

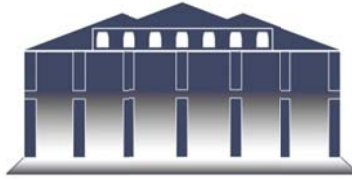
**Child Nutrition Programs Challenged to Meet
Nutrition Standards, Maintain Participation, and
Remain Solvent**



**Final Report to the Joint Legislative
Program Evaluation Oversight Committee**

Report Number 2011-06

October 12, 2011



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John W. Turcotte
Director

October 12, 2011

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Representative Julia Howard, Chair, Joint Legislative Program Evaluation Oversight Committee

North Carolina General Assembly
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Honorable Co-Chairs:

Session Law 2010-115 directed the Joint Legislative Program Evaluation Oversight Committee to include in the 2010 Work Plan for the Program Evaluation Division a study of the operation of the Child Nutrition Program. The evaluation focused on issues surrounding indirect costs and increasing the nutritional value of foods provided in schools.

I am pleased to report the Department of Public Instruction cooperated with us fully and was at all times courteous to our evaluators during the evaluation.

Sincerely,

A handwritten signature in black ink, appearing to read "John W. Turcotte".

John W. Turcotte
Director



PROGRAM EVALUATION DIVISION

NORTH CAROLINA GENERAL ASSEMBLY

October 2011

Report No. 2011-06

Child Nutrition Programs Challenged to Meet Nutrition Standards, Maintain Participation, and Remain Solvent

Summary

NC Session Law 2010-115 charged the Program Evaluation Division with examining Child Nutrition Program indirect costs and strategies to increase nutritious foods in schools. Child Nutrition Programs are operated by each of North Carolina's 115 school districts. Despite federal reimbursements, on average schools lose money on each school meal sold and must generate revenue to cover costs, most often by selling à la carte foods to children.

Viability of Child Nutrition Programs depends on a delicate balance of cost, nutritional value, and student participation. The challenges of this "trilemma" are exemplified by data showing 52 programs operated at a loss between Fiscal Years 2007-08 and 2009-10. Although approaches to increase standards and maintain revenue have shown some success, North Carolina tested higher nutrition standards in 2005 with daunting results: programs lost money and participation dropped. Although these nutrition standards are not currently required, many programs follow them.

The lack of formal guidelines for indirect cost assessment at the local level challenges program solvency and adds to cost pressures on Child Nutrition Programs. Indirect costs are a small proportion of program expenses but they are controversial because they are assessed at the discretion of each school district. State guidance on indirect cost assessment has not alleviated concern about their contribution to program insolvency.

North Carolina is among a minority of states that do not supplement federal funding beyond the required state match. States that provide additional funds use several strategies that take financial pressure off programs and promote higher quality meals. With limited options to ensure financial viability in North Carolina, programs may adopt other strategies to address the trilemma.

These findings illustrate fiscal and nutritional challenges facing Child Nutrition Programs. A new, well-designed pilot to establish the cost and processes needed to fully implement current state nutrition guidelines and maintain solvency would be the best way to address these issues. However, a pilot program is not advisable in light of impending revised federal nutrition requirements that will have precedence over state guidelines.

To address the identified issues, two recommendations suggest action by the General Assembly. First, school districts should be prohibited from assessing indirect costs to Child Nutrition Programs unless programs are fiscally solvent. Second, funding administrative support for the North Carolina Procurement Alliance would promote cost savings provided by the alliance and reduce expenses for Child Nutrition Programs.

Purpose and Scope

The statute directing this study (NC Session Law 2010-115) was based on recommendations from the Task Force on Childhood Obesity's final report to the 2010 General Assembly and charged the Program Evaluation Division with examining two aspects of the Child Nutrition Program: the effect of indirect costs on program finances and strategies to increase nutritious foods in schools. The overarching concern was the ability of local programs to adopt stronger, more costly nutrition standards even as they contend with increasing financial pressures. Four research questions guided the inquiry:

1. How is the Child Nutrition Program funded?
2. How are direct and indirect costs for the Child Nutrition Program allocated?
3. How do nutrition standards affect the Child Nutrition Program?
4. What promising approaches are used to fund and implement nutrition standards?

