1,772,666 | 179,070 | 453,402 | 2,405,138 |
| **Control districts in random assignment States** | | | | |
| Florida control | 7,422,364 | 648,833 | 1,351,779 | 9,422,976 |
| Illinois control | 8,191,499 | 797,021 | 1,740,836 | 10,729,356 |
| New York City control | 1,464,817 | 126,677 | 315,156 | 1,906,650 |
| **Universal implementation States** | | | | |
| Kentucky | 11,484,305 | 1,121,610 | 2,490,316 | 15,096,231 |
| Pennsylvania | 2,609,222 | 212,938 | 559,957 | 3,382,117 |

Source: Monthly administrative claims data provided by the States.

Notes: To facilitate comparisons across years, the results reported in this table are aggregated across the same set of months used in the Year 1 tables

DC-M = Direct Certification-Medicaid; SY = school year.

## Table C.2b. Total reimbursable breakfasts served, by certification category in SY 2012–2013 (Year 1 of DC-M demonstration)

| State | Total number of reimbursable breakfasts served | | | |
|---|---|---|---|---|
| | Free | Reduced-price | Paid | Total |
| **Treatment districts in random assignment States** | | | | |
| Florida treatment | 7,404,912 | 572,265 | 910,005 | 8,887,182 |
| Illinois treatment | 12,194,586 | 813,076 | 2,058,878 | 15,064,734 |
| New York City treatment | 1,709,830 | 152,349 | 385,943 | 2,248,122 |
| **Control districts in random assignment States** | | | | |
| Florida control | 7,524,567 | 672,373 | 1,632,429 | 9,829,369 |
| Illinois control | 11,016,938 | 996,445 | 1,982,308 | 13,994,806 |
| New York City control | 1,378,869 | 129,174 | 299,778 | 1,807,821 |
| **Universal implementation States** | | | | |
| Kentucky | 11,932,011 | 1,045,564 | 2,310,495 | 15,288,070 |
| Pennsylvania | 2,469,894 | 183,402 | 521,816 | 3,175,112 |

Source: Monthly administrative claims data provided by the States.

Notes: The results reported in this table are aggregated across months after each demonstration State implemented DC-M: September for Illinois, New York City, and Pennsylvania; October for Kentucky; and February for Florida. In addition, November and December are excluded from the analysis for New York City, because school meals were served to all students for free during those months, in the aftermath of Hurricane Sandy.

DC-M = Direct Certification-Medicaid; SY = school year.

## Table C.2c. Average daily reimbursable breakfasts served, by certification category in SY 2011–2012 (before DC-M demonstration)

| State | Average daily number of reimbursable breakfasts served | | | |
|---|---|---|---|---|
| | Free | Reduced-price | Paid | Total |
| **Treatment districts in random assignment States** | | | | |
| Florida treatment | 94,655 | 8,025 | 12,643 | 115,323 |
| Illinois treatment | 63,343 | 6,111 | 13,817 | 83,271 |
| New York City treatment | 13,948 | 1,412 | 3,570 | 18,930 |
| **Total for treatment districts in random assignment States** | **171,946** | **15,548** | **30,031** | **217,524** |
| **Control districts in random assignment States** | | | | |
| Florida control | 96,691 | 8,461 | 17,619 | 122,772 |
| Illinois control | 56,914 | 5,541 | 12,131 | 74,586 |
| New York City control | 11,647 | 1,000 | 2,494 | 15,141 |
| **Total for control districts in random assignment States** | **165,252** | **15,002** | **32,245** | **212,499** |
| **Universal implementation States** | | | | |
| Kentucky | 71,393 | 7,025 | 15,615 | 94,033 |
| Pennsylvania | 15,188 | 1,237 | 3,253 | 19,678 |
| **Total for universal implementation States sample** | **86,581** | **8,262** | **18,868** | **113,711** |

Source: Monthly administrative claims data provided by the States.

Note: To facilitate comparisons across years, the results reported in this table are aggregated across the same set of months used in the Year 1 tables.

DC-M = Direct Certification-Medicaid; SY = school year.

## Table C.2d. Average daily reimbursable breakfasts served, by certification category in SY 2012–2013 (Year 1 of DC-M demonstration)

| State | Average daily number of reimbursable breakfasts served | | | |
|---|---|---|---|---|
| | Free | Reduced-price | Paid | Total |
| **Treatment districts in random assignment States** | | | | |
| Florida treatment | 94,489 | 7,329 | 11,659 | 113,476 |
| Illinois treatment | 83,986 | 5,615 | 14,213 | 103,802 |
| New York City treatment | 13,615 | 1,211 | 3,057 | 17,882 |
| **Total for treatment districts in random assignment States** | **192,090** | **14,154** | **28,929** | **235,161** |
| **Control districts in random assignment States** | | | | |
| Florida control[a] | 98,645 | 8,812 | 21,347 | 128,804 |
| Illinois control | 75,981 | 6,875 | 13,734 | 96,584 |
| New York City control | 11,107 | 1,035 | 2,407 | 14,549 |
| **Total for control districts in random assignment States** | **185,734** | **16,721** | **37,488** | **239,937** |
| **Universal implementation States** | | | | |
| Kentucky | 74,607 | 6,571 | 14,544 | 95,721 |
| Pennsylvania | 14,700 | 1,097 | 3,112 | 18,910 |
| **Total for universal implementation States sample** | **89,307** | **7,668** | **17,656** | **114,631** |

Source: Monthly administrative claims data provided by the States.

Note: The results reported in this table are aggregated across months after each demonstration State implemented DC-M: September for Illinois, New York City, and Pennsylvania; October for Kentucky; and February for Florida. In addition, November and December are excluded from the analysis for New York City, because school meals were served to all students for free during those months, in the aftermath of Hurricane Sandy.

[a] The increase between SY 2011–2012 and SY 2012–2013 in the numbers of breakfasts served in control group districts in Florida is driven by one large district that was entirely Provision 2 for the SBP in SY 2011–2012 (and thus excluded from the data in that year) but not Provision 2 in SY 2012–2013.

DC-M = Direct Certification-Medicaid; SY = school year.

## Table C.3a. Key NSLP participation outcomes in SYs 2011–2012 and 2012–2013

| State | National School Lunch Program | | | | | |
|---|---|---|---|---|---|---|
| | Average number of meals served per student per day | | | Percentage of lunches served for free | | |
| | SY 2011–2012 | SY 2012–2013 | Difference | SY 2011–2012 | SY 2012–2013 | Difference |
| **Treatment districts in random assignment States** | | | | | | |
| Florida treatment | 59.5 | 56.7 | -2.7 | 67.9 | 70.5 | 2.7 |
| Illinois treatment | 52.7 | 51.2 | -1.5 | 49.5 | 56.8 | 7.2 |
| New York City treatment | 43.8 | 42.2 | -1.6 | 78.5 | 79.8 | 1.3 |
| **Pooled random assignment treatment districts** | **53.6** | **51.8** | **-1.8** | **57.3** | **62.6** | **5.3** |
| **Control districts in random assignment States** | | | | | | |
| Florida control | 54.4 | 53.6 | -0.8 | 66.2 | 69.0 | 2.9 |
| Illinois control | 53.0 | 50.8 | -2.1 | 50.0 | 53.1 | 3.1 |
| New York City control | 49.7 | 48.0 | -1.7 | 80.3 | 80.0 | -0.3 |
| **Pooled random assignment control districts** | **53.2** | **51.6** | **-1.6** | **58.0** | **60.8** | **2.8** |
| **Universal implementation States** | | | | | | |
| Kentucky | 65.4 | 62.4 | -3.0 | 56.8 | 60.2 | 3.3 |
| Pennsylvania | 58.4 | 55.2 | -3.3 | 48.7 | 52.2 | 3.5 |
| **Pooled universal implementation sample** | **63.2** | **60.2** | **-3.1** | **54.5** | **57.9** | **3.4** |

Source: Monthly administrative claims data provided by the States.

Notes: The results reported in this table are aggregated across months after each demonstration State implemented DC-M: September for Illinois, New York City, and Pennsylvania; October for Kentucky; and February for Florida. In addition, November and December are excluded from the analysis for New York City, because school meals were served to all students for free during those months, in the aftermath of Hurricane Sandy.

NSLP = National School Lunch Program; SY = school year.

## Table C.3b. Key SBP participation outcomes in SYs 2011–2012 and 2012–2013

| State | School Breakfast Program | | | | | |
|---|---|---|---|---|---|---|
| | Average number of meals served per student per day | | | Percentage of breakfasts served for free | | |
| | SY 2011–2012 | SY 2012–2013 | Difference | SY 2011–2012 | SY 2012–2013 | Difference |
| **Treatment districts in random assignment States** | | | | | | |
| Florida treatment | 22.1 | 21.9 | -0.2 | 82.0 | 83.3 | 1.2 |
| Illinois treatment | 15.4 | 19.6 | 4.2 | 76.1 | 81.0 | 5.0 |
| New York City treatment | 16.6 | 15.9 | -0.7 | 73.6 | 76.0 | 2.4 |
| **Pooled random assignment treatment districts** | **17.5** | **19.8** | **2.4** | **78.0** | **81.3** | **3.3** |
| **Control districts in random assignment States** | | | | | | |
| Florida control | 17.7 | 19.0 | 1.3 | 78.7 | 76.6 | -2.2 |
| Illinois control | 17.1 | 20.8 | 3.7 | 76.3 | 78.7 | 2.4 |
| New York City control | 16.6 | 16.4 | -0.2 | 76.9 | 76.2 | -0.7 |
| **Pooled random assignment control districts** | **17.3** | **19.7** | **2.4** | **77.4** | **77.7** | **0.4** |
| **Universal implementation States** | | | | | | |
| Kentucky | 29.0 | 29.1 | 0.1 | 76.0 | 78.0 | 2.0 |
| Pennsylvania | 15.1 | 14.6 | -0.6 | 77.2 | 77.7 | 0.5 |
| **Pooled universal implementation sample** | **25.0** | **25.0** | **0.0** | **76.2** | **77.9** | **1.8** |

Source: Monthly administrative claims data provided by the States.

Notes: The results reported in this table are aggregated across months after each demonstration State implemented DC-M: September for Illinois, New York City, and Pennsylvania; October for Kentucky; and February for Florida. In addition, November and December are excluded from the analysis for New York City, because school meals were served to all students for free during those months, in the aftermath of Hurricane Sandy.

SBP = School Breakfast Program; SY = school year.

