

**Measuring Student Poverty:
Policy Constraints and Research Alternatives**

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Measuring Student Poverty: Policy Constraints and Research Alternatives

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Background

The purpose of this report is to support the work conducted by the Department of Education regarding the collection of data on student economic disadvantage status, as required by **LD 362, Resolve 2021, Chapter 37, Resolve, To Require the Department of Education To Report on Family Income Data Collection**. LD 362 directs the Department to submit a report to the Joint Standing Committee on Education & Cultural Affairs on “strategies to use alternative databases and income measures to determine eligibility for public school nutrition programs”.¹ We review the policy context and requirements for measuring student economic status. We also provide a brief overview of the advantages and disadvantages of current data sources for measuring student poverty and some of the alternative data sources under consideration.

Summary

Student poverty data are used to fulfill federal program requirements related to funding and accountability, to allocate funds using the state’s funding formula (EPS), and to conduct research on achievement gaps and evaluate what types of programs and services are best at supporting economically disadvantaged students. Like most states, relies upon Free and Reduced Price Lunch (FRPL) eligibility data, which is collected about individual students by school nutrition programs, to meet these various needs. FRPL eligibility is a uniform measure consistently collected across schools and updated annually making it a convenient proxy for student poverty.

¹ <https://legislature.maine.gov/legis/bills/getPDF.asp?paper=HP0260&item=2&snum=130>
<https://legislature.maine.gov/legis/bills/getPDF.asp?paper=HP0260&item=1&snum=130>

² Child Nutrition, Maine Department of Education <https://www.maine.gov/doe/schools/nutrition> National School Lunch Program (NSLP), Food and Nutrition Service, US Department of Agriculture

However, the expansion of federal Community Eligibility Provision (CEP) nutrition program participation and the state's universal free meals program in response to COVID-19 are raising concerns about the reliability of FRPL eligibility data. The quality of these data is declining as parents no longer need to file documentation to be eligible for meals. Education leaders are voicing concerns that the measure will eventually degrade to the point that it is no longer adequately accurate, and thus alternative approaches to measuring student poverty are needed. Ideas include: improving current processes used to collect data on individual students; expanding the information collected to include additional indicators of poverty; and eliminating the need to collect student-level data at all by using estimates of student poverty or replacing student-level counts with school-level estimates. Each alternative must be evaluated to see whether it is feasible and which purposes, if any, it is well-suited to fulfill.

A review of federal program statutes and guidance documents indicates that if student- and school-level poverty estimates currently being tested turn out to be reliable, they could be used validly for several purposes:

- States could readily allocate Title I-A funds to districts and schools based on aggregate or estimated data.
- It would be feasible to change the state's EPS funding formula so that additional resources to support students in poverty are allocated based on a different measure such as estimated counts or estimated school- or district-level poverty rates.
- Student-level estimates of household income could, in theory, be useful to fulfill the federal Title I-A accountability requirements. The Every Student Succeeds Act (ESSA) requires that school districts report academic achievement and other student outcome measures by various student subgroups; estimates of income could be the basis for identifying students who are economically disadvantaged rather than FRPL status. This would require amending Maine's federal ESSA plan, and it is unclear whether federal rules would allow for the use of estimated data.
- There appears to be no flexibility in the USDA's current requirement that FRPL eligibility status be determined directly at the individual student level. Absent a major policy shift at the federal level, states will need to continue to collect individual student-level data in order to receive federal reimbursement for their meal programs. This is particularly impactful for districts that do not meet CEP threshold criteria.

While certain types of research and evaluation could be done using estimates of school-level poverty rates, student-level measures of poverty will generally enable more useful and actionable analysis. For example, a student-level indicator is needed for identification of achievement gaps for low-income students, and for evaluating the effectiveness of programs intended to improve other student outcomes. Some of the alternatives to FRPL being proposed would produce broader measures of income and economic hardship, which could lead to more rigorous and robust research and evaluation. Estimated student-level poverty measures can be used in place of direct measures but unless they are more accurate than existing FRPL eligibility data in identifying low-income students they will introduce additional measurement error into statistical models, requiring the use of more sophisticated techniques to avoid making false conclusions.

Findings

I. Why we need student poverty data

There are three main areas where student poverty data are needed: to fulfill federal program requirements related to funding and accountability, allocate funds using the state's funding formula (EPS), and to conduct research and evaluation. Specifically, measures of student poverty are used to:

- establish student eligibility for programs (USDA NSLP) and other targeted services
- receive and allocate federal funds (USDA NSLP, Title I)
- establish school eligibility for programs (USDA CEP)
- meet accountability and student achievement reporting requirements (ESSA, Title I)
- allocate funds via state funding formula (EPS)
- conduct research and evaluation on opportunity and achievement gaps and estimate what types of programs and services are best to support students in poverty (e.g., U.S. Department of Education's National Assessment of Educational Progress, ongoing work by MEPRI researchers).

II. FRPL eligibility as the go-to poverty measure

A student's eligibility to participate in the USDA's national school lunch program (NSLP) has long been used to fulfill not only USDA NSLP reimbursement requirements but these other needs as well. The program targets poor students and requires that a student's eligibility be directly identified annually, making it a readily available and uniform measure of student poverty.

Students living in households with incomes at or below 130% of the federal poverty line (FPL) are eligible for free meals and those living in households with incomes between 131% and 185% of the FPL are eligible for reduced price meals. Eligible students are identified by meal program applications completed by parents or guardians or if directly certified to be living in a household where at least one member is participating in Supplemental Nutrition Assistance Program (SNAP) or some other means-tested public assistance program.