Data were collected from the following sources:

- financial data from the Department of Public Instruction;
- surveys of North Carolina school district finance officers and Child Nutrition Program directors;
- interviews with federal administrators, North Carolina state and local administrators, administrators in other states, and experts in the field;
- federal and state statutes and regulations; and
- reviews of the literature on school nutrition.

Background

The Task Force on Childhood Obesity's 2010 report to the General Assembly identified school nutrition as one component in the effort to address the emerging public health crisis of childhood overweight and obesity. Obesity rates among school-age children in the United States have tripled over the past three decades. In 2007, 33.5% of North Carolina's children ages 10 to 17 were obese or overweight, the 14th highest in the nation. Obese children and teenagers are at greater risk for developing a wide range of illnesses including type 2 diabetes, heart disease, high blood pressure, cancer, and other health conditions including asthma and sleep apnea. With the economic downturn, program administrators see the focus in North Carolina shifting from obesity to balancing hunger with obesity.

School meals alone cannot solve childhood obesity, but strong school-based policies and programs are essential parts of the solution. Children consume between 19% and 50% of their daily caloric intake at school. Nutritious foods in schools help ensure children have access to good-quality meals, especially those who come from low-income families.

Empirical evidence demonstrates the importance of adequate nutrition to enhance cognitive performance, supporting the oft-repeated adage, "a hungry child cannot learn." For example, research suggests a positive effect of breakfast consumption, particularly through participation in the

School Breakfast Program, on academic performance or achievement test scores, grades, and school attendance.¹

Recently, nutrition standards for school meals have been improved to make foods healthier and to emphasize fresh produce. However, policy changes are complicated by the tension between providing nutritious school meals on the one hand and maintaining balanced Child Nutrition Program budgets on the other. Although the two central concerns that spurred legislation directing this evaluation—nutrition standards and indirect costs—do not appear at first glance to overlap, they both exert pressure on Child Nutrition Program budgets.²

Since its inception in 1946, the program's purpose has been to provide nutritious meals for school children. The National School Lunch Program provides per-meal reimbursements for states to offer subsidized school meals to all schoolchildren. School lunches were initially conceived as a means to support national defense: poor diet-related health rendered some recruits unable to serve in World War II. Other federal school-based nutrition programs have been added since then,³ but school breakfast and lunch are the heart of school meals. In this report, the term “school meals” is defined as federally reimbursed breakfast and lunch.

As amended in 2004, Section 2 of the Richard B. Russell National School Lunch Act affirms this purpose:

It is hereby declared to be the policy of Congress, as a measure of national security, to safeguard the health and well-being of the Nation's children and to encourage the domestic consumption of nutritious agricultural commodities and other food....⁴

In Fiscal Year 2008-09, the federal Child Nutrition Program operated at a cost of \$15.5 billion. The largest program within child nutrition, the National School Lunch Program, provided subsidized lunches to 31 million children each day at a cost of \$9.8 billion; the School Breakfast Program cost \$2.9 billion and served 11.1 million children daily.

Federal, state, and local entities are involved in providing school meals to children (see Exhibit 1). Two federal agencies, two state agencies, and local school districts provide resources and/or program oversight. As shown in Exhibit 2, numerous federal regulations define accounting practices, nutrition standards, and overall program operations.