## Table C.4a. Regression-adjusted impacts on average number of lunches served per student per day in SY 2012–2013, by certification category

| State | Average number of meals served per student per day by certification category | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Free | | | Reduced-price | | | Paid | | | Total | | |
| | Treatment districts | Control districts | Difference (CI) | Treatment districts | Control districts | Difference (CI) | Treatment districts | Control districts | Difference (CI) | Treatment districts | Control districts | Difference (CI) |
| Florida[a] | -- | -- | -- | -- | -- | -- | -- | -- | -- | 54.5 | 55.2 | -0.7 (±1.8) |
| Illinois | 78.6 | 72.1 | 6.5* (±3.0) | 53.8 | 67.7 | -13.9* (±2.4) | 33.5 | 34.7 | -1.2 (±1.6) | 51.3 | 50.7 | 0.7 (±0.9) |
| New York City | 68.9 | 74.1 | -5.2* (±3.2) | 47.3 | 49.1 | -1.8 (±6.9) | 14.2 | 12.4 | 1.8 (±2.3) | 45.1 | 44.2 | 0.9 (±2.9) |
| **Pooled samples** | | | | | | | | | | | | |
| Illinois and New York City | **76.8** | **72.4** | **4.4* (±2.5)** | **52.8** | **64.7** | **-11.9* (±2.3)** | **31.4** | **32.2** | **-0.8 (±1.4)** | **50.4** | **49.7** | **0.7 (±0.9)** |
| All random assignment States | -- | -- | -- | -- | -- | -- | -- | -- | -- | **52.3** | **52.3** | **-0.0 (±1.0)** |

Source: Monthly administrative claims data and October certification data provided by the States.

Notes: The results reported in this table are aggregated across months after each demonstration State implemented DC-M: September for Illinois and New York City, and February for Florida. In addition, November and December are excluded from the analysis for New York City, because school meals were served to all students for free during those months, in the aftermath of Hurricane Sandy.

[a]Outcomes by category depend on the number of students certified in that category, which was measured at the end of October 2012, when Florida had not yet conducted DC-M. Thus, only total number of meals served per student is shown for that State.

*Percentage for treatment districts is significantly different than the percentage for control districts at the 0.05 level.

CI = 95 percent confidence interval half-width; NSLP = National School Lunch Program; SY = School Year.

## Table C.4b. Regression-adjusted impacts on average number of breakfasts served per student per day in SY 2012–2013, by certification category

| State | Average number of meals served per student per day by certification category | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Free | | | Reduced-price | | | Paid | | | Total | | |
| | Treatment districts | Control districts | Difference (CI) | Treatment districts | Control districts | Difference (CI) | Treatment districts | Control districts | Difference (CI) | Treatment districts | Control districts | Difference (CI) |
| Florida[a] | -- | -- | -- | -- | -- | -- | -- | -- | -- | 19.7 | 20.7 | -1.0* (±1.0) |
| Illinois | 40.7 | 39.1 | 1.7 (±2.5) | 18.7 | 23.6 | -4.9* (±1.5) | 5.2 | 5.7 | -0.5 (±0.8) | 20.6 | 20.8 | -0.2 (±0.9) |
| New York City | 23.5 | 26.1 | -2.7 (±3.8) | 16.5 | 18.1 | -1.7 (±2.6) | 6.4 | 6.3 | 0.1 (±0.9) | 15.9 | 16.7 | -0.8 (±2.2) |
| **Pooled samples** | | | | | | | | | | | | |
| Illinois and New York City | **37.2** | **36.4** | **0.8 (±2.2)** | **18.3** | **22.6** | **-4.3* (±1.3)** | **5.4** | **5.8** | **-0.4 (±0.7)** | **19.7** | **20.1** | **0.3 (±0.9)** |
| All random assignment States | -- | -- | -- | -- | -- | -- | -- | -- | -- | **19.7** | **20.4** | **-0.7* (±.7)** |

Source: Monthly administrative claims data and October certification data provided by the States.

Notes: The results reported in this table are aggregated across months after each demonstration State implemented DC-M: September for Illinois and New York City, and February for Florida. In addition, November and December are excluded from the analysis for New York City, because school meals were served to all students for free during those months, in the aftermath of Hurricane Sandy.

[a]Outcomes by category depend on the number of students certified in that category, which was measured at the end of October 2012, when Florida had not yet conducted DC-M. Thus, only total number of meals served per student is shown for that State.

*Percentage for treatment districts is significantly different than the percentage for control districts at the 0.05 level.

CI = 95 percent confidence interval half-width; SBP = School Breakfast Program; SY = School Year.

# APPENDIX D

# SUPPLEMENTAL TABLES RELATED TO FEDERAL REIMBURSEMENT COSTS

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## Table D.1a. Federal NSLP reimbursement costs, by certification category in SY 2011–2012 (Year before DC-M demonstration)

| State | Total reimbursement costs ($000s) | | | |
|---|---|---|---|---|
| | Free | Reduced-price | Paid | Total |
| **Treatment districts in random assignment States** | | | | |
| Florida treatment | 47,100 | 5,145 | 1,601 | 53,845 |
| Illinois treatment | 66,508 | 8,739 | 5,460 | 80,708 |
| New York City treatment | 13,934 | 1,128 | 250 | 15,312 |
| **Control districts in random assignment States** | | | | |
| Florida control | 54,225 | 5,862 | 2,076 | 62,163 |
| Illinois control | 60,488 | 8,121 | 4,806 | 73,415 |
| New York City control | 12,829 | 955 | 202 | 13,985 |
| **Universal implementation States** | | | | |
| Kentucky | 54,091 | 6,557 | 3,214 | 63,862 |
| Pennsylvania | 20,065 | 2,426 | 1,735 | 24,225 |

Source: Monthly administrative claims data provided by the States.

Note: To facilitate comparisons across years, the results reported in this table are aggregated across the same set of months used in the Year 1 tables.

DC-M = Direct Certification-Medicaid; NSLP = National School Lunch Program; SY = school year.

## Table D.1b. Federal NSLP reimbursement costs, by certification category in SY 2012–2013 (Year 1 of DC-M demonstration)

| State | Total reimbursement costs ($000s) | | | |
|---|---|---|---|---|
| | Free | Reduced-price | Paid | Total |
| **Treatment districts in random assignment States** | | | | |
| Florida treatment | 48,933 | 4,847 | 1,745 | 55,525 |
| Illinois treatment | 77,039 | 6,816 | 5,500 | 89,355 |
| New York City treatment | 14,184 | 1,025 | 284 | 15,493 |
| **Control districts in random assignment States** | | | | |
| Florida control | 56,665 | 5,677 | 2,232 | 64,574 |
| Illinois control | 64,093 | 8,023 | 5,061 | 77,177 |
| New York City control | 12,642 | 1,016 | 233 | 13,891 |
| **Universal implementation States** | | | | |
| Kentucky | 57,746 | 6,273 | 3,362 | 67,381 |
| Pennsylvania | 20,461 | 2,121 | 1,557 | 24,138 |

Source: Monthly administrative claims data provided by the States.

Notes: The results reported in this table are aggregated across months after each demonstration State implemented DC-M: September for Illinois, New York City, and Pennsylvania; October for Kentucky; and February for Florida. In addition, November and December are excluded from the analysis for New York City, because school meals were served to all students for free during those months, in the aftermath of Hurricane Sandy. Because per meal reimbursement rates increased between years, total reimbursement costs in some States and categories could increase in SY 2012–2013 even if the number of meals served declines.

DC-M = Direct Certification-Medicaid; NSLP = National School Lunch Program; SY = school year.

## Table D.2a. Federal SBP reimbursement costs, by certification category in SY 2011–2012 (Year before DC-M demonstration)

| State | Total reimbursement costs ($000s) | | | |
|---|---|---|---|---|
| | Free | Reduced-price | Paid | Total |
| **Treatment districts in random assignment States** | | | | |
| Florida treatment | 13,257 | 928 | 266 | 14,451 |
| Illinois treatment | 16,109 | 1,279 | 536 | 17,923 |
| New York City treatment | 3,124 | 263 | 122 | 3,509 |
| **Control districts in random assignment States** | | | | |
| Florida control | 13,282 | 963 | 365 | 14,610 |
| Illinois control | 14,527 | 1,162 | 470 | 16,159 |
| New York City control | 2,604 | 187 | 85 | 2,876 |
| **Universal Implementation States** | | | | |
| Kentucky | 20,428 | 1,647 | 672 | 22,748 |
| Pennsylvania | 4,597 | 303 | 151 | 5,052 |

Source: Monthly administrative claims data provided by the States.

Note: To facilitate comparisons across years, the results reported in this table are aggregated across the same set of months used in the Year 1 tables.

DC-M = Direct Certification-Medicaid; SBP = School Breakfast Program; SY = school year.

## Table D.2b. Federal SBP reimbursement costs, by certification category in SY 2012–2013 (Year 1 of DC-M demonstration)

| State | Total reimbursement costs ($000s) | | | |
|---|---|---|---|---|
| | Free | Reduced-price | Paid | Total |
| **Treatment districts in random assignment States** | | | | |
| Florida treatment | 13,650 | 882 | 246 | 14,778 |
| Illinois treatment | 21,678 | 1,189 | 556 | 23,422 |
| New York City treatment | 3,121 | 233 | 104 | 3,459 |
| **Control districts in random assignment States** | | | | |
| Florida control | 13,862 | 1,033 | 441 | 15,336 |
| Illinois control | 19,443 | 1,453 | 535 | 21,432 |
| New York City control | 2,535 | 198 | 81 | 2,814 |
| **Universal Implementation States** | | | | |
| Kentucky | 21,903 | 1,595 | 624 | 24,123 |
| Pennsylvania | 4,455 | 268 | 141 | 4,864 |

Source: Monthly administrative claims data provided by the States.

Notes: The results reported in this table are aggregated across months after each demonstration State implemented DC-M: September for Illinois, New York City, and Pennsylvania; October for Kentucky; and February for Florida. In addition, November and December are excluded from the analysis for New York City, because school meals were served to all students for free during those months, in the aftermath of Hurricane Sandy. Because per meal reimbursement rates increased between years, total reimbursement costs in some States and categories could increase in SY 2012–2013 even if the number of meals served declines.

DC-M = Direct Certification-Medicaid; SBP = School Breakfast Program; SY = school year.

## Table D.3a. NSLP and SBP Federal reimbursement costs before and after DC-M implementation

| State | Federal reimbursement costs ($000s) | | | | | |
|---|---|---|---|---|---|---|
| | National School Lunch Program | | | School Breakfast Program | | |
| | SY 2011–2012 | SY 2012–2013 | Difference | SY 2011–2012 | SY 2012–2013 | Difference |
| **Treatment districts in random assignment States** | | | | | | |
| Florida treatment | 53,845 | 55,525 | 1,679 | 14,451 | 14,778 | 327 |
| Illinois treatment | 80,708 | 89,355 | 8,648 | 17,923 | 23,422 | 5,500 |
| New York City treatment | 15,312 | 15,493 | 181 | 3,509 | 3,459 | -51 |
| **Control districts in random assignment States** | | | | | | |
| Florida control | 62,163 | 64,574 | 2,410 | 14,610 | 15,336 | 726 |
| Illinois control | 73,415 | 77,177 | 3,763 | 16,159 | 21,432 | 5,273 |
| New York City control | 13,985 | 13,891 | -94 | 2,876 | 2,814 | -62 |
| **Universal implementation States** | | | | | | |
| Kentucky | 63,862 | 67,381 | 3,519 | 22,748 | 24,123 | 1,375 |
| Pennsylvania | 24,225 | 24,138 | -87 | 5,052 | 4,864 | -187 |

Source: Monthly administrative claims data provided by the States.

