

Low-Income Students and School Meal Programs in California

Caroline Danielson

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SUMMARY

School nutrition programs help improve nutrition among vulnerable children. In so doing, they help build a better future for these children and the state. Now that California is implementing the Local Control Funding Formula (LCFF), there is additional reason to make sure all students who are eligible for free or low-cost meals enroll in these programs. Along with English Learners and foster youth, low-income students—in other words, students who are eligible for free and reduced-price meals—are targeted for additional funds under the LCFF. This renewed focus on enrollment could also prompt further consideration of *participation* in school nutrition programs.

This report looks at factors that might be linked to variations in student enrollment and participation in free or reduced-price meals. Not surprisingly, we find that districts with higher poverty rates identify higher levels of eligibility than wealthier districts. Low-income high school students appear to be enrolled at levels comparable to younger students, but students in elementary school districts are much more likely to participate in lunch programs than students in other types of districts. We also find that schools in districts with higher shares of foreign-born residents have modestly lower participation levels (but not identification of low-income students). Finally, we find evidence that schools with smaller enrollments are more successful than larger schools at identifying and serving low-income students.

One way to further the goal of full enrollment among low-income students is to cut the large share of low-income students who must submit applications for free or reduced-price meals. Achieving this objective is arguably an important part of a larger state effort to integrate social safety net programs and services.

SCHOOL NUTRITION PROGRAM GOALS AND CHALLENGES

School-based nutrition programs aim to improve nutritional outcomes to support better educational outcomes.¹ For this reason, school meal programs are closely monitored by both state and federal governments to ensure that meals served meet dietary guidelines.² Students consume about a third of their calories in school, and there is evidence that students who participate in school nutrition programs consume fewer “empty” calories.³

All students can participate in school nutrition programs; however, students with family incomes under 130 percent of the federal poverty line are eligible for free meals, and those with incomes between 130 percent and 185 percent of the poverty line are eligible for low-cost (or “reduced-price”) meals.⁴ State law requires public schools to offer at least one nutritionally adequate meal to all “needy” students each school day.⁵

School districts now have new funding incentives to enroll low-income students.⁶ The Local Control Funding Formula (LCFF), signed into law in 2013 and being phased in between the 2013–14 and 2020–21 school years, aims to simplify and rationalize the distribution of school funding from the state, which makes up roughly 30 percent of school district budgets. (The remaining funds come from both local and federal sources.) LCFF provides base funding for each student in a school district and supplemental funds for “high-needs” students—low-income students, English Learners, and children in foster care.⁷ Districts in which more than 55 percent of the student population is high needs receive additional concentration funds.⁸



Efforts to identify and enroll all low-income students and then to achieve full participation potentially encounter significant challenges. Schools and districts need to communicate clearly with students and families and find ways to ensure that parents of eligible students fill out the necessary paperwork (if they are not identified through their participation in other programs for low-income Californians). And, of course, once they are enrolled, low-income students still must choose to participate in the program. Many factors might affect enrollment and participation. For example, it may be harder for smaller schools or districts to identify low-income students, or for districts with more immigrants to achieve full enrollment, or for schools to motivate older students to enroll and participate. This report examines levels of enrollment and participation in NSLP among low-income students in California school districts during the 2012–13 school year, before the start of LCFF implementation, to assess whether differences across schools in enrollment and participation are associated with these characteristics of student bodies and school districts, as well as others.

HOW MANY STUDENTS ARE IDENTIFIED AS LOW INCOME?

In the 2014–15 school year, a student in a family of four with an annual income below \$31,005 is eligible for free meals; the reduced-price income cutoff is \$44,123.⁹ Students who participate in CalFresh or CalWORKs (or have a sibling who participates) are automatically eligible for free meals; most of these students are identified through data matches with county or state welfare records.¹⁰ Any student with a special status—in foster care, homeless, a migrant, or a runaway—is also automatically eligible.