Direct certification is conducted through computer matching of student enrollment lists against means-tested public assistance program records. States are required by the USDA to conduct the direct certification process at least three times a year and to directly certify at least 95 percent of children who are receiving SNAP benefits. States are also permitted to include Temporary Assistance for Needy Families (TANF) Program or Food Distribution Program on Indian Reservations (FDPIR), Medicaid (with USDA permission) and foster care in their direct certification process. Students who are enrolled in HeadStart or a comparable State-funded pre-kindergarten program, or who are officially confirmed to be receiving services because they are homeless, a runaway or an immigrant are also directly certified and categorically eligible for free meals.²

Once a student is determined eligible, they remain eligible for the rest of the school year and 30 days into the subsequent school year, regardless of changes in their family's situation. Households are not required to report changes in income or program participation. A subsequent updated direct certification contact indicating that the student

² Child Nutrition, Maine Department of Education <https://www.maine.gov/doe/schools/nutrition> National School Lunch Program (NSLP), Food and Nutrition Service, US Department of Agriculture <https://www.fns.usda.gov/nslp>

or the household is no longer receiving public assistance program benefits also does not change the student's initial eligibility status for that school year.³

The attractiveness of FRPL (free or reduced price lunch) eligibility as the “go to” measure of student poverty is obvious. The measure is uniform and consistently collected across schools and updated annually. Moreover, as a directly measured, student-level data point, it provides maximum flexibility. In its disaggregated form it not only produces actual counts of poor students for reimbursement and funding allocation, it enables the comparison of poor and not-poor student achievement outcomes, meeting both accountability and research and evaluation needs as well. In its aggregated form it can be used to describe the demographic composition of schools and identify schools with highly concentrated levels poverty, an important factor in estimating the effects of student poverty and targeting resources to schools facing longer odds in meeting state education goals.

III. The limitations of FRPL eligibility data

Despite its widespread use, the reliability and validity of FRPL eligibility as a measure of student poverty has long been questioned. Research conducted by the USDA found that 20 percent of students were inaccurately classified as FRPL eligible or ineligible. The study found that most of errors were due to parent/guardian mistakes on meal program applications and the limited ability of school administrative staff to catch those mistakes. The report made recommendations to improve both the application and direct certification processes and recommended that states increase their use of direct certification, which had a substantially lower error rate.⁴

Improving direct certification does increase the reliability with which poor students are identified but it is not a complete solution. First, not all eligible families participate in the public assistance programs typically used in direct certification due a range of factors

³ Eligibility Manual for School Meals Determining and Verifying Eligibility, National School Lunch Program (NSLP), Food and Nutrition Service, US Department of Agriculture, 2017 https://fns-prod.azureedge.net/sites/default/files/cn/SP36_CACFP15_SFSP11-2017a1.pdf

⁴ Program Error in the NSLP and SBP: Findings from the Second Access, Participation, Eligibility and Certification Study (APEC II), USDA, Food and Nutrition Service, Department of Agriculture, 2015. <https://www.fns.usda.gov/nslpsbp-access-participation-eligibility-and-certification-study-ii>

including stigma, fear that participation will negatively impact their application for legal status, confusion as to their eligibility, language barriers and complex and burdensome application processes.⁵ For example, in 2018, the SNAP participation rate among all eligible persons in Maine was around 81%.⁶ In addition, some families are categorically ineligible to participate, for example, asylum seekers are ineligible for benefits once the parents receive their work permits and start working.⁷ Participation rates are even lower for TANF, with recent estimates indicating that fewer than 20% of poor families with children receive TANF cash benefits.⁸

Second, direct certification identifies only those students eligible for free meals. The public assistance programs used by most states including Maine in the direct certification process (SNAP, TANF, FDPIR) have the same income eligibility limits as those for free meals (at or below 130% of the FPL) and thus do not identify students eligible for reduced price meals.

Schools use meal program applications completed by parents or guardians to identify students in households with incomes between 131% and 185% of the FPL who are eligible for reduced price meals. Applications can also identify students whose families are eligible but not participating in the public assistance or other programs used in direct certification. However, while applications can provide an important supplement to direct certification, they present a significant administrative burden to schools and parents/guardians and are limited by parent/guardian failure to complete the application or to complete it accurately. Language barriers, confusion about program rules and application components as well as an unwillingness to report personal information lead to

⁵ Measuring Student Poverty: Developing Accurate Counts for School Funding, Accountability, and Research, The Urban Institute, 2019. <https://www.urban.org/research/publication/measuring-student-poverty>

⁶ Reaching those in need: Estimates of State Supplemental Nutrition Assistance Program Participation Rates in 2018. Conducted by Mathematic for the USDA, 2021. <https://fns-prod.azureedge.net/sites/default/files/resource-files/Reaching2018.pdf>

⁷ See: 10-144, Maine Department of Health and Human Services, Office of Family Independence, Chapter 301, Food Supplement Program, pages 3-4.

⁸ TANF Cash Assistance Should Reach Many More Families in Maine to Lessen Hardship, Center for Budget and Policy Priorities, 2020 https://www.cbpp.org/sites/default/files/atoms/files/tanf_trends_me.pdf

incomplete or inaccurate incomplete applications.⁹ Parents/guardians are required to either provide case numbers as proof that they are categorically eligible because the household participates in SNAP, TANF or FDPIR or that they report all income earned by all members of the household and the last 4 digits of the primary wage earner's SSN. The form requires a rather daunting warning that this information may be shared with other government programs or law enforcement.¹⁰

Also not counted by program applications will be poor students whose families choose not to participate in school meal programs due to stigma or concern that it will negatively impact their immigrant status or undermine their asylum application. Research has shown that high school students, students in rural and suburban schools and immigrant students are less likely to participate in school meal programs.¹¹

In addition to the administrative burden on schools to follow up on incomplete or inaccurately completed applications, school staff are also required to verify a randomly selected sample of applications annually. The verification process involves selecting the random sample of up to 3,000 applications for verification, notifying the households selected, obtaining from them the necessary documentation (pay stubs, award letters from assistance agencies for benefits such as Social Security or SSI, support payment decree

⁹ Program Error in the NSLP and SBP: Findings from the Second Access, Participation, Eligibility and Certification Study (APEC II), USDA, Food and Nutrition Service, Department of Agriculture, 2015. <https://www.fns.usda.gov/nslpsbp-access-participation-eligibility-and-certification-study-ii>
Measuring Student Poverty: Developing Accurate Counts for School Funding, Accountability, and Research, The Urban Institute, 2019 <https://www.urban.org/research/publication/measuring-student-poverty>.