Notes: The results reported in this table are aggregated across months after each demonstration State implemented DC-M: September for Illinois, New York City, and Pennsylvania; October for Kentucky; and February for Florida. In addition, November and December are excluded from the analysis for New York City, because school meals were served to all students for free during those months, in the aftermath of Hurricane Sandy. Because per meal reimbursement rates increased between years, total reimbursement costs in some States and categories could increase in SY 2012–2013 even if the number of meals served declines.

DC-M = Direct Certification-Medicaid; NSLP = National School Lunch Program; SBP = School Breakfast Program; SY = school year.

## Table D.3b. Average daily NSLP and SBP Federal reimbursement costs before and after DC-M implementation

| State | Average daily Federal reimbursement costs ($000s) | | | | | |
|---|---|---|---|---|---|---|
| | NSLP | | | SBP | | |
| | SY 2011–2012 | SY 2012–2013 | Difference | SY 2011–2012 | SY 2012–2013 | Difference |
| **Treatment districts in random assignment States** | | | | | | |
| Florida treatment | 687 | 707 | 20 | 185 | 189 | 4 |
| Illinois treatment | 561 | 622 | 60 | 125 | 161 | 36 |
| New York City treatment | 120 | 121 | 1 | 28 | 28 | 0 |
| **Total for treatment districts in random assignment States** | **1,368** | **1,449** | **81** | **337** | **378** | **40** |
| **Control districts in random assignment States** | | | | | | |
| Florida control[a] | 807 | 849 | 42 | 190 | 201 | 11 |
| Illinois control | 511 | 539 | 28 | 112 | 148 | 34 |
| New York City control | 110 | 109 | -1 | 23 | 23 | 0 |
| **Total for control districts in random assignment States** | **1,428** | **1,498** | **69** | **325** | **372** | **45** |
| **Universal implementation States** | | | | | | |
| Kentucky | 397 | 419 | 22 | 142 | 151 | 9 |
| Pennsylvania | 141 | 143 | 3 | 29 | 29 | 0 |
| **Total for universal implementation States** | **537** | **562** | **25** | **171** | **180** | **9** |

Source: Monthly administrative claims data provided by the States.

Note: The results reported in this table are aggregated across months after each demonstration State implemented DC-M: September for Illinois, New York City, and Pennsylvania; October for Kentucky; and February for Florida. In addition, November and December are excluded from the analysis for New York City, because school meals were served to all students for free during those months, in the aftermath of Hurricane Sandy. Because per meal reimbursement rates increased between years, total reimbursement costs in some States and categories could increase in SY 2012–2013 even if the number of meals served declines.

[a] The increase between SY 2011–2012 and SY 2012–2013 in the costs of breakfasts served in Control group districts in Florida is in part driven by one large district that was entirely Provision 2 for the SBP in SY 2011–2012 (and thus excluded from the SBP data for that year) but not Provision 2 in SY 2012–2013.

DC-M = Direct Certification-Medicaid; NSLP = National School Lunch Program; SBP = School Breakfast Program; SY = school year.

## Table D.4. NSLP and SBP Federal reimbursement costs per student per day before and after DC-M implementation

| State | Federal reimbursement costs per student per day (dollars) | | | | | |
|---|---|---|---|---|---|---|
| | National School Lunch Program | | | School Breakfast Program | | |
| | SY 2011–2012 | SY 2012–2013 | Difference | SY 2011–2012 | SY 2012–2013 | Difference |
| **Treatment districts in random assignment States** | | | | | | |
| Florida treatment | 1.29 | 1.33 | 0.05 | 0.35 | 0.36 | 0.02 |
| Illinois treatment | 0.88 | 0.98 | 0.10 | 0.23 | 0.30 | 0.07 |
| New York City treatment | 1.05 | 1.08 | 0.03 | 0.24 | 0.25 | 0.00 |
| **Total for treatment districts in random assignment States** | **1.06** | **1.14** | **0.07** | **0.28** | **0.32** | **0.04** |
| **Control districts in random assignment States** | | | | | | |
| Florida control | 1.15 | 1.24 | 0.09 | 0.27 | 0.30 | 0.03 |
| Illinois control | 0.89 | 0.95 | 0.05 | 0.26 | 0.31 | 0.06 |
| New York City control | 1.21 | 1.24 | 0.03 | 0.25 | 0.26 | 0.01 |
| **Total for control districts in random assignment States** | **1.05** | **1.11** | **0.07** | **0.26** | **0.30** | **0.04** |
| **Universal implementation States** | | | | | | |
| Kentucky | 1.22 | 1.27 | 0.05 | 0.44 | 0.46 | 0.02 |
| Pennsylvania | 0.96 | 0.98 | 0.02 | 0.23 | 0.22 | 0.00 |
| **Total for universal implementation States** | **1.14** | **1.18** | **0.04** | **0.38** | **0.39** | **0.02** |

Source: Monthly administrative claims data provided by the States.

Notes: The results reported in this table are aggregated across months after each demonstration State implemented DC-M: September for Illinois, New York City, and Pennsylvania; October for Kentucky; and February for Florida. In addition, November and December are excluded from the analysis for New York City because school meals were served to all students for free during those months in the aftermath of Hurricane Sandy. Because per meal reimbursement rates increased between years, total reimbursement costs per student per day in some States and categories could increase in SY 2012–2013 even if the number of students served per day declines.

DC-M = Direct Certification-Medicaid; NSLP = National School Lunch Program; SBP = School Breakfast Program; SY = school year.

## Table D.5. NSLP and SBP blended reimbursement rates before and after DC-M implementation

| State | Blended reimbursement rates per student (dollars) | | | | | |
|---|---|---|---|---|---|---|
| | National School Lunch Program | | | School Breakfast Program | | |
| | SY 2011–2012 | SY 2012–2013 | Difference | SY 2011–2012 | SY 2012–2013 | Difference |
| **Treatment districts in random assignment States** | | | | | | |
| Florida treatment | 2.16 | 2.36 | 0.19 | 1.60 | 1.66 | 0.06 |
| Illinois treatment | 1.67 | 1.92 | 0.24 | 1.50 | 1.55 | 0.06 |
| New York City treatment | 2.41 | 2.57 | 0.16 | 1.46 | 1.54 | 0.08 |
| **Total for treatment districts in random assignment States** | **1.95** | **2.16** | **0.21** | **1.55** | **1.61** | **0.06** |
| **Control districts in random assignment States** | | | | | | |
| Florida control | 2.11 | 2.31 | 0.20 | 1.55 | 1.56 | 0.01 |
| Illinois control | 1.69 | 1.86 | 0.18 | 1.51 | 1.53 | 0.02 |
| New York City control | 2.45 | 2.59 | 0.14 | 1.51 | 1.56 | 0.05 |
| **Total for control districts in random assignment States** | **1.96** | **2.14** | **0.19** | **1.53** | **1.55** | **0.02** |
| **Universal implementation States** | | | | | | |
| Kentucky | 1.87 | 2.04 | 0.18 | 1.51 | 1.58 | 0.07 |
| Pennsylvania | 1.64 | 1.77 | 0.13 | 1.49 | 1.53 | 0.04 |
| **Total for universal implementation States** | **1.80** | **1.97** | **0.16** | **1.50** | **1.57** | **0.07** |

Source: Monthly administrative claims data provided by the States.

Notes: The results reported in this table are aggregated across months after each demonstration State implemented DC-M: September for Illinois, New York City, and Pennsylvania; October for Kentucky; and February for Florida. In addition, November and December are excluded from the analysis for New York City because school meals were served to all students for free during those months in the aftermath of Hurricane Sandy. Because per meal reimbursement rates increased between years, blended reimbursement rates in some States and categories could increase in SY 2012–2013 even if the number of meals served declines.

DC-M = Direct Certification-Medicaid; NSLP = National School Lunch Program; SBP = School Breakfast Program; SY = school year.

# APPENDIX E

# SUPPLEMENTAL TABLES RELATED TO CHALLENGES

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## Table E.1. Start-up challenges and resolutions in demonstration States, SY 2012–2013

| State | Reported start-up challenges | Resolutions |
|---|---|---|
| Florida | **Establishing an MOU.** Responsibility for NSLP/SBP shifted from one agency to another while an MOU was being drafted. Establishing a new MOU among the three agencies involved in DC-M was a time-consuming process. | Despite their initial difficulties, the three agencies now have a greater understanding of one another's processes and communication has improved. No additional impact is anticipated. |
| | **Staffing.** Staff turnover among agency leadership necessitated revisions to MOU language and legal counsels in each agency having to review the MOUs, ultimately leading to delays. | There was little recourse when this problem presented itself; however, this challenge was limited to the first year. |
| | **IT protocols.** The SNAP/TANF and DC-M eligibility files could not be sent to ED simultaneously because the second file would overwrite the first. Additionally, incorporating the Medicaid data into the SNAP/TANF file would have required staff to insert another data element into the file. | It was more efficient for ED to set up a separate inbox to accept the transfer of the DC-M eligibility file than to modify the SNAP/TANF file. |
| Illinois | **Understanding time lines.** It took longer than anticipated to program and review the creation of the DC-M eligibility file. As a result, DC-M started in October, after districts had certified most of their eligible students. This created complications in Illinois because students who receive free lunches also qualify for a school fee waiver. | This problem was related to the timing of DC-M in the kickoff year and should no longer be an issue in subsequent years. |
| Kentucky | **Staffing.** The State was short-staffed and staff had competing demands on their time, which delayed project planning and start-up. | There was little recourse when this problem presented itself; however, this challenge was limited to the first year. |
| | **Understanding time lines.** The agency maintaining the data operates in three-month production cycles during which the data extracts are planned and programmed in the first month, reviewed in the second, and run in the third month. The download website also had to be updated to accommodate DC-M, and staffing shortages and competing demands posed a challenge. | There was little recourse when this problem presented itself; however, ongoing costs and time necessary to create the DC-M eligibility file are minimal. |
| | **Complexity of eligibility rules.** The intricacies of the Medicaid program led to uncertainty about which subgroups (for example, SSI-qualified) to include or exclude from DC-M. | State staff received clarification from USDA regarding the study parameters and groups to include. |
| | **Creating eligibility file.** Teen mothers were initially excluded from DC-M. | Kentucky will modify its DC-M file to include teen parents. |
| New York City | None identified. | None identified |
| Pennsylvania | **Creating eligibility file.** Ineligible children were identified in the initial DC-M list distributed to districts. These children qualified for Medicaid as a household of one, but are not considered a household of one for NSLP/SBP purposes. | The initial list was retracted, and the program code was modified so that this subcategory of students was excluded in the DC-M file. |

Source: Semi-structured interviews with State officials.