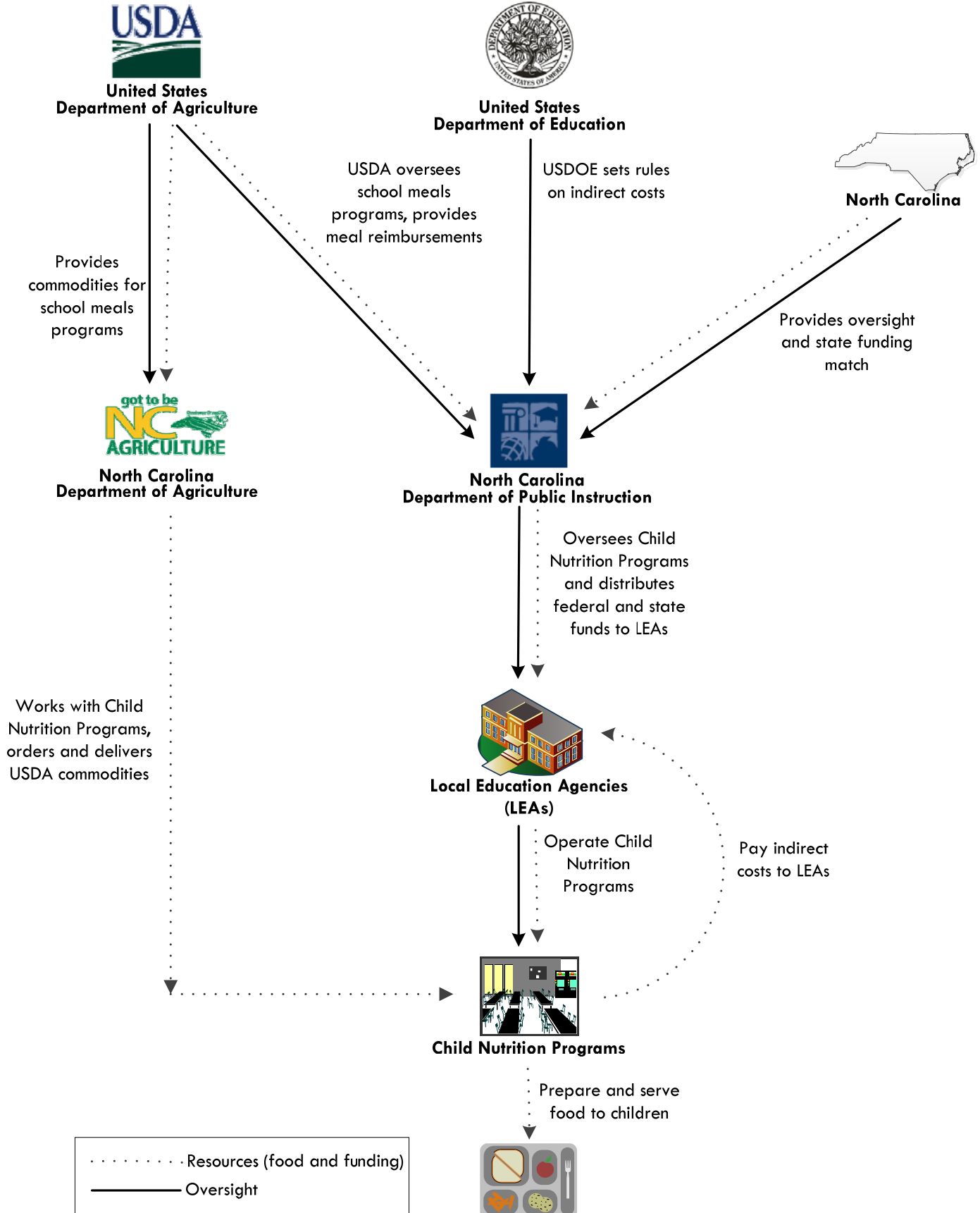
¹ Rampersaud, G. (2009). Benefits of breakfast for children and adolescents: Update and recommendations for practitioners. *American Journal of Lifestyle Medicine*, 3(2), 86-103.

² Rising costs also squeeze program budgets, but indirect costs are of particular interest because they are charged to Child Nutrition Programs by the school districts that operate them. Unlike other expenses, indirect costs are discretionary: school districts may charge all, part, or none of the permissible rate.

³ These programs include National School Lunch, School Breakfast, Child and Adult Care Food, Summer Food Service, Fresh Fruit and Vegetable, and the Farm to School Initiative. The National School Lunch Program also was conceived as a means to support farm prices and distribute excess agricultural products; as a result, the program is administered by the U.S. Department of Agriculture.

⁴ Public Law 111-296.

Exhibit 1: Multiple Entities Are Involved in Serving School Meals



Source: Program Evaluation Division based on federal and state policy documents.

At the federal level, the program is operated by the U.S. Department of Agriculture (USDA) Food and Nutrition Service. USDA sets the per-meal reimbursement rate for meals sold by schools; determines which commodities will be made available for distribution and delivers them to states;⁵ sets the funding formula and requires states to contribute matching funds; and establishes federal nutrition standards. Also at the federal level, the Department of Education approves the methodology each state uses to set the indirect cost rate school districts may assess their program.