¹⁰ "The Richard B. Russell National School Lunch Act requires the information on this application. You do not have to give the information, but if you do not submit all needed information, we cannot approve your child for free or reduced price meals. You must include the last four digits of the social security number of the primary wage earner or other adult household member who signs the application. The social security number is not required when you apply on behalf of a foster child or you list a Supplemental Nutrition Assistance Program (SNAP), Temporary Assistance for Needy Families (TANF) Program or Food Distribution Program on Indian Reservations (FDPIR) case number or other FDPIR identifier for your child or when you indicate that the adult household member signing the application does not have a social security number. We will use your information to determine if your child is eligible for free or reduced price meals, and for administration and enforcement of the lunch and breakfast programs. We may share your eligibility information with education, health, and nutrition programs to help them evaluate, fund, or determine benefits for their programs, auditors for program reviews, and law enforcement officials to help them look into violations of program rules." <https://www.maine.gov/doe/schools/nutrition/studenteligibility>

¹¹ Many Eligible Children Don't Participate in School Nutrition Programs, Carsey School of Public Policy, University of New Hampshire, 2015
<https://scholars.unh.edu/cgi/viewcontent.cgi?referer=&httpsredir=1&article=1245&context=carsey>

from a court official) or verifying the information on the application through other means (direct certification, collateral contacts including employers, social service agencies, migrant workers' agencies, and religious or civic organizations).¹² The verification process is administratively onerous and according to the USDA, has a limited ability to improve the identification of FRPL eligible students: nationally, more than 40% of households selected for verification fail to comply.¹³

In 2010 Congress established the Community Eligibility Provision (CEP), intended to both reduce the administrative burden on parents and schools and expand participation in school meal programs. Schools are eligible to participate in the CEP program if 40% or more of their students are directly certified to be FRPL eligible. Participating schools no longer collect parent/guardian applications or conduct annual verification; all students in the school receive meals at no charge, ensuring access to food and eliminating the need for cafeteria staff to establish FRPL status and collect money from students. The reimbursement amount paid to CEP schools is determined by multiplying the number of students directly certified by 1.6, with the resulting number being the percentage of meals reimbursed at the higher "free" rate; the remainder are reimbursed at the "paid" rate.¹⁴

In the school year 2019-20, 73 schools in Maine participated in the CEP program.¹⁵ While the USDA prohibits CEP schools from utilizing meal applications to identify poor students, Maine schools that participate in the CEP program are still required to collect student-level data on economic status either through direct certification of alternative "Parent/guardian economic status form".¹⁶ To encourage parents to complete the form, the personal information requested is minimal and income is reported categorically. However,

¹² Child Nutrition, Maine Department of Education, Select "Verification" tab
<https://www.maine.gov/doe/schools/nutrition/studenteligibility>

¹³ Eligibility Manual for School Meals Determining and Verifying Eligibility, USDA, 2017 https://fns-prod.azureedge.net/sites/default/files/cn/SP36_CACFP15_SFSP11-2017a1.pdf

¹⁴ Community Eligibility Provision, USDA, Child Nutrition Programs
<https://www.fns.usda.gov/cn/community-eligibility-provision>

¹⁵ Maine Department of Education, Maine CEP SY2020
<https://www.maine.gov/doe/sites/maine.gov.do/files/inline-files/SY%202020%20Special%20Provision%20Districts.pdf>

¹⁶ Maine Department of Education, Economically disadvantaged status
<https://www.maine.gov/doe/schools/nutrition/economicallydisadvantaged>

without their child's access to school meals hanging in the balance, there is less incentive for parents to complete and return these forms.

Finally, even if FRPL eligibility data were able to reliably identify all poor students, the measure captures only income-related disadvantage and not the broader socioeconomic disadvantage (SES) of particular interest to education and policy researchers. A more valid measure would include not just the family's income but also things like parent education level and occupational status. Moreover, using FRPL eligibility as a proxy for poverty misses students in households with incomes above 185% of the FPL, many of whom are still at-risk of experiencing food insecurity, housing instability and other stressors facing by economically insecure households.¹⁷

IV. Ideas for dealing with the limitations of FRPL data

With the expansion of CEP program participation and the push by advocates to follow Maine's lead and make free meals universal, the quality of FRPL data is likely to decline even further. Federal and state education agencies, researchers and other stakeholders are working on ways to either improve FRPL data or replace it with other poverty measures. Ideas range from improving current processes used to collect data on individual students to eliminating the need to collect student-level data at all by using estimates of student-level poverty, or, when possible, replacing student-level data with school-level estimates.¹⁸ In this section we provide a brief overview of these ideas and evaluate some of the advantages and disadvantages.

Improve direct certification

¹⁷ Improving the Measurement of Socioeconomic Status for the National Assessment of Educational Progress: A Theoretical Foundation. US Department of Education, Washington DC, National Center for Education Statistics, 2012 https://nces.ed.gov/nationsreportcard/pdf/researchcenter/socioeconomic_factors.pdf
Measuring Student Poverty: Developing Accurate Counts for School Funding, Accountability, and Research, The Urban Institute, 2019
https://www.urban.org/sites/default/files/publication/101430/measuring_student_poverty.pdf

¹⁸ National Forum on Education Statistics (2015), *Forum Guide to Alternative Measures of Socioeconomic Status in Education Data Systems*, US Department of Education, Washington DC, National Center for Education Statistics. <https://nces.ed.gov/pubs2015/2015158.pdf>
Measuring Student Poverty: Developing Accurate Counts for School Funding, Accountability, and Research, The Urban Institute, 2019
https://www.urban.org/sites/default/files/publication/101430/measuring_student_poverty.pdf

The USDA and other stakeholders have made a number of suggestions for improving the direct certification process including expanding the number of means-tested public assistance programs used, conducting matches more frequently, and employing more advanced matching techniques.¹⁹