Many low-income students go through an application process to enroll in school nutrition programs. In the 2012–13 school year, more than half of the students (59%) who enrolled in free and reduced-price meal programs in California did so by means of an application. Twenty-nine percent of students found eligible for free or low-cost meals were identified through matching county or state program records with student records (91% of districts identified at least some students this way). Just 12 percent of students attended schools that made use of federal provisions for universal eligibility for school nutrition programs.¹¹ The current dependence on student applications raises the possibility that the identification of low-income students is uneven across different types of schools and school districts because hurdles that students and their families face may be different and because schools' ability to conduct effective outreach may vary.

PATHWAYS TO ENROLLMENT

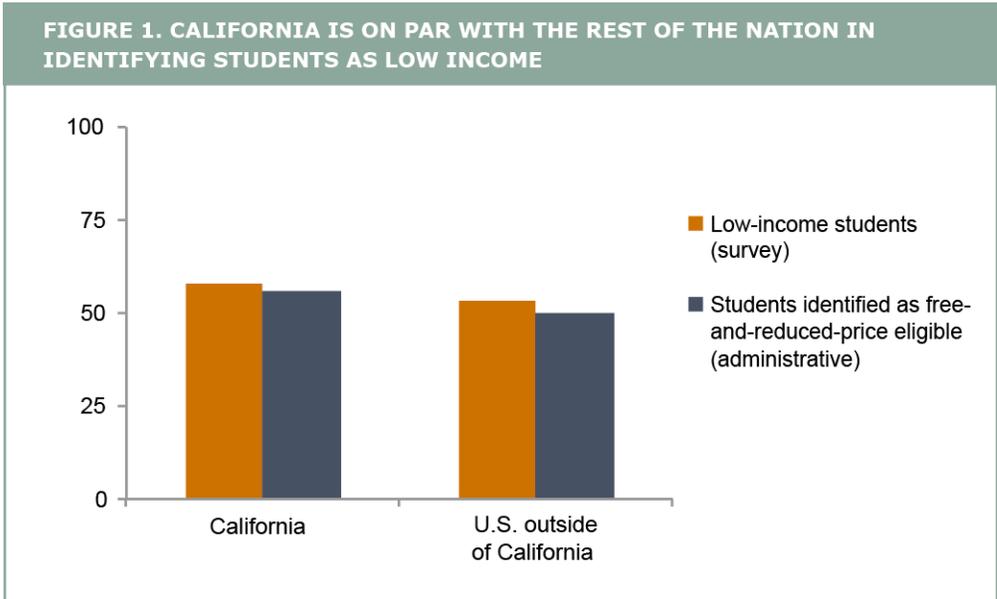
Students can enroll in nutrition programs at any point during the year, though informational campaigns are conducted—and application materials are sent home with students—in the fall. (Students identified as eligible remain so through September of the following school year.)

Because full enrollment among eligible students is a priority and the need to complete an application may discourage some families from applying, approaches that do not rely on applications have been developed in federal legislation. Provision 2 and Provision 3, long-standing U.S. Department of Agriculture (USDA) initiatives, give schools the option of serving free meals to all students without collecting and processing applications. Participating schools are reimbursed for the estimated cost of meals served to low-income students. (More detail can be found on the USDA website.)

In 2004, federal legislation required school districts to identify (or “directly certify”) students as eligible for free meals through data matches to means-tested programs such as CalFresh and CalWORKs. Once students have been identified, school districts simply send letters to inform families that their students have been automatically enrolled.

In 2014–15, the USDA introduced the Community Eligibility Provision (CEP), a hybrid approach that allows schools to serve free meals to all students and receive federal reimbursement based on a formula that takes into account the share of directly certified students. In the CEP's first year, only 205 schools in 28 California districts elected to use CEP. These schools serve approximately 93,000 students. For the full list of participating schools, see U.S. Department of Agriculture, Community Eligibility Provision (CEP) Elections by State, School Year 2014–15 (as of September 1, 2014).

Using self-reported income and family relationships from the California sample of a large-scale national survey of households, we can construct estimates of the number of public school students who are eligible for free and low-cost meals.¹² Approximately 58 percent of California’s public school students lived in such low-income families, compared to 53 percent of public school students in the rest of the U.S. (Figure 1). A comparison of the share of students who are low-income and the share enrolled in meal programs indicates high rates of enrollment: 56 percent of students were identified as eligible for free or reduced-price meals at the start of the 2012–13 school year in California, compared to 50 percent of students in other states. From this evidence, California appears to be on par with the rest of the nation, and there appears to be high enrollment among low-income students.