Exhibit 2: Child Nutrition Program Oversight at the Federal, State, and Local Levels

	Federal	State	Local
Program Operations	<p><u>USDA</u></p> <ul style="list-style-type: none"> Set program eligibility for children (7 CFR 245) Set program requirements for states (7 CFR 210, 220) Set terms for commodity distribution (7 CFR 250) 	<p><u>NCDPI</u></p> <ul style="list-style-type: none"> Administer federal school meal program grants Provide technical assistance and program oversight (NC Gen. Stat. § 115C-263) Require LEA participation (NC Gen. Stat. §115C-264) <p><u>NCDACS</u></p> <ul style="list-style-type: none"> Distribute USDA commodities to programs 	<p><u>LEAs</u></p> <ul style="list-style-type: none"> Operate programs in public schools Set meal prices <p><u>Child Nutrition Programs</u></p> <ul style="list-style-type: none"> Select/purchase foods and set menus Manage staffing May sell à la carte items May outsource operations
Nutrition Standards	<p><u>USDA</u></p> <ul style="list-style-type: none"> Set nutrition standards (7 CFR 210, 220; PL 111-296) 	<p><u>NCDPI</u></p> <ul style="list-style-type: none"> May set state nutrition standards in addition to federal requirements (NC Gen. Stat. § 115C-264.3) 	<p><u>Child Nutrition Programs</u></p> <ul style="list-style-type: none"> Meet federal and state requirements May set local standards in addition to state and federal requirements
Financial Management	<p><u>USDA</u></p> <ul style="list-style-type: none"> Reimburse eligible meals <p><u>USDOE</u></p> <ul style="list-style-type: none"> Require adherence to accounting rules (OMB Circular A-87) Approve state indirect cost methodology (EDGAR § 75.560-75.580) Issue indirect cost guidance 	<p><u>NCDPI</u></p> <ul style="list-style-type: none"> Match federal funds Request federal reimbursement based on local meal counts; distribute payments to programs Develop indirect cost methodology Assure compliance with federal accounting rules (Child Nutrition Compliance Supplement) Provide assistance with program management and operations 	<p><u>LEAs</u></p> <ul style="list-style-type: none"> Assess and collect indirect costs from programs <p><u>Child Nutrition Programs</u></p> <ul style="list-style-type: none"> Establish and manage food service account Monitor cash management at all schools in the district Approve and pay direct and indirect costs Report number of meals served to the State for federal reimbursement

Note: U.S. Department of Agriculture (USDA); U.S. Department of Education (USDOE); NC Department of Public Instruction (NCDPI); NC Department of Agriculture and Consumer Services (NCDACS); Local Education Agency (LEA).

Source: Program Evaluation Division based on a review of federal and state guidelines and regulations.

⁵ Schools are entitled to receive commodity foods at a value of \$.2025 for each meal served (FY 2010-11).

To qualify for federal funding, school meals must meet federal nutritional standards. Current standards include criteria for calories, fat, protein, vitamins, and minerals for breakfast and lunch. Federal funds are allocated as a reimbursement based on the number of eligible meals prepared and served at each of the three funding levels, which are determined by the household income of the eligible student. Reimbursement rates for lunch in Fiscal Year 2011-12 are

- \$2.77 per free meal. Eligible students (those from families at or below 130% of the poverty level) bear no cost.
- \$2.37 per reduced-price meal. Eligible students (those with family incomes between 130% and 185% of the poverty level) pay no more than \$0.40 per meal.
- \$0.26 per paid meal. Students are ineligible for free or reduced price meals. Local boards of education determine the price of these meals; students in North Carolina paid \$1.95 on average in Fiscal Year 2010-11.

Districts with 60% or more school meals served at a free or reduced price receive an additional \$0.02 per meal.

Federal law does not require schools to participate in the Child Nutrition Program but state law may, as is true in North Carolina. At the state level, the North Carolina Department of Public Instruction's Child Nutrition Services Section provides program oversight, sets state guidelines for operations, provides technical assistance to local programs, ensures Local Education Agencies (LEAs)—which operate Child Nutrition Programs in public schools—follow federal requirements, and allocates state and federal funds to LEAs.⁶ Federal administrators interviewed for this evaluation noted North Carolina's strong program leadership and oversight; the program conducts monitoring, staff training, and compliance reviews that have earned national recognition.