DC-M = Direct Certification-Medicaid; ED = Department of Education; IT = information technology; MOU = memorandum of understanding; NSLP = National School Lunch Program; SBP = School Breakfast Program; SNAP =

Supplemental Nutrition Assistance Program; SSI = Supplemental Security Income; SY = school year; TANF = Temporary Assistance for Needy Families; USDA = U.S. Department of Agriculture.

## Table E.2. DC-M implementation challenges and resolutions for demonstration States, SY 2012–2013

| State | Reported implementation challenges | Resolutions |
|---|---|---|
| Florida | **Communication.** Some families were confused about the eligibility criteria for DC-M. | Florida developed a prototype letter for districts to distribute to families that explains DC-M. |
| | **Manual matching.** Florida has a number of private and charter schools that lack electronic matching software and conduct their matches manually.[a] | Florida plans to move to a State-level matching system. Districts and charter schools will still have the option of matching students using their own systems. |
| Illinois | **Matching.** The agency that provides the DC-M eligibility file does not provide the DC file for SNAP/TANF. A filter was developed to prevent SNAP/TANF children from appearing in the DC-M matches, but duplicates occasionally occur. | Because children are first matched under SNAP, then TANF, and finally Medicaid, staff have been trained to prioritize SNAP cases when matches occur through multiple programs. |
| Kentucky | **Communication.** There were minor communication issues with districts, particularly regarding the eligibility criteria for DC-M. A few public aid offices also miscommunicated that Medicaid recipients were categorically eligible for DC-M. | Kentucky explained the income limits for DC-M, and clarified that DC can be extended to other students in a household, excluding foster children. Staff also encouraged districts to discuss the income requirements for DC-M with their local public aid offices. |
| | **Matching.** Last names are truncated in the DC-M eligibility file, which created matching difficulties with student enrollment files. Names are not always consistent across the two files, particularly with certain immigrant populations. This is further complicated when an SSN or SSID is lacking. | Names will not be truncated once Kentucky's Health Benefits Exchange starts providing the Medicaid data. Probabilistic name-matching software will also help match using the State system. In the meantime, for Hispanic populations, the State follows the customary naming practice—the father's surname followed by the mother's surname—and attempts to match on other criteria when SSN or SSID are unavailable. |
| | **Manual matching.** Manual matches were necessary in certain districts that lacked electronic matching systems, and were burdensome in some districts with large immigrant populations that lacked SSNs.[a] | In addition to the pursuit of name-matching software, Kentucky now assigns students an SSID, which can be used to conduct future matches. |
| New York City | **Matching.** Schools are responsible for entering and updating student information, which might not always match Medicaid data. | All students in New York City's information system have a student ID that can be used for matching. For other potential matching elements, New York City must rely on the accuracy of school-provided data. |
| Pennsylvania | **Communication.** Some families were confused about the eligibility criteria for DC-M. | Provide training to districts regarding DC-M eligibility criteria. |
| | **Household definition.** Households are sometimes defined differently for Medicaid than they are for NSLP/SBP. This can result in excluding income when calculating DC-M eligibility that would have been included in a paper application.[b] | This remains a challenge for the State and has led to some dissatisfaction with DC-M among State staff. |

Source: Semi-structured interviews with State officials.

[a] Manual matching issues are also relevant for direct certification with SNAP, TANF, or other programs.

[b] Such differences in household definition are not exclusive to Pennsylvania, but that is the only State that noted it as a challenge.

DC-M = Direct Certification-Medicaid; NSLP = National School Lunch Program; SBP = School Breakfast Program; SNAP = Supplemental Nutrition Assistance Program; SSID = State Student identifier; SSN = Social Security number; SY = school year; TANF = Temporary Assistance for Needy Families; USDA = U.S. Department of Agriculture.

## Table E.3. Frequency of direct certification matching in demonstration States, SY 2012–2013

| State | Frequency of matching | Approximate gap between enrollment in Medicaid and distribution of DC-M file | Description of schedule |
|---|---|---|---|
| Florida | Monthly | 13–43 days | The DC-M eligibility file includes students identified during the first weekend of the month following the month of their enrollment in Medicaid. The file is delivered to ED by the 10th of every month and is typically cleaned and reformatted within a day. The file is then provided to districts in about a day. |
| Illinois | Monthly | 15–46 days | Matches are run and provided to districts at the start of each month. The Medicaid file includes students enrolled by the 15th of the prior month. |
| Kentucky | Monthly | 1–38 days (assuming the file is sent on the 7th of the subsequent month) | The DC-M eligibility file is created on the last business day of every month and provided to districts within the first week of the subsequent month. |
| New York City | Daily, based on monthly Medicaid data | 14–44 days | Matches include students enrolled in Medicaid two weeks before the file is sent. These matches are also run daily against New York City's student information system to track movement between treatment and control groups, transfers, and newly admitted students. |
| Pennsylvania | Monthly | 1–31 days | The DC-M eligibility file is provided to districts on July 15 for all eligible students in June, after which a monthly file is provided at the beginning of each month with eligible students from the prior month. |

Source: Semi-structured interviews with State officials.

Note: The range between enrollment in Medicaid and distribution of the DC-M eligibility or match list is based on enrollment in October, a 31-day month. The date of Medicaid enrollment is not counted toward the gap. States in which districts are responsible for matching reported that matches occur on a monthly basis; however, preliminary results of the year 2 interviews suggest that a small number of districts choose to match more frequently.

DC-M = Direct Certification-Medicaid; ED = Department of Education; SY = school year.

## Table E.4. Reported major State staff time burdens for DC-M in demonstration States, SY 2012–2013

| State | Reported major State staff time burdens |
|---|---|
| Florida | Establishing the MOU due to staff turnover at two of the three agencies involved in DC-M |
| Illinois | Reviewing the DC-M match program, such as testing, verifying matches, and removing duplicates |
| Kentucky | During start-up, identifying all the data requirements for the DC-M file took longer than anticipated, as did the three-month production cycle to develop, test, and produce the file |
| | Providing training, technical assistance, and responding to inquiries from districts |
| New York City | Automating the process for producing a data extract for DC-M took approximately two months. |
| Pennsylvania | During start-up, identifying the correct Medicaid categories, the rationale behind them, and their eligibility requirements required significant time |
| | Responding to inquiries from districts regarding DC-M eligibility criteria was "very time consuming" initially, but decreased as the school year progressed. |

Source: Semi-structured interviews with State officials.

DC-M = Direct Certification-Medicaid; MOU = memorandum of understanding; SY = school year.

## Table E.5. Reported minor State staff time burdens for DC-M in demonstration States, SY 2012–2013

| State | Reported minor State staff time burdens |
|---|---|
| Florida | Reviewing, cleaning, and reformatting the DC-M file, in addition to the SNAP/TANF file each month |
| Illinois | Responding to inquiries regarding DC-M eligibility criteria |
| | Extracting the DC-M file from the data warehouse and ensuring timely delivery |
| Kentucky | Responding to inquiries from districts throughout the school year |
| | Administrative review of selected schools is expected to take slightly longer due to increased enrollment |
| New York City | None specified |
| Pennsylvania | Training districts on the new Medicaid code that appeared on their direct certification lists |

Source: Semi-structured interviews with State officials.

DC-M = Direct Certification-Medicaid; SNAP = Supplemental Nutrition Assistance Program; SY = school year; TANF = Temporary Assistance for Needy Families.

## Table E.6. Factors suggested to have facilitated implementation of DC-M in demonstration States, SY 2012–2013

| Factors reported to facilitate implementation | State |
|---|---|
| **Experience.** All States had prior experience conducting direct certification with SNAP, TANF, and/or foster children, and had established DC processes and IT protocols that could be extended to the Medicaid data. | Florida, Illinois, Kentucky, New York City, Pennsylvania |
| **Technology.** All States possessed a DC system that could accommodate the inclusion of Medicaid data. In addition, all States except Florida had a Statewide information system that could be used to conduct or facilitate matching. | Florida, Illinois, Kentucky, New York City, Pennsylvania |
| **Training and orientation.** Training was provided to districts, schools, and/or vendors on the purpose of DC-M and its implementation. In Florida, this included an orientation for districts' electronic matching software vendors to encourage cooperation with the districts and to modify their systems to identify the source of DC. | Florida, Illinois, Kentucky, Pennsylvania |
| **Cooperation.** According to State staff, an existing relationship with the agency providing the Medicaid data helped facilitate project start-up and implementation. In Kentucky and Pennsylvania, agencies worked together to identify and troubleshoot issues in the DC-M eligibility file. | Kentucky, New York City, Pennsylvania |

Source: Semi-structured interviews with State officials.

DC-M = Direct Certification-Medicaid; IT = information technology; SNAP = Supplemental Nutrition Assistance Program; SY = school year; TANF = Temporary Assistance for Needy Families.

## Table E.7. State recommendations for improving the success of DC-M, SY 2012–2013

| State staff recommendations | State |
|---|---|
| **Planning.** Agencies involved in DC-M should meet as early as possible to accelerate the start-up process, discuss time lines, establish their MOUs, and/or clarify the eligibility requirements for DC-M. | Florida, Illinois, Kentucky, New York City |
| **Interagency cooperation.** It is important to build a relationship with the agency maintaining the Medicaid data. A cooperative relationship will help agencies establish an MOU and create the necessary data extracts for DC-M. | Illinois, Kentucky, New York City |
| **Training and communication with districts.** States should provide training and technical assistance at the local level on how to implement DC-M, which staff believe is more beneficial if synchronized to occur shortly before the first DC-M match. States also have to inform districts about using State matching systems, what the new DC eligibility file will include, and why Medicaid recipients are not categorically eligible for NSLP/SBP as SNAP and TANF recipients are. This will increase the understanding of DC-M among districts, and enable them to better respond to questions from parents and public aid offices. | Florida, Illinois, Kentucky |
| **Infrastructure.** States need to have a sophisticated or efficient system that is ready to conduct the Medicaid match. It can be difficult to build or migrate to an automated DC system. | New York City |
| **Awareness of differences in household definitions.** States should familiarize themselves with differences between Medicaid and NSLP/SBP eligibility rules, including household definitions, as authorized under the demonstration. | Pennsylvania |

Source: Semi-structured interviews with State officials.

DC-M = Direct Certification-Medicaid; MOU = memorandum of understanding; NSLP = National School Lunch Program; SBP = School Breakfast Program; SNAP = Supplemental Nutrition Assistance Program; SY = school year; TANF = Temporary Assistance for Needy Families.

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# APPENDIX F

# CHALLENGE INTERVIEW PROTOCOLS

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## *Interview Protocol: State Child Nutrition Director*

## *Challenges to Implementing Direct Certification with Medicaid*

## *Demonstrations of NSLP/SBP Direct Certification of Children Receiving Medicaid Benefits*

State: Date:
Interviewee/Position: Start time:
Others present/Position: End time:
Permission to record: Interviewer:

**Introduction**

The purpose of this interview is to gather information about [STATE's] demonstration of direct certification of children for the National School Lunch Program and School Breakfast Program, or NSLP/SBP, using Medicaid enrollment data. This interview will last approximately 1 hour.