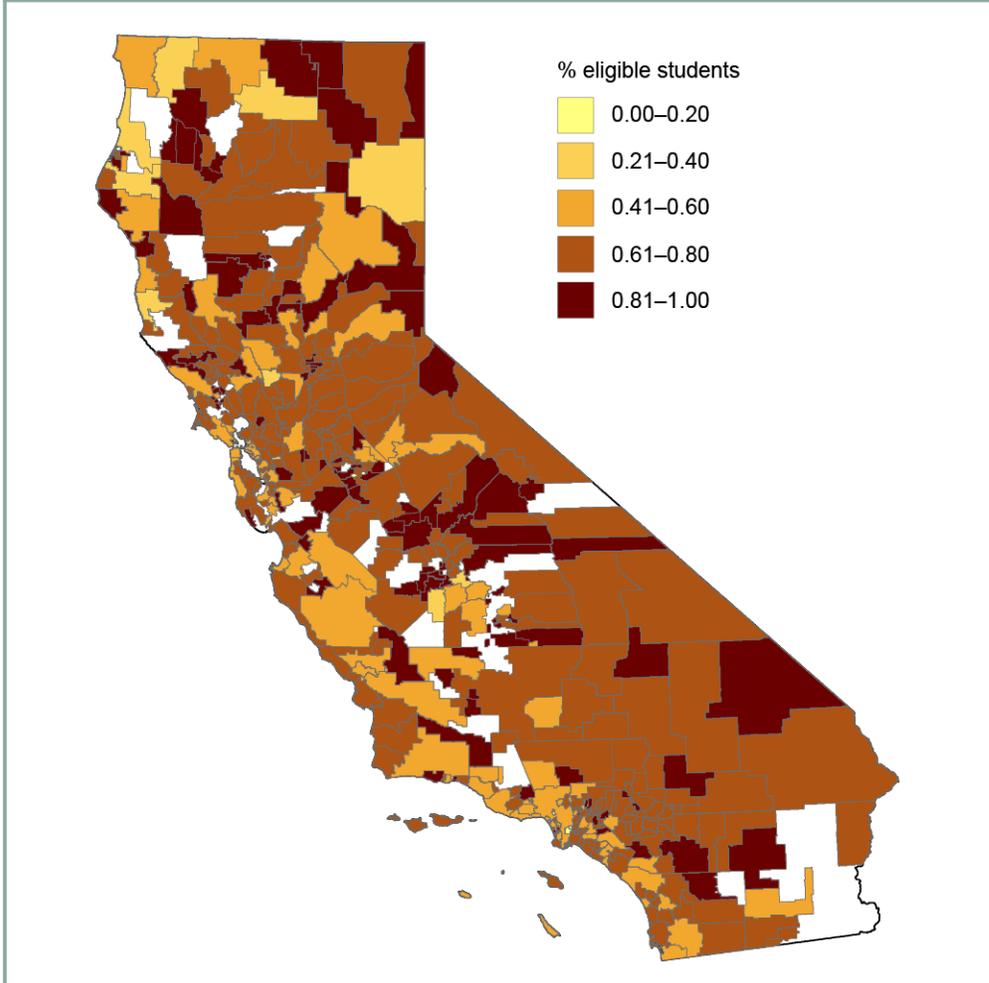


SOURCE: Author calculations from the American Community Survey (2012) and the National Center for Education Statistics, Common Core of Data (2012).

NOTE: Estimates refer to students enrolled in K–12 public schools.

Nonetheless, poverty does vary across the state. Figure 2 maps the share of students identified as low-income across school districts in the state. Most students (73.6%) were enrolled in districts where at least 40 percent of students were low income.¹³ Only 8.7 percent of students attended school in districts where 20 percent or fewer of students were identified as eligible for free and reduced-price lunch.