Maine currently uses SNAP, TANF, FDPIR and Foster Care for direct certification of students eligible for free meals. Additional programs that are recommended for consideration include: Special Supplemental Nutrition Program for Women, Infants, and Children (WIC), Medicaid and Children Health Insurance Programs (CHIPs), Social Security Insurance (SSI), Home Energy Assistance Program (HEAP), HUD Public Housing and Voucher programs, and the ACA Marketplace.²⁰ The Biden administration's American Families Plan specifically seeks to increase use of Medicaid and Supplemental Security Income (SSI) data for direct certification purposes.²¹

While direct certification is cost effective in the longer run, adding programs to direct certification can come with significant upfront costs. Establishing MOUs and data matching processes between agencies can present challenges. Differences in the privacy and confidentiality policies as well as differences in data management and computing across agencies can make the process time-consuming and administratively burdensome. Differences in eligibility criteria between the NSLP and these other programs can introduce administrative complexity to using the data to identify FRPL eligible students. Given these constraints, it only makes sense to expand the number of programs used if it will result in a

¹⁹ Ensuring Access to Free and Reduced Price School Meals for Low-Income Students, Guidance document FNS-GD-2016-0042, USDA, Food and Nutrition Service, US Department of Agriculture, 2016. <https://www.fns.usda.gov/cn/ensuring-access-free-and-reduced-price-school-meals-low-income-students> Direct Certification in the National School Lunch Program State Implementation Progress Report to Congress School Year 2017-2018 & School Year 2018-2019, Research Summary, USDA, Food and Nutrition Service, US Department of Agriculture, 2021. <https://fns-prod.azureedge.net/sites/default/files/resource-files/NSLPDirectCertification2017-1.pdf> Direct Certification Improves Low-Income Student Access to School Meals: An Updated Guide to Direct Certification. Food Research and Action Center (FRAC), 2018. <https://frac.org/wp-content/uploads/direct-cert-improves-low-income-school-meal-access.pdf>

²⁰Examining the Potential to Expand Data Matching in the National School Lunch and Breakfast Programs' Eligibility and Verification Process, White Paper, Food and Nutrition Service · Office of Policy Support, 2016. <https://fns-prod.azureedge.net/sites/default/files/ops/DataMatching.pdf>

²¹ American Families Plan Could Substantially Reduce Children's Food Hardship, Center for Budget and Policy Priorities, 2021 <https://www.cbpp.org/research/food-assistance/american-families-plan-could-substantially-reduce-childrens-food-hardship>

substantial increase in the number of poor students counted, which will occur only if the participation overlap between the currently employed programs and the additional programs is low.²²

Since Maine already directly certifies 100% of SNAP-receiving households²³, adding more programs will be useful only if there are significant numbers of poor families in Maine that don't also participate in these other public assistance programs. The benefits to adding MaineCare and CubCare (Maine's Children's Health Insurance Program, CHIP) to the direct certification will depend on the overlap in participation. Participation rates in MaineCare and CubCare for children ages 0 to 18 are estimated to be 94%.²⁴ Because SNAP participation among eligible families in Maine has declined in recent years and is currently around 80% (i.e., nearly 20% of eligible households do not participate) and certain households are not eligible to participate in SNAP (asylum seekers once employed), adding MaineCare and CubCare to the direct certification process could increase the number of poor students identified.

Additionally, MaineCare/CubCare records can be used to identify not just students eligible for free meals but students eligible for reduced price meals as well. The MaineCare income eligibility limits for children as a percent of the federal poverty level range from 132% to 162% of the FPL for regular coverage and for children in families with incomes above 162% there is additional source of coverage under Maine's CHIP program, CubCare, which provides assistance to families earning up to 213% of the FPL.²⁵ The State of

²² Examining the Potential to Expand Data Matching in the National School Lunch and Breakfast Programs' Eligibility and Verification Process, White Paper, Food and Nutrition Service · Office of Policy Support, 2016. <https://fns-prod.azureedge.net/sites/default/files/ops/DataMatching.pdf>

²³ Direct Certification in the National School Lunch Program State Implementation Progress Report to Congress School Year 2017-2018 & School Year 2018-2019, Research Summary, USDA, Food and Nutrition Service, US Department of Agriculture, 2021. <https://fns-prod.azureedge.net/sites/default/files/resource-files/NSLPDirectCertification2017-1.pdf>

²⁴ Children's Uninsured Rate Rises by Largest Annual Jump in More Than a Decade, Georgetown University, Health Policy Institute, Center for Children and Families, 2020 <https://kidshealthcarereport.ccf.georgetown.edu/states/maine/> Kaiser Family Foundation, <https://www.kff.org/statedata/custom-state-report/?i=152246&g=me&view=3>

²⁵ MaineCare Eligibility Guidelines 2021, Maine Department of Health and Human Services, Office for Family Independence. <https://www.maine.gov/dhhs/sites/maine.gov.dhhs/files/inline-files/2021%20MaineCare%20Eligibility%20Guidelines.pdf>

Massachusetts started using Medicaid data in 2012 to identify students eligible for free meals; and in 2017 they received permission to use Medicaid data to directly certify students for both free and reduced price meals.²⁶

Despite these possible advantages, the eligibility criteria between the NSLP and MaineCare and CubCare differ, making it necessary to use income data from the Medicaid record to determine FRPL eligibility. This will add to the complexity of using the data and establishing inter-agency protocols around privacy and data security. To protect household privacy and confidentiality, DHHS could share only categorical data with MDOE. To ensure validity, the income categories established beyond the FRPL eligibilities should be based on research regarding what levels of income put a household at economic disadvantage.