*Winter 2013 Interviews:*
We talked to you in [MONTH] about your experiences with the demonstration of direct certification of the National School Lunch Program/School Breakfast Program, or NSLP/SBP, using Medicaid enrollment data. In this interview, we would like to discuss your experiences and progress since the last time we talked.

*All Interviews:*

Throughout this interview, we will refer to the demonstration of direct certification with Medicaid data as DC-M. The information that we collect in this interview will be used together with information from other States to describe the experiences of all States participating in the demonstration.

Because each State's project is unique, describing a particular State's experiences will likely identify that State. We will not use your name in our reports, but your identity might be inferred from the identity of your State and the nature of the information that you provide. If there is something that you want to say in confidence that you would not otherwise mention, let us know and we'll use it to inform our understanding, but will keep the details private.

We will ask you questions and record your answers in an interview format that will take about an hour. With your permission, we'd like to electronically record your responses to make sure we get them right. Do I have your permission to record the interview?

[*If yes:* Thank you.]

[*If no:* You have my assurance that we will keep anything private that you wish. If you'd prefer, we will not cite anything that you say verbatim from the recording. *Wait for response; if yes, record:* Thank you. *If no:* That's OK. Just bear with me as I take detailed notes.]

Your DC-M implementation began near the start of the 2012-2013 school year, but we're going to focus on your recent efforts regarding the certification process for this school year.

## BACKGROUND

To start, let's talk about how your demonstration has progressed since [MONTH].

1. Have any changes occurred in your DC-M matching process since the initial round of matching was completed? If so, why did you make these changes? [*Prob*e: Follow up on anything they mentioned planning during the first round of interviews.]

## IMPLEMENTATION CHALLENGES

I'd also like to discuss any implementation challenges that your State might have had to deal with.

2. Have any new challenges arisen since we last spoke?
3. Overall, what challenges have you [*if district-level matching, add:* and local districts] encountered in implementing DC-M? What problems have these challenges caused? [*Probe:* Any other serious challenges?]
    a. [*For each challenge:*] To what extent have you been able to resolve the challenge? How? (If State mentioned challenges in previous interview, ask about their current status in resolving them)]
4. What challenges have you encountered in obtaining the Medicaid data? Describe how you overcame them or, if ongoing, how you plan to do so. (For example, did you implement changes after some data elements from Medicaid did not fully meet your needs?)

***Matching***

Let's turn to the matching process.

5. First, consider the specifications for matching student enrollment data with Medicaid data
    a. What challenges have you encountered, if any, related to the availability of identifying information in Medicaid data? Is missing data a particular challenge in key data elements in the Medicaid files?
6. Because children receiving Medicaid are not categorically eligible, DC-M requires States and districts to look at income, in addition to Medicaid receipt, to determine NSLP eligibility. How challenging is conducting that extra step?
7. Is a gross income variable, or any other information used to define the file, provided to you by your State's Medicaid agency? [*If yes:* do you use the data in any way?]

[*If no:* why are the income data restricted? What procedures has your agency or Medicaid put in place to review that the appropriate data are provided?]

8. Did you experience any delays in conducting DC-M compared to direct certification with SNAP, or was the timeline about the same? Describe the nature of any delays and the average impact in time.

9. Describe any quality assurance systems in place to ensure the accuracy of matches. [*Probe:* Do you check a sample of cases? How is the sample determined?]

***Resources***

10. Let's discuss the challenges associated with resources to implement DC-M. First, let's focus on IT capabilities. Since we last spoke, have you been required to make any systems updates in order for your agency to accommodate DC-M? Please explain.

    a. Were any additional systems updates necessary to identify eligible children and conduct the DC-M matching process? Explain the impact of these updates on staffing decisions. What was the impact on the schedule for getting the work done?

11. Now, please think about any challenges you faced in obtaining staff to implement DC-M at the State level, or if applicable, at the district level.

    a. Did you face challenges in identifying staff or obtaining enough of their time to implement DC-M? How did DC-M impact their other responsibilities?

    b. Did you need any temporary or contract staff?

    c. What activities associated with DC-M were most time consuming, difficult to implement, or required significantly more time/effort than originally anticipated?

    d. Were there any particular aspects of your State's systems or processes that made DC-M more or less labor intensive for staff?

    e. Is the staff time in conducting DC-M offset by reduced staff time on other activities? Please explain how and to what extent.

    f. Did you experience any turnover among key staff that affected your continuing ability to conduct DC-M or make changes/improvements to it?

## OUTCOMES

Now, let's talk about outcomes of DC-M.

12. Think about the relative success of matches achieved with DC-M. Overall, roughly what proportion of Medicaid cases were successfully matched under DC-M in your district? How does this compare to the proportion of SNAP cases successfully matched?

    a. Did your experiences with or success in DC-M matching vary by student characteristics or for any subset of cases or groups of children/families? [*Probe:* Were there differences in success by race/ethnicity? Student grade level? Family/household size and composition? Were there name differences among

members of the family/household?] Have you had any challenges concerning key data elements being more often missing for certain subgroups?

b. Did success in matching vary by district characteristics such as size of district? Whether it was urban, suburban, or rural? Diversity of district?

13. Are there specific challenges related to obtaining and using Medicaid data that negatively affect the matching success rate? [*Probe:* Have you had difficulties with low-quality data, missing data, high rates of unmatched cases, one-to-many matches, or matching individuals within a household? Any other examples?] [*If district-level matching:* Have districts reported any specific barriers?]
14. What is your estimate of benefits gained from DC-M in helping to meet your State's goals for participating in the demonstration and increasing the participation of students in NSLP/SBP, based on what you know so far?
15. If you were asked whether to recommend continued, full-scale implementation of DC-M for your State based on the investment made, estimated ongoing implementation costs, offsets to other direct certification costs, and gains in helping to certify needy children for free meals, would you recommend continuing the effort? Why or why not?
16. Would you recommend the effort to other States that are similar to your State in terms of needs of the population and availability of systems and resources? Why or why not?

## RESPONSE TO CHALLENGES/LESSONS LEARNED

Now I'd like you to think about the lessons learned to date in implementing the DC-M demonstration.

17. What would you do differently or recommend that other States do differently?
18. What procedures have been planned or implemented to improve the success of DC-M? [*Probe:* Are these planned or already implemented; if planned, for when?]
19. How will the system as implemented be able to adapt to changes in Medicaid income definitions or eligibility criteria in the future?
20. Is there anything else you would like to add?

**Closing**

[*In February 2013, add for all States except NYC:* [STATE] has X districts included in the evaluation. We'd like to get some input from you on several local districts we can talk to in September 2013 about their experiences. We'd like to be able to talk to a variety of districts in terms of size and the nature of their experiences to get a broad perspective. Mathematica will send you a form you can complete to suggest districts for those interviews, from which we'll choose about six to interview.]

That concludes our interview. Thank you for your time. We'll be contacting you again in several months to schedule an interview for [MONTH] to discuss your State's experiences in the next round of DC-M.

## *Interview Protocol: State Medicaid Director*

## *Challenges to Implementing Direct Certification with Medicaid*

## *Demonstrations of NSLP/SBP Direct Certification of Children Receiving Medicaid Benefits*

| | |
|---|---|
| State: | Date: |
| Interviewee/Position: | Start time: |
| Others present/Position: | End time: |
| Permission to Record: | Interviewer: |

**Introduction**

The purpose of this interview is to gather information about [STATE's] demonstration on direct certification of children for the National School Lunch Program and School Breakfast Program, or NSLP/SBP, using Medicaid enrollment data. The interview will last approximately 30 minutes. Since you are involved in the Medicaid program, we will focus on your perspective.

*Winter 2013 Interviews:*

We talked to you in [MONTH] about your experiences with the demonstration of direct certification of the National School Lunch Program/School Breakfast Program, or NSLP/SBP, using Medicaid enrollment data. In this interview, we would like to discuss your experiences and progress since the last time we talked.

*All Interviews:*

Throughout this interview, we will refer to the demonstration of direct certification with Medicaid data as DC-M. The information that we collect in this interview will be used together with information from other States to describe the experiences of all States participating in the demonstration.

Because each State's project is unique, describing a particular State's experiences will likely identify that State. We will not use your names in our reports, but your identity might be inferred from the identity of your State and the nature of the information that you provide. If there is something that you want to say in confidence that you would not otherwise mention, let us know and we'll use it to inform our understanding, but will keep the details private.

We will ask you questions and record your answers in an interview format that will take about a half hour. With your permission, we'd like to electronically record your responses to make sure we get them right. Do I have your permission to record the interview?

[*If yes:* Thank you.]

[*If no:* You have my assurance that we will keep anything private that you wish. If you'd prefer, we will not cite anything that you say verbatim from the recording. *Wait for response; if yes, record:* Thank you. *If no:* That's OK. Just bear with me as I take detailed notes.]

Your DC-M implementation began near the start of the 2012-2013 school year, but we're going to focus on your recent efforts regarding the certification process for this school year.

## BACKGROUND

To start, let's talk about how your demonstration has progressed since [MONTH].

1. Have any changes occurred in your DC-M matching process since the initial round of matching was completed? If so, why did you make these changes? [*Prob*e: Follow up on anything they mentioned planning during the first round of interviews.]

## IMPLEMENTATION CHALLENGES

I'd also like to discuss any implementation challenges that your State might have had to deal with.

2. Have any new challenges arisen since we last spoke?
3. Overall, what challenges have you encountered in implementing DC-M? What problems have these challenges caused? [*Probe:* Any other serious challenges?]

   a. [*For each challenge:*] To what extent have you been able to resolve the challenge? How? (If State mentioned challenges in previous interview, ask about their current status in resolving them)

***Providing the data***

4. Because children receiving Medicaid are not categorically eligible, DC-M requires States and districts to look at income, in addition to Medicaid receipt, to determine NSLP eligibility. How challenging is conducting that extra step? How does your State assess income of children in the Medicaid data for DC-M?

   a. Do you use a simple gross income variable, program or category codes, or a combination of the two to determine eligibility? [*If gross income:* was the appropriate single data element already in your system or did you need to construct it?] [*If program/category codes:* how easy was it for your agency to decide which program codes were eligible and which were not? Did this process require any clarification from the Child Nutrition Agency?]

   b. Is a gross income variable included in the file your agency sends to Child Nutrition staff?

   c. DC-M requires information on income "before the application of any expense, block or other income disregard," rather than the income definition used in determining Medicaid eligibility. How were you able to account for this difference so that you

could use Medicaid income to determine eligibility for DC-M? How challenging was this aspect of the process? Would it have been easier to provide the income definition used in determining Medicaid eligibility?

[*If respondent says that Medicaid receipt is used as an indicator of NSLP eligibility:* Is the measure of income used for Medicaid eligibility gross income? What exclusions and deductions do you make? And what income cutoff is used for Medicaid eligibility (Is it 133%? Higher? Lower?)]