Between 2002-03 and 2009-10, North Carolina contributed an average of \$7.5 million annually to meet the federal state match requirement of no less than 30% of a portion of federal funds. In Fiscal Year 2009-10, state matching funds supported free kindergarten breakfast and partial salaries and benefits for local administrators, which included \$45,000 toward Child Nutrition director salaries in each LEA.⁷

State law places additional stipulations on the program. For example, North Carolina Session Laws established statewide standards for school foods (NC Sess. Laws 2005-457) and directed LEAs to serve free breakfast to students who qualified for reduced-price meals (NC Sess. Laws 2011-342).

In 2006, the North Carolina State Board of Education established standards for elementary school meals related to, for example, sodium, cholesterol, fresh fruits and vegetables, and whole grains. They also prescribed cooking methods (i.e., no frying) and extended requirements to à la carte foods (individual items sold in the cafeteria that are not part of

⁶ According to federal law, the state education agency must administer the program in all but rare cases.

⁷ More recently, NC Session Laws 2011-342 redirected funds for kindergarten breakfast to fund free breakfast for children in all grades who qualify for reduced-price meals.

a reimbursable school meal) in elementary schools. These standards have not been funded and remain voluntary.

At the local level, each LEA manages the Child Nutrition Program and oversees program funding. According to federal regulations, each Child Nutrition Program has a school food service account that must be nonprofit. Local boards of education are charged with the financial stability of the Child Nutrition Program and must use LEA general funds to ensure the program can continue to operate if it incurs a loss.⁸

The measure of each program's financial stability is the number of months' operating balance on hand. This number represents the number of months of program operations that could be funded with the cash balance. An operating balance is needed to cover expenses because federal funding is provided as a reimbursement for meals served, and reimbursement is typically received about six weeks after the meals are provided. Operating balances have high and low thresholds. On the high end, federal regulations require programs to keep no more than three months' operating balance to ensure programs operate as nonprofits; those with more than this amount must work with the Department of Public Instruction to develop a plan to reduce the balance. On the low end, state program administrators define programs with less than one month's operating balance as insolvent.

LEAs must ensure Child Nutrition Program costs are properly classified (as direct or indirect) and paid. LEA administrators work with their local board of education to determine whether to assess indirect costs.

Although school meals must meet federal nutrition standards to qualify for reimbursement, local decisions determine which foods will be made available to students. LEAs determine how to meet nutrition standards for reimbursable school meals, including what specific foods to serve and how to prepare them. Besides school meals, schools may offer foods and beverages for purchase from other sources: à la carte, vending machines, fundraisers, and snack bars.⁹ These items are called competitive foods because they compete with school meals for student purchase.

In sum, the historical and present intent of the Child Nutrition Program is to provide nutritious meals to schoolchildren. Increases in childhood hunger and childhood overweight and obesity have heightened interest in school meals as part of the solution to the problem, but increased costs associated with healthier foods and indirect costs add financial pressure to programs.

⁸ If the loss is a result of lack of payment from children who have charged meals, LEAs cover the loss and are not reimbursed by the Child Nutrition Program. However, if Child Nutrition Programs require funds to meet expenses for other reasons, funds must be provided by the LEA and may or may not be repaid by the program.

⁹ Revenue from vending machines, fundraisers, and snack bars do not usually accrue to Child Nutrition Programs.

Findings

Finding 1. Viability of Child Nutrition Programs depends on a delicate balance of cost, nutritional value, and student participation.

This “trilemma” is acknowledged by the U.S. Department of Agriculture (USDA) as *the* challenge to Child Nutrition Programs. Comments provided by program directors in a Program Evaluation Division survey reflected their experience with some aspect of the trilemma, mostly to do with budgetary challenges.¹⁰ As shown in Exhibit 3, pressures on one factor can upset the balance and have unintentional effects on either or both of the others. For example, increasing nutritional value by replacing white bread with whole wheat bread increases costs and may decrease participation if not carefully introduced, thus reducing revenue. School meal participation may be adversely affected by competitive food sales, thereby reducing revenue from federal reimbursements. Raising prices may offset costs and increase nutritional value but may reduce school meal participation. Child Nutrition Program administrators have to juggle achieving strong participation and high nutritional value while managing costs.