FIGURE 2. THE SHARE OF STUDENTS IDENTIFIED AS ELIGIBLE FOR FREE AND REDUCED-PRICE LUNCH VARIES ACROSS THE STATE



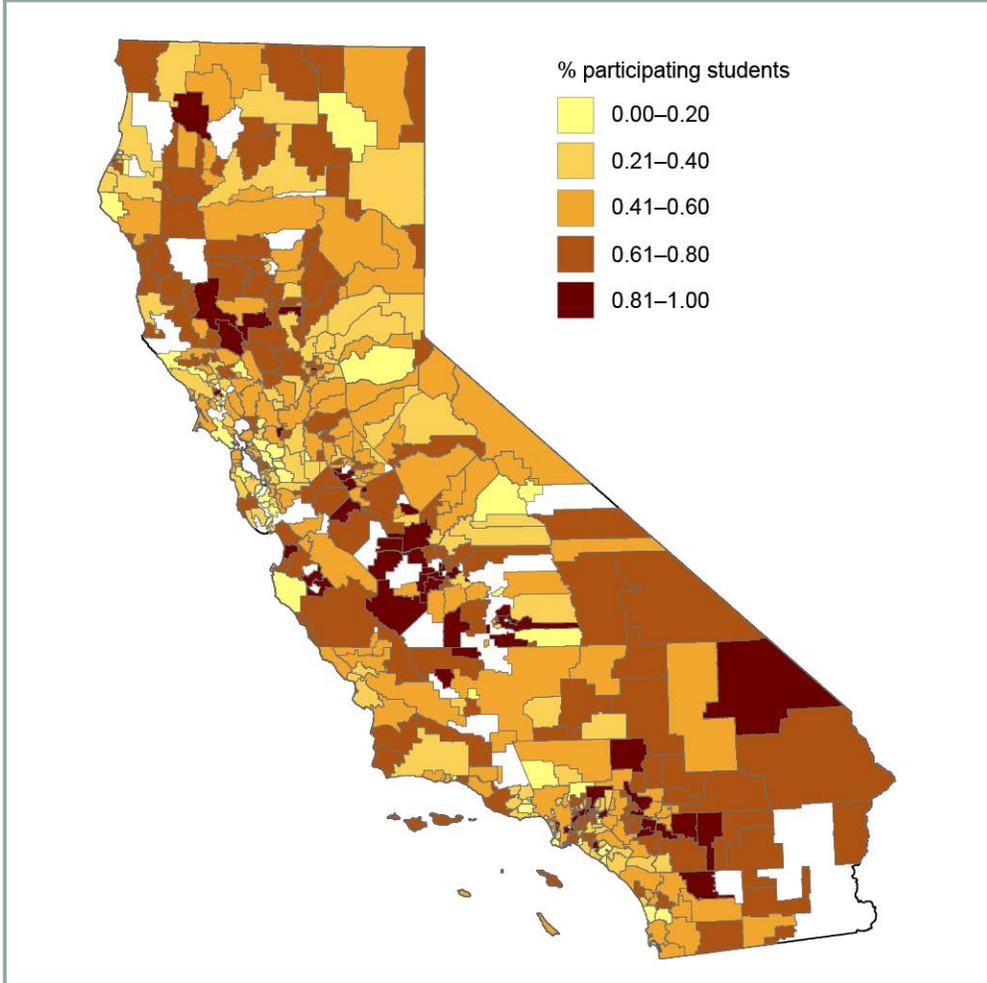
SOURCE: Author calculations from CDE summary administrative data. See Technical Appendix A for details.

NOTES: Ratios refer to October 2012. Unshaded areas reflect districts with current, districtwide Provision 2 or Provision 3 status and a few instances of missing data.

HOW MANY LOW-INCOME STUDENTS PARTICIPATE IN SCHOOL LUNCH?

Enrolling all eligible students in NSLP (and other school nutrition programs) is a fundamental objective, but full participation is also critical. In fall 2012 an average of 72.1 percent of eligible students participated in free or reduced-price school lunch programs statewide.¹⁴ Figure 3 maps participation among low-income students across school districts in the state. In most districts, participation among low-income students ranged from 60 percent to 80 percent.¹⁵ These districts enrolled 60.3 percent of the state's public and charter school students. However, 23 percent of students were enrolled in districts where participation was lower (for most, between 40 percent and 60 percent), and only 16.7 percent of students were enrolled in districts with 80 percent to 100 percent of students participating.