5. Describe any challenges in exchanging data from system to system and how you overcame them.
6. Now that you've accommodated requests to provide data for DC-M, do you anticipate any continuing impacts on your agency besides the ongoing provision of data? If so, what are they?
7. How often does your agency provide Medicaid enrollment data files for the match?
   a. To what extent has providing the files on this schedule been a challenge? [*If challenge:* How have you adapted to this challenge over time?]

***Resources***

8. Let's discuss the challenges associated with resources to implement DC-M. First, let's focus on IT capabilities. Since we last spoke, have you been required to make any systems updates in order for your agency to accommodate DC-M?
   a. Explain the impact of these updates on staffing decisions and the time constraints to accomplish this.
9. Now, please think about any challenges in obtaining staff to implement DC-M.
   a. What activities associated with DC-M were most time consuming and difficult to implement for staff? To what extent, if any, did activities require significantly more time/effort than originally anticipated?
   b. Were there any particular aspects of your State's systems or processes that made DC-M more or less labor intensive for staff?
   c. Did you need any temporary or contract staff?

## RESPONSE TO CHALLENGES/LESSONS LEARNED

Now I'd like you to think about the lessons learned to date in response to implementing the DC-M demonstration.

10. What would you do differently or recommend that other States do differently?
11. How will the system as implemented be able to adapt to changes in Medicaid income definitions or eligibility criteria in the future?
12. Is there anything else you would like to add?

## Closing

That concludes our interview. Thank you for your time. We'll be contacting you again in several months to schedule an interview for [MONTH] to discuss your State's experiences in the next round of DC-M.

# APPENDIX G

# SUPPLEMENTAL TABLES RELATED TO STATE ADMINISTRATIVE COSTS

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## Table G.1. State start-up and ongoing administrative costs of DC-M in 2012–2013, by State and agency type

| State | Administrative costs ($) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Quarter 1 (July - Sep 2012) | | Quarter 2 (Oct - Dec 2012) | | Quarter 3 (Jan - March 2013) | | Quarter 4 (April - June 2013) | | Full year (July 2012 - June 2013) | | |
| | Child nutrition agency[a] | Medicaid agency | Child nutrition agency[a] | Medicaid agency | Child nutrition agency[a] | Medicaid agency | Child nutrition agency[a] | Medicaid agency | Child nutrition agency[a] | Medicaid agency | Total |
| **Random assignment States** | | | | | | | | | | | |
| Florida total costs | 2,999 | 414 | 345 | 83 | 584 | 244 | 144 | 58 | 4,073 | 799 | 4,873 |
| Start-up costs | 2,999 | 414 | 345 | 83 | 449 | 215 | 0 | 0 | 3,793 | 712 | 4,506 |
| Ongoing costs | 0 | 0 | 0 | 0 | 136 | 29 | 144 | 58 | 280 | 87 | 367 |
| Illinois total costs | 34,436 | 9,173 | 29,177 | 5,423 | 2,827 | 1,587 | 1,090 | 1,587 | 67,530 | 17,769 | 85,299 |
| Start-up costs | 34,436 | 9,173 | 10,501 | 2,250 | 0 | 0 | 0 | 0 | 44,937 | 11,423 | 56,360 |
| Ongoing costs | 0 | 0 | 18,676 | 3,173 | 2,827 | 1,587 | 1,090 | 1,587 | 22,593 | 6,346 | 28,939 |
| New York City total costs | 4,535 | 8,640 | 701 | 2,880 | 701 | 0 | 701 | 0 | 6,639 | 11,520 | 18,159 |
| Start-up costs | 4,535 | 8,640 | 0 | 2,880 | 0 | 0 | 0 | 0 | 4,535 | 11,520 | |
| Ongoing costs | 0 | 0 | 701 | 0 | 701 | 0 | 701 | 0 | 2,104 | 0 | 2,104 |
| **Random assignment State total** | **41,970** | **18,227** | **30,224** | **8,386** | **4,112** | **1,831** | **1,936** | **1,645** | **78,242** | **30,088** | **108,330** |
| **Universal implementation States** | | | | | | | | | | | |
| Kentucky total costs | 3,286 | 1,309 | 1,612 | 2,941 | 1,287 | 1,188 | 1,519 | 1,758 | 7,704 | 7,196 | 14,900 |
| Start-up costs | 3,286 | 1,309 | 0 | 2,941 | 0 | 0 | 0 | 1,758 | 3,286 | 6,008 | 9,294 |
| Ongoing costs | 0 | 0 | 1,612 | 0 | 1,287 | 1,188 | 1,519 | | 4,418 | 1,188 | 5,607 |
| Pennsylvania total costs[b] | 8,723 | 176,743 | 4,060 | 0 | 4,485 | 0 | 4,345 | 0 | 21,612 | 176,743 | 198,356 |
| Start-up costs | 8,723 | 176,743 | 0 | 0 | 0 | 0 | 0 | 0 | 8,723 | 176,743 | 185,466 |
| Ongoing costs | 0 | 0 | 4,060 | 0 | 4,485 | 0 | 4,345 | 0 | 12,889 | 0 | 12,889 |
| **Universal implementation State total** | **12,009** | **178,052** | **5,672** | **2,941** | **5,771** | **1,188** | **5,864** | **1,758** | **29,316** | **183,940** | **213,256** |

Source: State cost tracking logs.

Notes: Totals may differ slightly from the sum of components due to rounding. In most State agencies, **start-up costs** are defined as costs that occur up to and including the DC-M implementation month, while all other costs that occur throughout the months following DC-M implementation are classified as **ongoing**. However, for the Kentucky and New York City Medicaid agencies, we defined some costs shortly following the implementation month as start-up if they appeared to be short-term costs and did not occur later than one full quarter after the implementation month (for example, time spent developing and testing programs for the extract in the second quarter in Kentucky's Department for Medicaid Services). DC-M was implemented in September 2012 in Kentucky, New York City, and Pennsylvania, October 2012 in Illinois, and February 2013 in Florida.

[a]In most States, a single child nutrition agency—typically the State department of education—coordinates DC-M. In Florida, however, both the Florida Department of Education and the Florida Department of Agriculture are involved. Reported costs include those from both agencies.

[b]Pennsylvania's Medicaid (Department of Public Welfare) costs are contractor costs for work during the July-September 2012 time period to modify the existing direct certification system process to include Medicaid.

## Table G.2 Labor and other direct State administrative costs of DC-M in 2012–2013 by State, quarter, and agency type

| State and Cost Category | Administrative costs ($) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Quarter 1 (July - Sep 2012) | | Quarter 2 (Oct - Dec 2012) | | Quarter 3 (Jan - March 2013) | | Quarter 4 (April - June 2013) | | Full year (July 2012 - June 2013) | | |
| | Child nutrition agency[a] | Medicaid Agency | Child nutrition agency[a] | Medicaid Agency | Child nutrition agency[a] | Medicaid agency | Child nutrition agency[a] | Medicaid agency | Child nutrition agency[a] | Medicaid agency | Total |
| **Random assignment States** | | | | | | | | | | | |
| Florida | | | | | | | | | | | |
| Total costs | 2,999 | 414 | 345 | 83 | 584 | 244 | 144 | 58 | 4,073 | 799 | 4,873 |
| Labor costs | 2,999 | 414 | 345 | 83 | 584 | 244 | 144 | 58 | 4,073 | 799 | 4,873 |
| ODCs | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Illinois | | | | | | | | | | | |
| Total costs | 34,436 | 9,173 | 29,177 | 5,423 | 2,827 | 1,587 | 1,090 | 1,587 | 67,530 | 17,769 | 85,299 |
| Labor costs | 34,436 | 9,173 | 29,177 | 5,423 | 2,827 | 1,587 | 1,090 | 1,587 | 67,530 | 17,769 | 85,299 |
| ODCs | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| New York City | | | | | | | | | | | |
| Total costs | 4,535 | 8,640 | 701 | 2,880 | 701 | 0 | 701 | 0 | 6,639 | 11,520 | 18,159 |
| Labor costs | 4,535 | 8,640 | 701 | 2,880 | 701 | 0 | 701 | 0 | 6,639 | 11,520 | 18,159 |
| ODCs | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Random assignment State total** | **41,970** | **18,227** | **30,224** | **8,386** | **4,112** | **1,831** | **1,936** | **1,645** | **78,242** | **30,088** | **108,330** |
| **Universal implementation States** | | | | | | | | | | | |
| Kentucky | | | | | | | | | | | |
| Total costs | 3,286 | 1,309 | 1,612 | 2,941 | 1,287 | 1,188 | 1,519 | 1,758 | 7,704 | 7,196 | 14,900 |
| Labor costs | 3,286 | 1,295 | 1,612 | 2,928 | 1,287 | 1,175 | 1,519 | 1,745 | 7,704 | 7,143 | 14,847 |
| ODCs | 0 | 13 | 0 | 13 | 0 | 13 | 0 | 13 | 0 | 53 | 53 |
| Pennsylvania | | | | | | | | | | | |
| Total costs | 8,723 | 176,743 | 4,060 | 0 | 4,485 | 0 | 4,345 | 0 | 21,612 | 176,743 | 198,356 |
| Labor costs | 8,723 | 6,195 | 4,060 | 0 | 4,485 | 0 | 4,345 | 0 | 21,612 | 6,195 | 27,808 |
| ODCs | 0 | 170,548 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 170,548 | 170,548 |
| **Universal implementation State total** | **12,009** | **178,052** | **5,672** | **2,941** | **5,771** | **1,188** | **5,864** | **1,758** | **29,316** | **183,940** | **213,256** |

Source: Cost tracking logs completed quarterly by State agency administrators.

Note: Totals may differ slightly from the sum of components due to rounding.

[a]In most States, a single child nutrition agency—typically the State department of education—coordinates DC-M. In Florida, however, both the Florida Department of Education and the Florida Department of Agriculture are involved. Reported costs include those from both agencies.

ODCs = Other direct costs.

## Table G.3. State agency staff hours spent on DC-M in 2012–2013, by State, quarter, and agency type

| State | Hours of labor | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Quarter 1 (July - Sep 2012) | | Quarter 2 (Oct - Dec 2012) | | Quarter 3 (Jan - March 2013) | | Quarter 4 (April - June 2013) | | Full year (July 2012 - June 2013) | | |
| | Child nutrition agency[a] | Medicaid agency | Child nutrition agency[a] | Medicaid agency | Child nutrition agency[a] | Medicaid agency | Child nutrition agency[a] | Medicaid agency | Child nutrition agency[a] | Medicaid agency | Total |
| **Random assignment States** | | | | | | | | | | | |
| Florida | 106 | 10 | 10 | 2 | 33 | 6 | 8 | 1 | 156 | 19 | 175 |
| Illinois | 580 | 80 | 390 | 55 | 42 | 20 | 16 | 20 | 1,028 | 175 | 1,203 |
| New York City | 77 | 108 | 12 | 36 | 12 | 0 | 12 | 0 | 113 | 144 | 257 |
| **Random assignment State total** | **763** | **198** | **411** | **93** | **87** | **26** | **36** | **21** | **1,296** | **338** | **1,634** |
| **Universal implementation States** | | | | | | | | | | | |
| Kentucky | 56 | 37 | 27 | 65 | 22 | 25 | 26 | 33 | 130 | 160 | 290 |
| Pennsylvania | 168 | 160 | 84 | 0 | 92 | 0 | 88 | 0 | 432 | 160 | 592 |
| **Universal implementation State total** | **224** | **197** | **111** | **65** | **114** | **25** | **114** | **33** | **562** | **320** | **882** |

Source: Cost tracking logs completed quarterly by State agency administrators.