On average, North Carolina’s Child Nutrition Programs lose money on each reimbursable school meal served. It cost \$2.98 on average to prepare and serve a school meal in North Carolina in Fiscal Year 2010-11. Although USDA reimburses schools for each meal sold, the reimbursement (together with student payments for reduced and full-price meals) does not cover costs. Exhibit 4 illustrates costs and revenues for school lunch in a Local Education Agency (LEA) that is representative of the average district size and percentage of children who qualify for free and reduced-price lunch in North Carolina. As shown on the left-hand side of the scales, it cost the district \$3.00 to prepare each of the 1.9 million school lunches sold over the year, for a total of nearly \$5.7 million. As shown on the right-hand side, the district collected \$4.7 million in revenue from lunches sold, 66% from the sale of free and reduced-price lunches (at \$2.74) and 34% from full-price lunches (\$2.04). The district lost a total of \$941,123—\$69.86 per student—from lunch sales alone. Data collected for this evaluation suggest that, on average, losses from school meal sales accrue regardless of district size, meals sold, or percentage of children who qualify for free and reduced-price lunch.

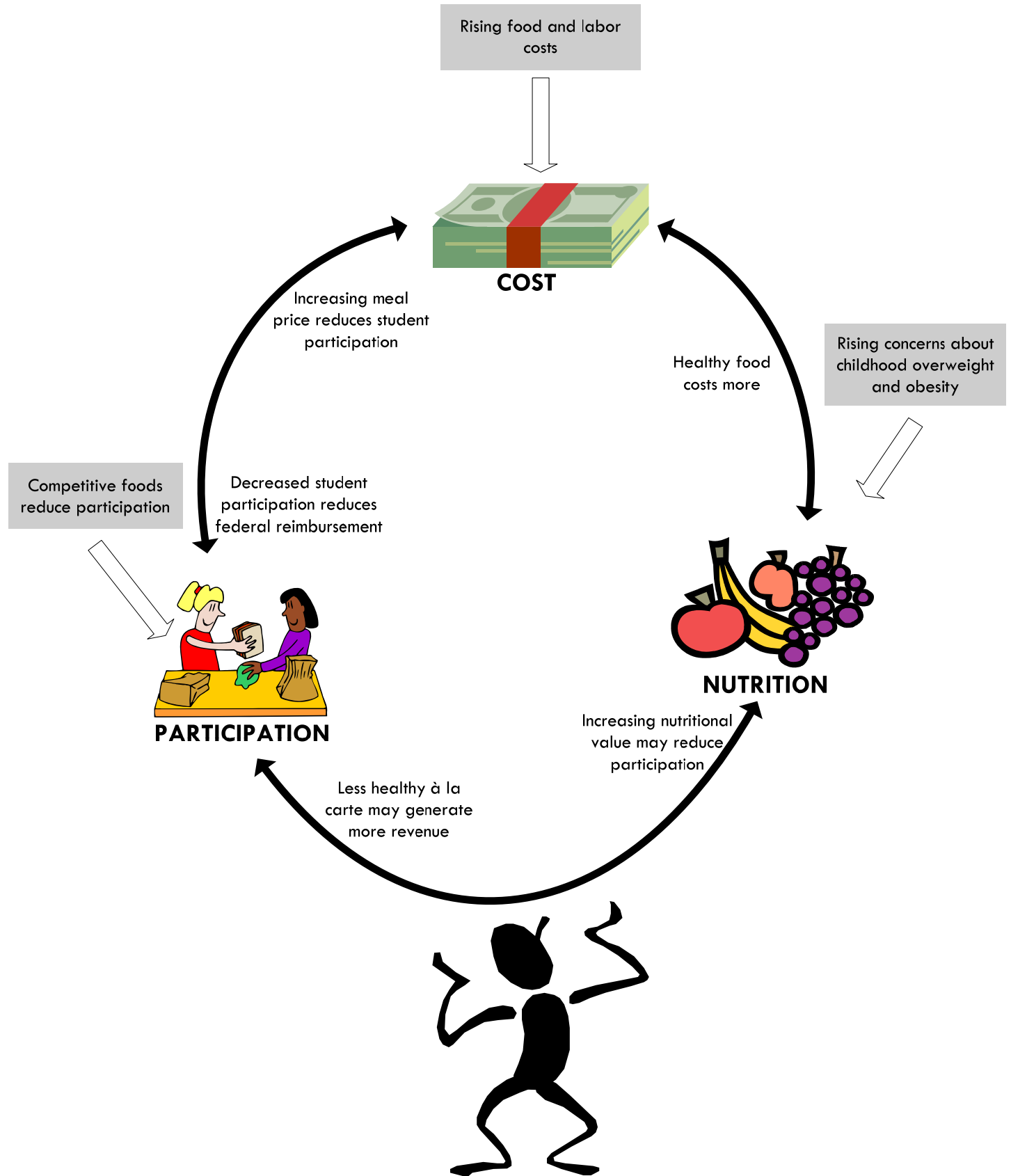
Although rising costs affect all programs, Child Nutrition Programs with higher costs relative to others (for example, due to high fixed costs relative to revenue) are at an added disadvantage because federal reimbursements are not based on actual costs. As noted in USDA’s 2008 School Lunch and Breakfast Cost Study–II, this process differs from federal education grants that are typically reimbursed for actual costs.¹¹