Other changes that have been recommended to improve the direct certification process include developing a centralized matching system instead of having each district perform their own matches, performing matches more frequently, the use of more reliable student identifiers like SSNs, and replacing exact matching processes with probabilistic or tiered matching. Maine already has a centralized system operated by the MDOE and conducts matches weekly. Maine currently employs an exact matching process using student names, DOBs and addresses.²⁷ While Maine is unlikely to move to using student SSNs due to legal restrictions that permit parents to opt-out,²⁸ its direct certification process might benefit from switching to probabilistic matching. It is common for low-income families' addresses to change frequently, and names can be entered into the systems incorrectly or inconsistently from record to record. More poor students might be

²⁶ Examining the Potential to Expand Data Matching in the National School Lunch and Breakfast Programs' Eligibility and Verification Process, White Paper, Food and Nutrition Service · Office of Policy Support, 2016 <https://fns-prod.azureedge.net/sites/default/files/ops/DataMatching.pdf> Direct Certification Improves Low-Income Student Access to School Meals: An Updated Guide to Direct Certification. Food Research and Action Center (FRAC), 2018. <https://frac.org/wp-content/uploads/direct-cert-improves-low-income-school-meal-access.pdf>

Match to Meal. USDA, Child Nutrition Division, State Systems Support Branch, Volume 1, Issue 1, 2013 https://schoolnutrition.org/uploadedFiles/4_Education_and_Professional_development/Webinar_Wednesday/Part2CommunityEligibilityProvision-MatchtoMealNewsletter2.pdf

Medicaid Direct Certification Demonstration Project, Request for Proposals: Apply by September 30, 2021, Food Research and Action Center (FRAC), 2018. <https://frac.org/wp-content/uploads/Medicaid-Direct-Cert-Demonstration-Project-RFP.pdf>

²⁷ Per conversation with Charlotte Ellis, 12-8-21

²⁸ <https://legislature.maine.gov/legis/statutes/20-A/title20-Asec6001-C.html>

identified if Maine upgraded its matching process by incorporating more flexible algorithms that allow inexact matches between data fields.

Improve processes used to collect information from parents/guardians

Other recommendations center on taking steps to improve processes used to collect data directly from parents/guardians. Data is obtained directly from parents/guardians through school meal program applications and economic status forms. Collecting income information from parents and guardians is administratively burdensome and suffers from low return rates. Maine already employs a number of the recommendations from the USDA to improve the completion of meal program applications. The state contracts with NutriLink Technologies to make completing meal program applications forms easier, including online options and materials available in multiple languages.²⁹

While the USDA dictates the content of the meal program application form, the economic status form that MDOE currently uses could, if feasible, be adapted to be easier to understand. Specifically, parents/guardians may be confused as to whose income they are reporting and how and why they need to use the category 1 and category 2 income bracket table to report on each child individually.³⁰

Additional tips for increasing form completion rates include sending a personal email from the principal (and not just “the school”) explaining the importance of completing the form and offering incentives such as a chance to win something (a gift certificate to the local grocery store, an Ipad, a smart TV).

Finally, some stakeholders recommend employing more formal surveys, either statewide or in districts where there are concerns that direct certification is leaving too many poor students uncounted.³¹ While it would be cost prohibitive to conduct surveys annually, periodic surveys could be used to collect information that could be used to

²⁹ PRIORITY NOTICE: Toolkit of Resources Available to Promote the Meal Benefit Application, Maine DOE Newsroom, 2021. <https://mainedoeneews.net/2021/08/13/priority-notice-toolkit-of-resources-available-to-promote-the-meal-benefit-application/> Student Eligibility & Applications, Maine DOE <https://www.maine.gov/doe/schools/nutrition/studenteligibility>

³⁰ Economically Disadvantaged Status, Maine DOE <https://www.maine.gov/doe/schools/nutrition/economicallydisadvantaged>

³¹ Common Sense and Fairness: Model Policies for State Education Funding, Ed Build, June 2020.

monitor the reliability and robustness of FRPL eligibility data and other estimates of student and school poverty as well as to collect additional SES information. Partnering with outside survey researchers might improve parent/guardian participation if it reduced privacy concerns.

Use household income data from other government sources

Stakeholders, administrators and researchers have also raised the possibility of using income data obtained through revenue services.³² Household income data could be collected through a data sharing agreement with the Maine Revenue Service (MRS). These data could be linked to student records using student addresses. More accurate matching would require parents/guardians to share at least the last four digits of their SSN.

Combined with information on household size, income information from these sources could be used to identify student eligibility for free or reduced price meals. It could also be used to produce a more inclusive measure of economic insecurity by enabling the identification of students living in near-poor households. Income data from income tax records would be able to identify students who are poor even if their families did not apply for public assistance or are not eligible to participate. It would be more reliable than income information self-reported on meal applications or economic status forms.

On the other hand, data from IRS tax returns have number of limitations and complications that may make them less useful and not worth the administrative, data-sharing logistics. Data from tax records will not be available for parents/guardians who earn below the minimum income required to file a tax return. Data will be incomplete or unavailable for parents/guardians “working under the table”. Other limitations relate to how the matching is accomplished. Income data will not be a valid measure of the student’s economic status if only the parent/guardian’s SSN is used in the matching process and the student does not live with the parent/guardian; if student addresses are used it will

³² Measuring Student Poverty: Developing Accurate Counts for School Funding, Accountability, and Research, The Urban Institute, 2019. <https://www.urban.org/research/publication/measuring-student-poverty>
Common Sense and Fairness: Model Policies for State Education Funding, Ed Build, June 2020.

inaccurately measure the economic status of students who experience more frequent changes in home address.³³

In practice, using individual-level income data obtained from the MRS will likely face pushback over privacy concerns and data-sharing restrictions. Differences in privacy and confidentiality policies as well as differences in data management and computing processes between the MRS and MDOE could also make the process of data sharing administratively difficult. To protect household privacy and confidentiality, MRS could share only categorical income data with MDOE. To ensure validity, the income categories established beyond the FRPL eligibilities should be based on research regarding what levels of income put a household at economic disadvantage. Maine might also consider using household income data from income tax records to develop school-level measures of poverty. Student addresses would be provided to the MRS who would then match them to income tax records. The MRS could then provide the MDOE with the % of income tax filing households from each school in each of pre-specified income bands. This approach would provide privacy protection for individual students and families but would increase the data management and computing workload on the MRS side.³⁴

Use estimates instead of direct counts

Because of the administrative burden and reliability concerns related to collecting data on students directly, alternatives that would replace direct counts with estimates using readily available Census data are being studied. The NCES and the Census Bureau have developed a neighborhood level poverty indicator that can be linked to individual students using their address. Unlike existing poverty estimates based on Census survey responses collected for larger, predefined geographic areas like census tracts or school districts, a neighborhood level indicator has the potential to produce more accurate estimates of the economic conditions facing schools and students. The tool - Spatially Interpolated Demographic and Economic (SIDE) estimates - uses spatial statistics and simulation techniques, geocoded location data and income data from the nearest sample of participants in Census Bureau's American Community Survey (ACS) to produce poverty

³³ Common Sense and Fairness: Model Policies for State Education Funding, Ed Build, June 2020.