Notes: Totals may differ slightly from the sum of components due to rounding. Labor hours include those for both State agency employees and contractors (except for Pennsylvania's data system contractor).

[a]In most States, a single child nutrition agency—typically the State department of education—coordinates DC-M. In Florida, however, both the Florida Department of Education and the Florida Department of Agriculture are involved. Reported costs include those from both agencies.

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# APPENDIX H

# STATE ADMINISTRATIVE COST DATA COLLECTION INSTRUCTIONS AND INSTRUMENT

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# EVALUATION OF DEMONSTRATIONS OF DIRECT CERTIFICATION OF CHILDREN RECEIVING MEDICAID BENEFITS (DC-M)

## INSTRUCTIONS FOR TIME AND COST TRACKING LOG

## DETAILED INSTRUCTIONS

**TAB 1: Activity Descriptions.** This tab provides more detailed descriptions of the activities to be considered/included when completing the Time Log (provided for clarification purposes). It also includes a glossary of terms. The State need not enter any information on this tab.

**TAB 2: Time Log.** In this tab, we are requesting information on the amount of time each staff member (or group of staff members with the same job category) spent on DC-M during the quarter, by activity. **Please include only time or costs incurred to implement DC-M that are in addition to time or costs already associated with other forms of direct certification for the National School Lunch Program/School Breakfast Program (that is, direct certification through the Supplemental Nutrition Assistance Program, Temporary Assistance for Needy Families, or Food Distribution Program on Indian Reservations).** Next, we provide instructions for completing each column.

***Column A: First Name, Initials, or Position of Staff Member.*** While tracking information on costs, we wish to minimize the amount of personally identifiable information included on the forms. Thus, if only a few staff members work on DC-M, we suggest listing them by first name or initials. If several staff members from a particular job category work on DC-M (such as programmers), they can be grouped on one line (assuming similar salary levels). Please include all staff members within your agency who worked on DC-M, even if the staff member was not specifically from the child nutrition division (for example, IT staff).

***Column B: Staff Position.*** Please provide a descriptive job title for the person listed in Column A, unless he or she was listed by job title there.

***Column C: Activity.*** Clicking on a cell in Column C will display an arrow on the right that opens a drop-down list of activities. Click on the appropriate activity to select it. The Activity Descriptions tab (TAB 1) provides more detailed definitions of the activities. If an activity that was part of DC-M is not listed, click on "Other activities" and describe the activity in Column G (Notes).

***Columns D–F: Total Hours Spent in Month: July, August, September.*** For the person or persons listed in the row and the activity selected in Column C, enter the total hours spent on that activity in July, August, and September. If needed, please consult records or speak to the individual(s) or their supervisor. The staff members' best estimates are fine. To facilitate tracking, we have included a weekly version of the time log for state agencies to use if interested (see **TAB 7: Time Log – Optional Weekly Version**). In future quarters, we will provide you with a revised form early in the quarter that you can use to track costs as they occur, rather than retrospectively.

***Column G: Notes.*** This column is for recording any additional details needed to understand the entries in Columns A–F.

**TAB 3: Salary Information.** In this tab, we are requesting information on the salaries of each staff member (or group of staff members with the same job category) who spent time related to the implementation of DC-M during the quarter. Next, we provide instructions for completing each column.

***Column A: First Name, Initials, or Position of Staff Member, and Column B: Staff Position*.** Please complete these columns for each staff member (or group of staff members with similar positions and salaries) who conducted DC-M activities, as you did in Tab 1. As with the time log, please include all staff members within your agency who worked on DC-M

***Column C: Pay Rate (dollars)*.** Please enter the dollar amount that the employee is paid for the time period described in Column D.

***Column D: Basis Paid.*** Please specify (using the drop-down menu) whether the pay rate in dollars refers to dollars per hour, per week, twice per month (24 pay periods), bi-weekly (26 pay periods), per month, or per year. If the pay rate is in a different unit than one of these options, please explain in the Notes column. If the staff member received overtime pay, list that rate on a separate line and write "overtime" in the Notes column.

***Column E: Fringe Benefit Rate/Amount.*** If fringe benefits are calculated as a percentage (such as 50 percent of salary), please enter the rate in this column. If fringe benefits are calculated as an amount, please enter the total dollar amount for the staff member(s) in the column. The dollar amount should reflect the same period as the base pay rate.

***Column F: Percentage or Amount.*** Please specify (using the drop-down menu) whether the fringe benefits in Column E are expressed as a percentage or a dollar amount.

***Column G: Notes.*** This column is for recording any additional details needed to understand the entries in Columns A–F.

**TAB 4: Other Direct Cost (ODC) Information.** In this tab, we are requesting information on any type of nonlabor ("other") direct costs (ODCs) that are incurred in order to implement DC-M. These may include printing and mailing costs for materials provided to school districts, charges for conference calls, or amounts paid to outside contractors for work on the project (such as programming or clerical work). Column A asks for the type of cost, Column B asks for the total dollar amount for the quarter, and Column C provides space for any explanatory notes. If totals by month are easier to report, please record them in the Notes column. If there are no ODCs related to DC-M, just type "no costs" somewhere on the form so we know it was not missed.

**TAB 5: Indirect Cost Information.** This tab (row 11) asks if the agency uses an indirect cost rate. If the answer is no, you do not need to provide any further information. If the answer is yes, please list the indirect cost rate and explain in row 12 what costs are included in indirect costs and how they are allocated. If there are differing indirect cost rates, depending on the cost to which it is applied, please provide detailed information on how each is allocated. Then, please estimate in row 13 the total indirect costs associated with the direct costs previously reported.

**TAB 6: Contact Information.** Please provide the requested information on how to contact the person responsible for completing this form (the person who will be the designated contact for further questions and for the follow-up interview). If multiple individuals contributed to the form, please provide this information for the major contributors.

| State Child Nutrition Agency Activity | Most Relevant for Matching at: | Activity Description |
|---|---|---|
| **Negotiate data- sharing agreements** | State- and district-level | Draft MOU/MOA; edit and execute the agreements; develop specifications for the data needed from the Medicaid eligibility files. |
| **Develop specifications for matching** | State- and district-level | Develop specifications for matching Medicaid data to student data. Decide which match variables should be used in what order, what is considered "exact" or "close" match, formats for resulting files, etc. |
| **Enhance MIS or student database** | State- and district-level | Make enhancements to systems and databases to allow for entry of information related to DC-M |
| **Extract student data** | State- and district-level | Extract relevant student data from state student database, or files provided by school districts. Extract could cover participating school districts only (in DC-M1 states), or all school districts. |
| **Receive/check Medicaid file** | State- and district-level | Receive and check file of Medicaid-eligible school-aged children from the State agency that collects the Medicaid data. |
| **Test match procedures** | State-level | Test automated (or manual) match procedures, refine and retest. |
| **Conduct automated match** | State-level | Conduct automated match; separate between the full matches, near matches, and non-matches. |
| **Conduct manual match (if necessary)** | State-level | Conduct manual matching of cases not matched by the automated system (if State decides to do this). |
| **Merge DC- M students with other DC students** | State-level | Merge students who qualify for DC-M with students who qualify through SNAP or TANF (or other public assistance); remove duplicates if needed. |
| **Extract Medicaid file for each district** | District-level | Select subset of Medicaid file for each district's area—selection could be by district, or by county, city, or zip code, depending on how school districts are set up and what is most convenient. |
| **Provide data file to districts** | State- and district-level | Provide data file to districts. This data will already be matched in States that conduct State-level matching. Otherwise, the file will include Medicaid participation data only. |
| **Provide training and TA to districts** | State- and district-level | Provide training and technical assistance (e.g., Webinars) to districts on the DC-M process, and respond to their questions. |
| **Conduct USDA evaluation activities** | State- and district-level | Conduct activities related to the USDA DC-M evaluation. These include developing and executing MOUs with Mathematica, discussing the evaluation with Mathematica, and providing administrative data to Mathematica. |
| **Other activities (describe in Notes column)** | State- and district-level | Other activities not described above; please specify. |

**Note: In the time log on the next worksheet, please only include time incurred to implement DC- M that is *in addition to* time already associated with other forms of direct certification for school meals (such as direct certification through SNAP, TANF, or other programs).**

**Glossary of Terms:**

**CN:** Child Nutrition.
**DC- M:** Demonstrations of Direct Certification of Children Receiving Medicaid (DC-M).
**DC- M1:** States where the DC-M occurs only in selected districts.
**DC- M2:** States where DC-M occurs statewide.
**MOU/MOA:** Memorandum of Understanding (or Agreement).
**SNAP:** Supplemental Nutrition Assistance Program.
**TANF:** Temporary Assistance for Needy Families.
**USDA:** U.S. Department of Agriculture.

**NSLP/SBP Direct Certification of Children Receiving Medicaid Benefits**
**Time Tracking Log**
**[*STATE NAME*] Child Nutrition Agency Version (July - September 2012)**

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| | |
|---|---|
| **DC- M1/DC- M2:** | |
| **Name:** | |
| **Position/Title:** | |
| **Name of Agency/Division:** | |

| First Name, Initials, or Position of Staff Member | Staffing Position (*if not specified in first column*) | Activity (select from list) | *Total Hours Spent During Month* | | | Notes |
|---|---|---|---|---|---|---|
| | | | July | August | September | |
| | | [select from list] | | | | |
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**Note: In this time log, please only include time incurred to implement DC- M that is *in addition to* time already associated with other forms of direct certification for school meals (such as direct certification through SNAP, TANF, or other programs).**

**NSLP/SBP Direct Certification of Children Receiving Medicaid Benefits**
**Salary Worksheet**
**[*STATE NAME*] Child Nutrition Agency Version (July - September 2012)**

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| | |
|---|---|
| **DC- M1/DC- M2:** | |
| **Name:** | |
| **Position/Title:** | |
| **Name of Agency/Division:** | |

| First Name, Initials, or Position of Staff Member (include each staff listed in Time Log) | Staffing Position (*if not specified in first column*) | Pay Rate (dollars) | Basis Paid (select from list) | Fringe Benefit Percentage/ Amount | Fringe Benefits Calculated as: | Notes |
|---|---|---|---|---|---|---|
| | | | [select from list] | | [select from list] | |
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**NSLP/SBP Direct Certification of Children Receiving Medicaid Benefits**
**Other Direct Costs (ODC) Worksheet**
**[*STATE NAME*] Child Nutrition Agency Version (July - September 2012)**

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| | |
|---|---|
| **DC- M1/DC- M2:** | |
| **Name:** | |
| **Position/Title:** | |
| **Name of Agency/Division:** | |

| Type of Other Direct Cost (such as printing and mailing costs, charges for conference calls, or amounts paid to outside contractors for work on the project. Please describe.) | Amount During Quarter (dollars) | Notes |
|---|---|---|
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**Note:** If totals by month are easier to report, please record them in the Notes column.