The USDA’s nationally representative 2008 cost study found about one in four school districts reported costs above the reimbursement rate in Fiscal Year 2005-06. National data suggest sources of cost pressure include increases in employee salaries and benefits, rising food costs, and more districts assessing indirect costs.

¹⁰ Ninety-six percent (96%) of Child Nutrition Program directors and 97% of LEA finance officers responded to evaluation surveys.

¹¹ U.S. Department of Agriculture, Food and Nutrition Service, Office of Research, Nutrition, and Analysis. (2008). *School Lunch and Breakfast Cost Study-II, Final Report*. Available at <http://www.fns.usda.gov/ora/menu/published/CNP/FILES/MealCostStudy.pdf>.

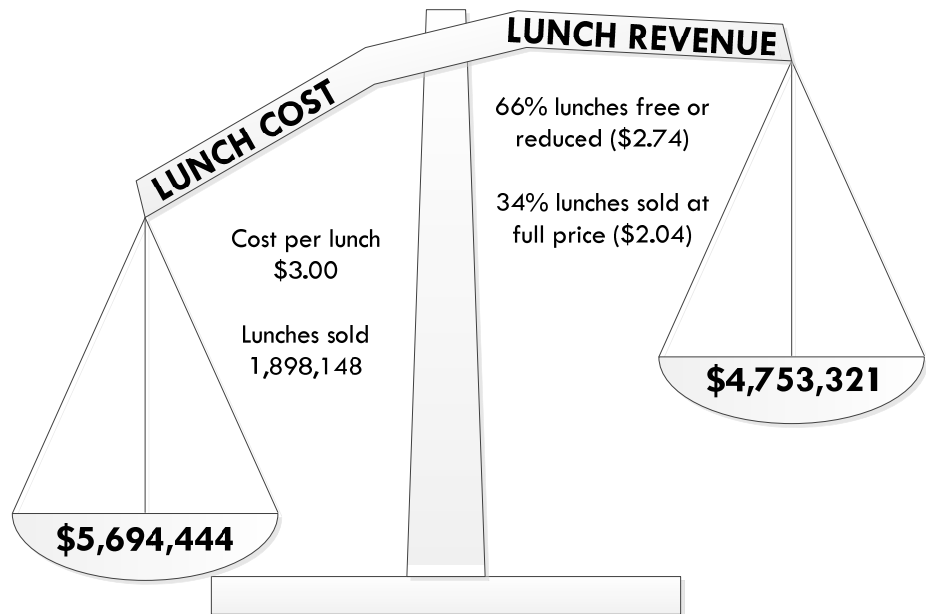
Exhibit 3: The Child Nutrition Program Trilemma



Source: Program Evaluation Division based on a review of the child nutrition literature.

Exhibit 4

On Average, Child Nutrition Programs Lose Money on Lunches Sold: Example of an "Average" District



Loss = \$941,123
(approximately \$69.86 per student)

Note: This example reflects data from an actual LEA chosen based on similarity to the statewide average in terms of size (mean = 12,194 students) and percentage of students who qualified for free or reduced-price lunch (mean = 60%).

Source: Program Evaluation Division based on financial data from the Department of Public Instruction.

Between Fiscal Years 2007-08 and 2009-10, 52 out of 114 Child Nutrition Programs operated at a loss.¹² On average, these programs lost \$143,028 annually.

There are few options for raising revenue to cover program costs, and one of the most prevalent approaches is to sell à la carte foods. These foods

- generate revenue that accrues to the Child Nutrition Program;
- are usually sold in the cafeteria at the same time as school meals;
- may include the same items sold as part of school meals;
- are not subsidized—the same item may cost students twice what they would pay if it were part of a school meal; and
- are exempt from current federal nutrition standards.