³⁴ Common Sense and Fairness: Model Policies for State Education Funding, Ed Build, June 2020.

indicators centered on a school's location or student addresses. The resulting measure is a ratio of income-to-poverty ranging from 0 to 999, with lower values indicating a greater degree of poverty.³⁵

Under the State Longitudinal Data Systems program, the NCES is currently working with states, including Maine, to test the SIDE indicator. Users upload student geocoded addresses which are then linked to SIDE neighborhood income-to-poverty estimates. The income-to-poverty ratio estimate can be used to identify students who are likely to be eligible for either free or reduced price meals (i.e., SIDE values less than or equal to 130 or less than 185) as well as a broader, more nuanced indicator of economic status (e.g., very poor, poor, near-poor, not-poor, very not poor). School-level estimates are produced by aggregating student-level estimates by school ID and include the mean, median, and standard deviation of the income-to-poverty ratio for students attending that school as well as the percentage of students with SIDE poverty scores less than or equal to 100 (i.e., at or below poverty) and 130 (i.e., eligible for free meals).

The SIDE estimates are being compared to existing FRPL eligibility counts obtained through direct certification to get a sense of their reliability. State DOE users are asked to compare the percentage of students identified as living in households with incomes at or below 130% of the FPL through direct certification and using SIDE estimates, both overall and across student populations (by race/ethnicity, grade level). Achievement/assessment scores are compared for directly certified students to those students who have SIDE values of ≤ 130 , overall and across student populations. School level poverty rankings using SIDE estimates are compared to those produced using FRPL data.³⁶

³⁵ Geverdt, D. (2018). Education Demographic and Geographic Estimates Program (EDGE): School Neighborhood Poverty Estimates - Documentation (NCES 2018-027). U.S. Department of Education. Washington, DC: National Center for Education Statistics.

https://nces.ed.gov/programs/edge/docs/EDGE_SIDE_PUBSCH_FILEDOC.pdf

Sidestepping the box: Designing a supplemental poverty indicator for school neighborhoods, Geverdt, National Center for Education Statistics and Nixon, U.S. Census Bureau, 2018.

<https://nces.ed.gov/programs/edge/docs/2017039.pdf>

BlindSIDE User Guide and BlindSIDE FAQ – 210406.pdf obtained from Margaret Piatt, MDOE.

³⁶ NCES EDGE-SLDS SCHOOL POVERTY INDICATOR – SAMPLE ANALYTIC QUESTIONS (Discussion DRAFT), obtained from Margaret Piatt, MDOE.

If these estimates are determined to be reliable relative to existing FRPL data, there are a number of benefits to using them instead of direct certification and parent/guardian forms. In addition to the fact that SIDE estimates could capture students that are missed using direct certification and parent/guardian forms, these estimates use readily available Census data and can be updated cost effectively every year. There is also greater protection of student and family privacy. Families are not being asked to share income information with school officials nor are government program records being accessed on their behalf in order to obtain income information. The tool has been designed so that state DOE users link the SIDE poverty indicators to student address geocodes through a local browser. The only personal data shared outside the state DOE are the student's residential geocode (longitude and latitude coordinates). At the very least, these new measures could be used to supplement and improve the accuracy of existing data by creating more accurate and school or district specific multipliers, in order to address problems of undercounting. SIDE estimates could also be used along with other data (e.g., past FRPL eligibility, race/ethnicity, and EL status, parents' education level and occupation, the number of address changes the student's household experienced that year) to improve imputation of student and school poverty for use in research.³⁷

V. The policy and research/evaluation constraints

In this final section we review the policy context and data requirements of two most impactful federal programs in public schools – the USDA NSLP and Title I – to assess whether alternatives to current FRPL data under consideration would be permitted. We also review the data options for Maine's EPS funding model and the data needs for robust policy research and program evaluation. Specific questions include whether school-level data can be used or is student-level required, and whether data need to be collected directly in order to provide actual tallies of poor students or if estimates can be used instead.

³⁷ Measuring Student Poverty: Developing Accurate Counts for School Funding, Accountability, and Research, The Urban Institute, 2019.
https://www.urban.org/sites/default/files/publication/101430/measuring_student_poverty.pdf

USDA NSLP

The estimated cost of Maine’s universal free meal program, set to begin in 2023, is \$34 million annually, the difference between the federal reimbursement for income eligible students and students who do not qualify for FRPL³⁸. USDA NSLP reimburses states for each meal served to a FRPL eligible student. The current reimbursement schedule is \$3.66 for each meal served to a student who is eligible for free meals, \$3.26 for each meal served to a student eligible for reduced price meals, and \$0.35 for each meal served to a FRPL-ineligible child (aka the paid rate). Reimbursement rates are a bit higher for schools where 60% or more of their students are FRPL eligible and for schools receiving performance-based assistance.³⁹

As described above, the USDA NSLP requires that student eligibility for free versus reduced price meals be determined annually either through parent/guardian applications or direct certification. The only exception to this is for schools participating in the CEP program, but the exception applies only to the annual data collection requirement. A school can participate in the CEP program if 40% of its students are identified as FRPL-eligible through direct certification. The reimbursement amount paid to schools is determined by multiplying the number of students directly certified by 1.6, with the resulting number being the percentage of meals reimbursed at the higher “free” rate; the remainder are reimbursed at the “paid” rate. CEP schools are permitted to use the base year reimbursement percent for the next 4 years, meaning they aren’t required to update their direct certification counts during that period.⁴⁰

If the SIDE estimates of school and student-level poverty currently being studied are determined to be better than existing measures of FRPL eligibility, a case could be made to let states use the estimates in place of data directly collected on students through direct certification and applications. It would, however, require legislative action to permit their