**NSLP/SBP Direct Certification of Children Receiving Medicaid Benefits**
**Indirect Costs Worksheet**
**[*STATE NAME*] Child Nutrition Agency Version (July - September 2012)**

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| | |
|---|---|
| **DC- M1/DC- M2:** | |
| **Name:** | |
| **Position/Title:** | |
| **Name of Agency/Division:** | |

| Question | Response |
|---|---|
| 1. Does your accounting system assign indirect costs to any of the direct labor and ODC costs listed above? (Yes or No) | CHECK ONE: ___YES ___NO |
| **2.** If yes, describe how applicable indirect costs are defined and measured. (Hypothetical example: Indirect costs include management, human resources, accounting, IT services, and building maintenance. They are charged at the rates of 12% of labor costs and 2% of ODCs.) | |
| **3.** If yes, what were the total indirect costs associated with Direct Certification-Medicaid in July-September? (in dollars) | |

**NSLP/SBP Direct Certification of Children Receiving Medicaid Benefits**
**Contact Information for Individuals Responsible for Completing Form**
**[*STATE NAME*] Child Nutrition Agency Version (July - September 2012)**

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| | |
|---|---|
| **Name of Agency/Division:** | |
| **Address:** | |
| **City/State/Zip code:** | |
| **Name of Agency/Division #2 (if applicable):** | |
| **Address #2 (if applicable):** | |
| **City/State/Zip code #2 (if applicable):** | |
| **Name of 1st Contact Person:** | |
| **Phone Number for 1st Contact:** | |
| **Email Address for 1st Contact:** | |
| **Name of 2nd Contact Person (optional):** | |
| **Phone Number for 2nd Contact (optional):** | |
| **Email Address for 2nd Contact: (optional):** | |

Thank you for completing this form. Your responses will help us determine whether there are savings in administrative costs from the demonstration, and what the extent of the savings is. Your responses will also help us understand the various types of activities you perform when conducting direct certification. We understand that this task requires the investment of your time and greatly appreciate your participation. While we have tried to make these forms both flexible and straightforward, we will appreciate any suggestions for improvements. Please contact Anne Gordon (agordon@mathematica-mpr.com) or Joshua Leftin (jleftin@mathematica-mpr.com) with any questions.

**NSLP/SBP Direct Certification of Children Receiving Medicaid Benefits**
**Time Tracking Log**
**[*STATE NAME*] Child Nutrition Agency Version (July - September 2012)**

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| | |
|---|---|
| **DC- M1/DC- M2:** | |
| **Name:** | |
| **Position/Title:** | |
| **Name of Agency/Division:** | |

| First Name, Initials, or Position of Staff Member | Activity (select from list) | *Total Hours Spent During Week* | | | | | | | | | | | | | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Week 1 | Week 2 | Week 3 | Week 4 | Week 5 | Week 6 | Week 7 | Week 8 | Week 9 | Week 10 | Week 11 | Week 12 | Week 13 | |
| | [select from list] | | | | | | | | | | | | | | |
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**Note: In this time log, please only include time incurred to implement DC- M that is *in addition to* time already associated with other forms of direct certification for school meals (such as direct certification through SNAP, TANF, or other programs).**

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| State Medicaid Agency and/or Agency Housing Medicaid Eligibility Files Activity | Activity Description |
|---|---|
| **Negotiate data- sharing agreements** | Draft MOU/MOA; edit and execute the agreements; develop specifications for the data needed from the Medicaid eligibility files. |
| **Enhance MIS or student database** | Make enhancements to systems and databases to allow for entry of information related to DC-M. |
| **Develop and test programs for extract** | Develop and test programs for creating extract. The extract consists of school-age children on Medicaid with income less than 133% of poverty. |
| **Provide test file to CN agency** | Provide test file to Child Nutrition agency. |
| **Revise based on feedback** | Revise specifications and programming in response to feedback. |
| **Create Extract** | Create extract of school-age children on Medicaid with income less than 133% of poverty. |
| **Send file to CN agency** | Send file securely to Child Nutrition agency. |
| **Respond to questions** | Respond to data questions from Child Nutrition agency. |
| **Conduct USDA evaluation activities** | Conduct activities related to the USDA DC-M evaluation. These include developing and executing MOUs with Mathematica, discussing the evaluation with Mathematica, and providing administrative data to Mathematica. |
| **Other activities (describe in Notes column)** | Additional activities not described above; please specify. |

**Note: In the time log on the next worksheet, please only include time incurred to implement DC- M that is *in addition to* time already associated with other forms of direct certification for school meals (such as direct certification through SNAP, TANF, or other programs).**

**Glossary of Terms:**

**CN:** Child Nutrition.
**DC- M:** Demonstrations of Direct Certification of Children Receiving Medicaid (DC-M).
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**DC- M2:** States where DC-M occurs statewide.
**MOU/MOA:** Memorandum of Understanding (or Agreement).
**SNAP:** Supplemental Nutrition Assistance Program.
**TANF:** Temporary Assistance for Needy Families.
**USDA:** U.S. Department of Agriculture

**NSLP/SBP Direct Certification of Children Receiving Medicaid Benefits**
**Time Tracking Log**
**[*STATE NAME*] Version for Medicaid Agency and/or Agency Housing Medicaid Eligibility Files (July - September, 2012)**

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| | |
|---|---|
| **DC- M1/DC- M2:** | |
| **Name:** | |
| **Position/Title:** | |
| **Name of Agency/Division:** | |

| First Name, Initials, or Position of Staff Member | Staffing Position (*if not specified in first column*) | Activity (select from list) | *Total Hours Spent During Month* | | | Notes |
|---|---|---|---|---|---|---|
| | | | July | August | September | |
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**Note: In this time log, please only include time incurred to implement DC- M that are *in addition to* time already associated with other forms of direct certification for school meals (such as direct certification through SNAP, TANF, or other programs).**

**NSLP/SBP Direct Certification of Children Receiving Medicaid Benefits**
**Salary Worksheet**
**[STATE NAME] Version for Medicaid Agency and/or Agency Housing Medicaid Eligibility Files (July - September, 2012)**

MATHEMATICA Policy Research

| | |
|---|---|
| **DC- M1/DC- M2:** | |
| **Name:** | |
| **Position/Title:** | |
| **Name of Agency/Division:** | |

| First Name, Initials, or Position of Staff Member (include each staff listed in Time Log) | Staffing Position (*if not specified in first column*) | Pay Rate (dollars) | Basis Paid (select from list) | Fringe Benefit Percentage/ Amount | Fringe Benefits Calculated as: | Notes |
|---|---|---|---|---|---|---|
| | | | [select from list] | | [select from list] | |
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**NSLP/SBP Direct Certification of Children Receiving Medicaid Benefits**
**Other Direct Costs (ODC) Worksheet**
**[*STATE NAME*] Medicaid Agency Version (July - September, 2012)**

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| | |
|---|---|
| **DC- M1/DC- M2:** | |
| **Name:** | |
| **Position/Title:** | |
| **Name of Agency/Division:** | |

| Type of Other Direct Cost (such as printing and mailing costs, charges for conference calls, or amounts paid to outside contractors for work on the project. Please describe.) | Amount During Quarter (dollars) | Notes |
|---|---|---|
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**Note:** If totals by month are easier to report, please record them in the Notes column.

**NSLP/SBP Direct Certification of Children Receiving Medicaid Benefits**
**Indirect Costs Worksheet**
**[*STATE NAME*] Medicaid Agency Version (July - September, 2012)**

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| | |
|---|---|
| **DC- M1/DC- M2:** | |
| **Name:** | |
| **Position/Title:** | |
| **Name of Agency/Division:** | |

| Question | Response |
|---|---|
| 1. Does your accounting system assign indirect costs to any of the direct labor and ODC costs listed above? (Yes or No) | CHECK ONE: ___YES ___NO |
| **2.** If yes, describe how applicable indirect costs are defined and measured. (Hypothetical example: indirect costs include management, human resources, accounting, IT services, and building maintenance. They are charged at the rates of 12% of labor costs and 2% of ODCs.) | |
| **3.** If yes, what were the total indirect costs associated with Direct Certification-Medicaid in July-September? (in dollars) | |

**NSLP/SBP Direct Certification of Children Receiving Medicaid Benefits**
**Contact Information for Individuals Responsible for Completing Form**
**[*STATE NAME*] Version for Medicaid Agency and/or Agency Housing Medicaid Eligibility Files (July - September, 2012)**

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| | |
|---|---|
| **Name of Agency/Division:** | |
| **Address:** | |
| **City/State/Zip code:** | |
| **Name of Agency/Division #2 (if applicable):** | |
| **Address #2 (if applicable):** | |
| **City/State/Zip code #2 (if applicable):** | |
| **Name of 1st Contact Person:** | |
| **Phone Number for 1st Contact:** | |
| **Email Address for 1st Contact:** | |
| **Name of 2nd Contact Person (optional):** | |
| **Phone Number for 2nd Contact (optional):** | |
| **Email Address for 2nd Contact: (optional):** | |

Thank you for completing this form. Your responses will help us determine whether there are savings in administrative costs from the demonstration, and what the extent of the savings is. Your responses will also help us understand the various types of activities you perform when conducting direct certification. We understand that this task requires the investment of your time and greatly appreciate your participation. While we have tried to make these forms both flexible and straightforward, we will appreciate any suggestions for improvements. Please contact Anne Gordon (agordon@mathematica-mpr.com) or Joshua Leftin (jleftin@mathematica-mpr.com) with any questions.

NSLP/SBP Direct Certification of Children Receiving Medicaid Benefits
Time Tracking Log
[STATE NAME] Version for Medicaid Agency and/or Agency Housing Medicaid Eligibility Files (July - September, 2012)

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| | |
|---|---|
| DC- M1/DC- M2: | |
| Name: | |
| Position/Title: | |
| Name of Agency/Division: | |

| First Name, Initials, or Position of Staff Member | Activity (select from list) | *Total Hours Spent During Week* | | | | | | | | | | | | | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Week 1 | Week 2 | Week 3 | Week 4 | Week 5 | Week 6 | Week 7 | Week 8 | Week 9 | Week 10 | Week 11 | Week 12 | Week 13 | |
| | [select from list] | | | | | | | | | | | | | | |
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**Note: In this time log, please only include time incurred to implement DC- M that is *in addition to* time already associated with other forms of direct certification for school meals (such as direct certification through SNAP, TANF, or other programs).**

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