FIGURE 3. THE SHARE OF ENROLLED STUDENTS WHO PARTICIPATE IN FREE AND REDUCED-PRICE LUNCH PROGRAMS VARIES ACROSS THE STATE



SOURCE: Author calculations from CDE summary administrative data. See Technical Appendix A for details.

NOTES: Ratios refer to October 2012. Ratios greater than 1 are recoded to 1. Unshaded areas reflect districts with current, districtwide Provision 2 or Provision 3 status and a few instances of missing data.

It is difficult to observe attitudes or beliefs that deter individual students from participating.¹⁶ We can, however, assess whether the differences we have seen in enrollment and participation across the state are systematically linked to school- and district-level characteristics.

WHAT FACTORS ARE LINKED TO ENROLLMENT AND PARTICIPATION?

Individual students are eligible for free or reduced-price meals if they have a special status or if their families indicate they have incomes under the eligibility ceiling or are participating in CalFresh or CalWORKs. In other words, poverty status is the essential factor that makes a student eligible. To determine whether factors other than poverty that might affect enrollment and participation, we use quantitative models to assess the relevance of several school and district characteristics: school grade range, school size, district size, district type, and the share of the district population that is foreign born.¹⁷ Even if one or several of these factors is relevant, this does not imply that the factor specifically lies behind the difference. Nonetheless, the information can inform efforts to boost program enrollment and participation.

Not surprisingly, schools in districts with higher poverty rates identify higher shares of needy students. Such schools also see higher participation among identified needy students in school lunch programs. While this is positive news from the point of view of serving California's vulnerable children, it also indicates that districts

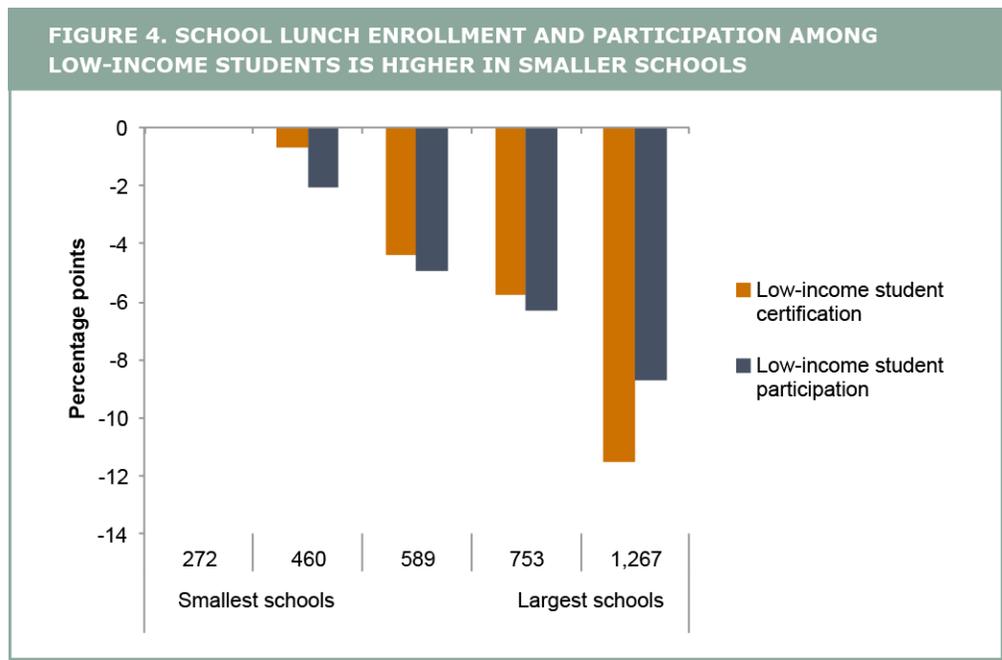
in wealthier areas may need to pay attention to participation among their smaller populations of low-income students.¹⁸

It is worth investigating the possibility that parents who are not U.S. citizens are reluctant to submit applications for, or allow their children to participate in, free or low-cost meal programs (although citizenship is not a criterion for eligibility). It is also possible that enrollment is affected by language or cultural barriers. We find no evidence of lower meal program enrollment in districts with higher shares of foreign-born residents, but we do find that participation is roughly 4 percentage points lower in these districts relative to districts with low shares.