³⁸ Maine Senate advances bill to provide free meals to all students, Portland Press Herald, June 8, 2021. <https://www.pressherald.com/2021/06/07/senate-advances-bill-to-provide-free-meals-to-all-students/>

³⁹ Federal Register, Vol. 86, No. 134, July 16, 2021, Department Of Agriculture, Food and Nutrition Service, National School Lunch, Special Milk and School Breakfast Programs, National Average Payments/Maximum Reimbursement Rates. <https://www.govinfo.gov/content/pkg/FR-2021-07-16/pdf/2021-15107.pdf>

⁴⁰ Community Eligibility Provision (CEP) School Food Service, Maine, Department of Education https://www.maine.gov/doe/sites/maine.gov.doe/files/inline-files/CEP-Fact-Sheet_0.pdf

use. Otherwise, states will need to continue to collect student level data directly and annually in order to receive federal reimbursement.

ESEA, Title I-A

There are two places under Title I-A's where student poverty data are used: in the allocation of Title I funding and for accountability and reporting. To allocate funds to districts, the federal government uses district-level poverty rates estimated by the Census Bureau's Small Area Income and Poverty Estimates (SAIPE) program. For intra-district allocations, Title I-A requires districts to rank schools according to their poverty rates and distribute funds in order of high to low. The current Title I-A statute lists the following measures that are allowed to be used for school selection and allocation of funds:

- eligibility for FRPL,
- eligibility for TANF,
- eligibility for Medicaid,
- Census poverty estimates (in the very rare instances where such estimates are available for individual schools or school attendance areas)
- Or, a composite of two or more of these measures.⁴¹

From this list it is clear that states could decide to use only direct certification as a way to identify students and produce school-level poverty rates, forgoing the administratively onerous and significantly more error-prone applications and forms. While fewer students will be identified as economically disadvantaged, the relative ranking of schools is unlikely to change.

Moreover, since Title I-A permits the use of Census SAIPE estimates - albeit in the rare cases that they are available for individual schools or school areas - it follows that if ongoing efforts to create reliable school-level measures using SIDE estimates are successful, they will likely be added to this list of permitted measures. Indeed, the NCES is asking states to test how closely school level poverty rankings using SIDE estimates

⁴¹ See page 15, ESEA: Title I-A Poverty Measures and Grants to Local Education Agencies and Schools, Congressional Research Service, 2020. https://www.everycrsreport.com/files/2020-11-09_R46600_7026187da56ebb0c68980e1f9eb836cda5d0a59c.pdf

compare to those produced using FRPL data. This would eliminate the need for student-level counts, at least for the allocation of Title I-A funds.

Title I-A accountability requirements are another matter. States receiving Title I-A funds must report annually on student performance outcomes including academic achievement, academic progress, graduation rates, and progress in achieving English language proficiency for all students and separately for economically disadvantaged students. Districts must also hold schools accountable for the achievement of the economically disadvantaged student group and provide school choice or supplemental education services to any economically disadvantaged student who attends a school that is being required to improve or take corrective actions. To fulfill these requirements, individual students must be identified as poor or not poor.⁴²

Again, an exception has been made for schools participating in the CEP program. The U.S. Department of Education provides the following policy guidance where CEP schools and accountability are concerned: the district can (1) consider all the students in a CEP school to be economically disadvantaged (2) consider only “identified students” (i.e., those directly certified) to be economically disadvantaged or (3) use income surveys to identify students from low-income families (See page 28, CRS report).⁴³ As the Congressional Research Service points out, using approach 1 - consider all the students in a CEP school to be poor - would make it impossible to observe any achievement gaps because there would be no way to distinguish between poor and not-poor students. In fact, because the percentage of identified students can be as low as 40% it would have the effect of making schools with lower poverty rates look like they are doing a better job helping poor students than they might actually be (i.e., non-poor students would pull up performance measures).⁴⁴

⁴² Accountability Under Title I, Part A of the ESEA: Frequently Asked Questions, US Department of Education, 2017 <https://www2.ed.gov/programs/titleiparta/eseatitleiaccountabilityfaqs.pdf>

⁴³ See Question 34, Guidance: The Community Eligibility Provision and Selected Requirements Under Title I, Part A of the Elementary and Secondary Education Act of 1965, As Amended. U.S. Department of Education, Office of Elementary and Secondary Education, Revised March 15 <https://fns-prod.azureedge.net/sites/default/files/cn/SP35-2015av2.pdf>

⁴⁴ ESEA: Title I-A Poverty Measures and Grants to Local Education Agencies and Schools, Congressional Research Service, 2020. https://www.everycrsreport.com/files/2020-11-09_R46600_7026187da56ebb0c68980e1f9eb836cda5d0a59c.pdf

Aside from CEP schools, disaggregated student-level data are required and, absent a change in legislation, will continue to be required. ESEA doesn't, however, dictate how states are to identify poor students. On page 44 of Accountability Under Title I, Part A of the ESEA: Frequently Asked Questions (2017) is the statement: "*States have the discretion to decide how to differentiate between economically disadvantaged and non-economically disadvantaged students.*" On the following page direct certification is recommended, though not required: "*We strongly encourage states to consider using direct certification, possibly in combination with other methods, in order to identify the students in a school who are economically disadvantaged.*"⁴⁵ Taken together, it seems like there is an opening to incorporate student-level SIDE estimates, if they are found to be as good or better than existing FRPL eligibility data collected directly on students.

Additional guidance provided by the Congressional Research Service (on page 34) also suggests that SIDE estimates currently under study might at some point in the future be considered for use: "*As discussed above, ED [U.S. Department of Education] currently is engaged in a study with multiple states to develop a new school-level measure of poverty. Should this measure come to fruition, it could be used to make Title I-A grants to schools, **for Title I-A accountability purposes**, and for research requiring school-level measures of poverty.*"⁴⁶ The statement is not specific but it seems to hint at an expectation that SIDE school level estimates at least will be reliable enough to be used in combination with other data to reliably assign economic disadvantaged status to individual students in order to produce accountability reports.

EPS

Maine's school funding formula provides additional funds to districts based on the number of low-income students. As laid out in the Essential Programs and Services (EPS) Funding Act of 2004, Maine provides an additional weight of 0.20 (0.05 targeted) for each low-income students (i.e., each economically disadvantaged student is counted as 1.20

⁴⁵Accountability Under Title I, Part A of the ESEA: Frequently Asked Questions, US Department of Education, 2017 <https://www2.ed.gov/programs/titleiparta/eseatitleiacountabilityfaqs.pdf>

⁴⁶ ESEA: Title I-A Poverty Measures and Grants to Local Education Agencies and Schools, Congressional Research Service, 2020. https://www.everycrsreport.com/files/2020-11-09_R46600_7026187da56ebb0c68980e1f9eb836cda5d0a59c.pdf

students). The weighted counts adjust upward the number of students to be funded and thus the district's EPS allocation. Effective and equitable implementation of the economically disadvantaged component depends on the accurate identification of poor students. If the SIDE student-level indicators prove to be reliable, the state may want to consider replacing existing FRPL counts based on direct certification and application forms with predicted counts.

Alternatively, the state could use only the direct certification count in its funding formula. For example, in response to the declining quality of FRPL data, Massachusetts added Medicaid to its direct certification process and changed to using only direct certification counts in its funding formula. To account for the fact that fewer students are counted as poor using only direct certification, they increased the funding allocated per directly certified student. The following year they ranked schools by their poverty rates and introduced a progressive set of rates, assigning more weight to students attending districts with higher concentrations of poverty.⁴⁷

If expanding direct certification is not feasible and the SIDE estimates don't pan out, Maine may want to consider using the readily available district-level poverty rates produced annually by the Census Bureau's Small Area Income and Poverty Estimates program. Weights could be applied to district poverty rates instead of student counts. Weights could be increased for increasing poverty rates, enabling districts to target additional funds to schools with higher concentrations of poverty, an approach that addresses the fact that these schools may need additional help to ensure that all students are provided equitable opportunity to learn. Likewise, if the SIDE school-level estimates pan out, they could be used instead of the district-level estimates.

In addition to reducing administrative effort, use of SIDE estimates of student- or school-level poverty or SAIPE district-level estimates might turn out to be more equitable than using FRPL eligibility data if some schools are having a more difficult time supplementing direct certification counts produced by the MDOE with parent/guardian

⁴⁷ Massachusetts Department of Elementary and Secondary Education, Low Income Student Calculation Study, 2017

applications and forms, or if direct certification is producing larger undercounts for areas with lower rates of public assistance participation.

Research and Evaluation

Researchers and policy analysts use student poverty measures to observe opportunity and achievement gaps and evaluate what types of policies, programs and services are better at helping poor students succeed. Some research can be done using school-level estimates of poverty but the analysis of achievement gaps and program effectiveness is more reliable using student-level data.

Research and evaluation will benefit from alternative measures only if the new measures are better at identifying economically disadvantaged students than existing FRPL eligibility data. The more error-prone the estimate of student poverty is, the more biased will be statistical results, and, usually, the bias results in an underestimate of the influence of the mis-measured variable on the outcome (i.e., the effect of being poor on academic performance will be estimated to be less than it really is). Predictions of student-level poverty might be improved if additional data, such as neighborhood or school poverty rate linked to individual students by their address, parents' education level and occupation, the number of address changes the student's household experienced that year, are used to impute student level economic status.

In some cases research and evaluation could be improved if statistical models included both a student-level poverty measure and a measure of school or neighborhood-level poverty. Research shows that poor students attending schools with lower rates of student poverty tend to do better than poor students attending schools with high levels of poverty, indicating that schools with a higher percentage of poor students struggle to ensure poor students succeed even when they are receiving additional resources. Research also suggests that low-income children living in neighborhoods with lower rates of poverty tend to do better in school than poor children living in neighborhoods with high levels of poverty, indicating that not all the resources available to a student come from their family

and that living in concentrated poverty might add additional stressors beyond the family's scarce resources.⁴⁸

Finally, research and evaluation could also benefit from alternative measures that provide a broader measure of disadvantage. As discussed above, FRPL data only identify students who are eligible to receive meal benefits. Children living in homes with incomes above 185% of the FPL still experience food insecurity, housing instability and the inability to pay for basic things like heat and out-of-pocket medical costs. The adults in working poor families tend to work more hours often leaving older children in charge of younger siblings; in some cases, their families need them to work for wages in order to add to the family income.⁴⁹ The proposed alternatives that have the potential to provide more economic information could enable researchers to employ more rigorous methodologies and produce more robust analysis of outcomes. Moreover, even if FRPL eligibility data were able to reliably identify all economically at-risk students, the measure captures only income-related disadvantage and not the broader socioeconomic disadvantage (SES) of interest to education and policy researchers. Better measures of both economic hardship and additional socioeconomic factors that impact a child's learning may lead to a better understanding of student academic performance and the challenges facing schools with higher concentrations of economically insecure students.⁵⁰

⁴⁸ Forum Guide to Alternative Measures of Socioeconomic Status in Education Data Systems, National Forum on Education Statistics, 2015. <https://nces.ed.gov/pubs2015/2015158.pdf>

Understanding Neighborhood Effects of Concentrated Poverty, US Department of Housing and Urban Development, Office of Policy Development and Research, 2011. <https://www.huduser.gov/portal/periodicals/em/winter11/highlight2.html>

⁴⁹ Brochtt, Boushey and Bernstein (2001) Hardships in America: The Real Story of Working Families, The Economic Policy Institute https://www.epi.org/publication/books_hardships/

⁵⁰ Forum Guide to Alternative Measures of Socioeconomic Status in Education Data Systems, National Forum on Education Statistics, 2015. <https://nces.ed.gov/pubs2015/2015158.pdf> Measuring Student Poverty: Developing Accurate Counts for School Funding, Accountability, and Research, The Urban Institute, 2019. https://www.urban.org/sites/default/files/publication/101430/measuring_student_poverty.pdf