It is also worth examining concerns about low-income older students being less willing than low-income elementary school students to enroll and participate in free and low-cost meal programs. We examine this question in several ways. Do schools that serve younger children have systematically higher free-and-reduced-price-meal populations than schools that serve older children? Do districts that serve younger versus older children see systematically higher low-income student enrollments? And, finally, do students enrolled in higher grades within the same school have systematically lower levels of enrollment in school nutrition programs compared with younger students in the same school?¹⁹

We find no clear evidence that low-income high school students are systematically under enrolled in school meal programs as compared with elementary school students. But we do see evidence that older low-income students are less likely to participate in school lunch than younger students.

Finally, we consider the link between enrollment and school size. Because of the fixed costs of staff and infrastructure, larger districts and schools may have greater capacity to enroll and serve low-income students. In fact, we find the opposite. While we do not see evidence that district size (as measured by total student enrollment) matters, smaller schools (again, as measured by total student enrollment) do see higher rates of both identification of and participation among low-income students (Figure 4). For example, relative to schools that enroll roughly a thousand students or more, schools that enroll approximately 400 students or less have enrollment rates among low-income students that are 11.5 percentage points higher and 8.7 percentage points higher participation in school lunch (again, among low-income students). The differences are smaller for mid-range schools as compared with small schools, but they are still negative.



SOURCE: Author calculations. See Technical Appendix A for data sources and technical appendix Table B1 and the accompanying discussion for details of the quantitative models.
 NOTE: Schools are divided into five equal groups. The X-axis labels show total school enrollment at the midpoint of each of these groups.

Many of our findings are reassuring—for example, high school students do not appear to be systematically under enrolled. But it appears that schools with larger enrollments would benefit from engaging in additional outreach around paper applications and/or stepped-up efforts to automatically enroll eligible students.

POLICY IMPLICATIONS

NSLP has been in place since the 1940s; LCFF is a recent reform. Both have the goal of improving outcomes among disadvantaged students. LCFF provides additional funds to districts with higher shares of disadvantaged students, including those enrolled in school nutrition programs. NSLP encourages schools to enroll low-income students and to serve them nutritious meals. If certain types of schools and districts see systematically lower enrollment and participation, equity in achieving these goals becomes a concern. We find indications that such systematic differences do exist across schools in California. While it may not be possible to identify the precise underlying reasons for these differences, decisionmakers at both the state and local levels can consider means of reducing application burdens and improving outreach, particularly for categories of schools that appear to be particularly at risk for under enrollment or under participation.

Certainly, persisting in efforts to automatically enroll low-income students who are enrolled in other safety net programs also holds promise.²⁰ Reducing the share of students who must submit applications for free or reduced-price meals is an important part of a larger statewide effort, spurred by the Affordable Care Act, to integrate social safety net services and programs.²¹ Increasing the coordination of information technology systems that enable all eligible Californians to enroll in safety net programs can help the state achieve a number of important goals, including those of the NSLP and LCFF.

Related reports are available on ppic.org: Paul Warren, *Implementing Local Accountability in California's Schools: The First Year of Planning* and Laura Hill and Iwunze Ugo, *Implementing California's School Funding Formula: Will High-Need Students Benefit?*

Technical appendices to this report are available at ppic.org.

NOTES

1. It can be difficult to evaluate the effectiveness of these programs because of their long-standing existence and broad reach. Some examples of relevant research include the following reports and articles. Sarah Bohn et al. establish that levels of participation in school breakfast and school lunch reduced poverty by about 1 percentage point among California children in 2012 (*The California Poverty Measure: A New Look at the Safety Net*, PPIC, 2013). Ann M. Collins et al. find reductions in food insecurity among low-income students randomized to receive funds to purchase foods during the summer when school is out of session (*Summer Electronic Benefits Transfer for Children (SEBTC Demonstrations: 2012 Final Report*, Food and Nutrition Service, Office of Policy Support, U.S. Department of Agriculture, 2013). Jayanta Bhattacharya, Janet Currie, and Steven Haider find that the School Breakfast Program improves diet quality ("Breakfast of Champions? The School Breakfast Program and the Nutrition of Children and Families," *Journal of Human Resources* 41 (3): 445–66). Jacob Leos-Urbel, Amy Ellen Schwartz, Meryle Weinstein, and Sean Corcoran examine the introduction of universal school breakfast in New York City and find few effects on academic outcomes, though they do find a marked increase in students eating breakfast ("Not Just for Poor Kids: The Impact of Universal Free School Breakfast on Meal Participation and Student Outcomes," *Economics of Education Review* 36: 88–107). Diane Schanzenbach finds a modest causal link between child obesity and participation in NSLP and concludes that healthier school lunches could reduce child obesity by 2 to 4 percentage points ("Do School Lunches Contribute to Child Obesity?" *Journal of Human Resources* 44 (3): 684–709). However, although Donka M. Mirtcheva and Lisa M. Powell find higher body mass index among school-aged girls who participate in NSLP, they conclude that the effect is not causal ("National School Lunch Program Participation and Child Body Weight," *Eastern Economic Journal* 39 (3): 328–45). Constance Newman finds that students offered more fruits and vegetables do consume more of them, but many students do not eat any at all (*Fruit and Vegetable Consumption by School Lunch Participants: Implications for the Success of New Nutrition Standards*, Economic Research Report No. ERR-154, U.S. Department of Agriculture, 2013). David Just and Joseph Price assess the potential of behavioral nudges to improve the nutritional quality of the school meals that children choose ("Default Options, Incentives and Food Choices: Evidence from Elementary-School Children," *Public Health Nutrition*, 1–8).
2. Guidelines for the NSLP and School Breakfast Program were substantially revised in 2012. See *Federal Register* 17 (17).

3. Ronette R. Briefel, Ander Wilson, and Philip M. Gleason, "Consumption of Low-Nutrient, Energy-Dense Foods and Beverages at School, Home, and Other Locations among School Lunch Participants and Nonparticipants," *Journal of the American Dietetic Association* 109 (2): 579–590.
4. Higher-income students can purchase meals at prices set by school districts.
5. See California Education Code Section 49550. California's education code defines "needy children" as those who meet the eligibility requirements for free and reduced-price meals (Section 49552).
6. Failing to identify low-income students can also weaken school nutrition programs because districts forego federal and state reimbursements that help them to operate sustainable programs.
7. Students who fit into more than one of these three groups are counted only once.
8. Legislative Analyst Office, *An Overview of the Local Control Funding Formula* (updated December 2013). Local government funds offset district entitlements; state funds make up any shortfall between local funds and the computed entitlement.
9. Eligibility is based solely on family income and current enrollment in a participating school. Immigration status is not considered. Included in family income calculations are pre-tax earnings, investment income, rental income, child support, welfare payments, social security payments, income from pensions, and certain other sources. Federal poverty guidelines vary by family size, but are not adjusted for regional cost of living differences. For more on eligibility guidelines see the [USDA website](#).
10. This is known as "direct certification" and is described in the text box. In California, one million students were directly certified in the 2012–13 school year—a success rate that put California in the bottom half of all states. See Quinn Moore, Kevin Conway, Brandon Kyler, and Andrew Gothro, *Direct Certification in the National School Lunch Program: State Implementation Progress, School Year 2012–2013*, Report no. CN-13-DC (U.S. Department of Agriculture, 2013). CalFresh is the state food stamps program; CalWORKs (California Work Opportunity and Responsibility to Kids) is a welfare program that provides cash aid and services.
11. Statistics for 2013–14 were similar: 56 percent of low-income enrollment was via application, while 29 percent of students were directly certified and 15 percent attended schools with current Provision 2 or Provision 3 status. At the district level, 88 percent of districts directly certified at least some students. Author calculations from aggregate CDE data. Only districts that appear in both the 2012–13 and the 2013–14 data are included in the calculations. There are several ways that schools can elect to serve universal free meals. For further details, see the [USDA website](#). For purposes of LCFF, schools with current Provision 2 and Provision 3 status must identify low-income students every four years using an alternative application. In the intervening years, these schools must only identify the status of students who are entering the school.
12. Author calculations from Steven Ruggles et al., *Integrated Public Use Microdata Series: Version 5.0* [Machine-readable database] (University of Minnesota, 2010). The American Community Survey (ACS) is a household survey of a random sample of all U.S. addresses. Fielded by the U.S. Census Bureau, the ACS has more than 350,000 California respondents in any one year.
13. The sample used to compute the statistics in this paragraph contains 6,263 observations for public and charter schools. The sample excludes schools with current Provision 2 or Provision 3 status because all students are considered eligible for free meals in such schools. Because these are generally high-poverty schools, the statewide share of low-income students is actually higher than 56.4 percent.
14. This percentage refers to October 2012, the month in which schools report official free and reduced-price lunch enrollment statistics. The sample used to compute this mean contains 6,263 observations for public and charter schools. The sample excludes Provision 2 and Provision 3 schools. Participation among schools with current Provision 2 or Provision 3 status was 70.3 percent. See [Technical Appendix A](#) for more details.
15. California Food Policy Advocates, *School Meal Analysis: 2012–13* (2014), provides further analysis of free and reduced price meal participation.
16. Low-income students may be deterred from enrolling due to stigma and may not want to participate even if enrolled because they find the meals unappetizing. These sorts of factors are difficult to observe on a large scale. Apart from participation, food waste among students who do receive a meal can be a concern.
17. To adjust for differences in eligibility across districts, we include variables measuring the low-income population age 6–17 and the race/ethnic demographic make-up of each school district (from Census's 5-year ACS summary files). We also include dropout rates for grades 9–12, a dummy variable indicating whether the school is a charter and a set of dummy variables for county in which the school district is located. See the [technical appendices](#) for further details.
18. There can be pockets of low-income students within individual schools or entire schools within wealthy districts that are high needs. For additional evidence of the latter situation, see Laura Hill and Iwunze Ugo, *Implementing California's School Funding Formula: Will High-Need Students Benefit?* (PPIC, 2015).
19. Students who have dropped out are not counted in either the numerator or the denominator of the rates we construct. Because only older students can drop out, and because we expect that more disadvantaged students face a higher probability of dropping out, we might expect that the resulting—relatively more advantaged—student body at the high school level would translate into *lower* rates of enrollment in free and reduced price meals. But we do not find this to be the case. We do include district-level dropout rates reported to CDE in our models to adjust for district-level differences in dropping out. See [Technical Appendix A](#) for further details. The inclusion of this variable alters the size of district type or grade-level coefficients very little.

20. In fact, the state has taken steps to connect students to the safety net from the opposite direction: State legislation approved in 2011 (AB 402) gives schools authority (with parental consent) to share information about students who submit applications for free or reduced-price meals with the county for the purpose of screening for CalFresh benefits.
21. Laurel Beck, Caroline Danielson, and Shannon McConville, *Enrollment in Health and Nutrition Safety Net Programs among California's Children* (PPIC, 2015).

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ABOUT THE AUTHOR

Caroline Danielson is a senior fellow at the Public Policy Institute of California. Her research focuses on multiple dimensions of the social safety net, including its role in mitigating poverty, program access and enrollment, and the integration and governance of programs. She has published in numerous academic journals, including the *Journal of Policy Analysis and Management* and the *Social Service Review*. Before coming to PPIC, she was a principal analyst at the University of California's Welfare Policy Research Project and a faculty member in the Department of Politics at the State University of New York, Potsdam. She holds a PhD in political science from the University of Michigan and a master's degree in policy analysis from the Pardee RAND graduate school.

OTHER PUBLICATIONS

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Public Policy Institute of California

500 Washington Street, Suite 600
San Francisco, CA 94111
T 415 291 4400 F 415 291 4401

PPIC Sacramento Center

Senator Office Building
1121 L Street, Suite 801
Sacramento, CA 95814
T 916 440 1120 F 916 440 1121

www.ppic.org

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