According to results from the Program Evaluation Division survey of Child Nutrition directors in North Carolina, most programs (87%) relied on revenue from à la carte sales. These sales play a large role in other states too: more than 9 out of 10 districts in USDA's 2001 study of school nutrition provided à la carte items.¹³ A 2005 Government Accountability Office

¹² Sampson County Schools was excluded from analysis because the district's accounting process did not provide data comparable to other Child Nutrition Programs.

¹³ U.S. Department of Agriculture, Food and Nutrition Service, Office of Analysis, Nutrition and Evaluation. (2001). *School Nutrition Dietary Assessment Study-II Summary of Findings*. Available at <http://www.fns.usda.gov/ora/menu/published/CNP/FILES/SNDAllfind.pdf>.

report found similar prevalence of sales and reliance on their income to close the gap between school meal costs and revenues.

The director of a Child Nutrition Program in a large district explained, “We survive on à la carte. Twenty-five percent of our budget comes from à la carte sales.” Whereas school meals must meet nutritional requirements to qualify for federal subsidies, à la carte foods historically have not. However, the most recent proposed reauthorization of the School Lunch Act, the Healthy and Hunger-Free Kids Act of 2010, expands requirements to all foods sold on school grounds, including à la carte and vending machine sales. Current, voluntary state standards also apply to à la carte items.

À la carte sales, however, negatively affect school meals participation. Research findings show increases in participation when à la carte items are eliminated or are required to meet nutrition standards, and increased participation helps program budgets by increasing federal reimbursements. Because à la carte foods are not currently required to meet standards, children who purchase items instead of or in addition to school meals likely consume a less balanced, nutritional meal.

Another option to raise revenue is increasing meal prices. Decisions to raise prices are typically at the discretion of the local board of education, but it can be a difficult decision. On the one hand, Child Nutrition Programs lose the most revenue on full-price meals, and it seems least problematic to raise those prices because they are sold to students who do not meet low-income guidelines. On the other hand, keeping prices low may encourage more children to participate, thereby increasing revenue from federal reimbursements and increasing the number of children who eat a meal that meets nutrition standards. State program administrators also link full-price meal participation to reducing stigma attached to meals for low-income children. Whatever the debate about raising prices, new federal regulations require schools to raise full-price meal prices incrementally in the coming years to better align with costs.

Besides increasing revenue, programs may cut labor or equipment expenses to balance the budget. One option reported by Child Nutrition Program directors was reducing staff and hours. Programs do not control salary levels, benefits, and raises—these decisions are made by the General Assembly, so staff reductions are the only way programs can reduce labor costs. Staff reductions, however, may make it more difficult to prepare fresh fruits and vegetables, which often require added labor and feature prominently in efforts to improve the nutritional value of school meals. Costs also may be controlled by delaying equipment repair or replacement. New equipment purchases are costly and directors may delay replacement as long as possible to avoid the expenditure.

The nutrition leg of the trilemma is inextricably tied to cost: higher quality, nutritious foods cost more. When asked to identify barriers to increasing healthy foods, 74% (81) of Child Nutrition Program directors who responded to the Program Evaluation Division survey indicated there was not enough money to purchase them. One director commented, “We need to be funded properly so we can better serve the children healthy well-balanced meals.” Child Nutrition directors provided examples that demonstrate higher food costs (see Exhibit 5).

Exhibit 5

Nutritious Food Costs
More: Selected
Comparisons

	Food Item	Cost per Serving	Annual Cost of One Serving per Week (All LEAs)	Annual Cost Difference for Healthier Option
Rice	Long grain brown	\$0.08	\$ 2,532,524	+\$ 1,266,262
	Long grain parboiled	\$0.04	\$ 1,266,262	
Tortillas	Whole wheat flour	\$0.51	\$ 16,144,838	+\$ 11,396,356
	White flour	\$0.15	\$ 4,748,482	
Apples	Whole fresh apples	\$0.31	\$ 9,813,529	+\$ 5,065,047
	Canned applesauce	\$0.15	\$ 4,748,482	

Source: Program Evaluation Division based on cost data from Child Nutrition Program directors.

Some Child Nutrition Program directors have adopted higher nutrition standards for à la carte foods, and they have done so at a cost. One director reported the switch to smaller sizes of reduced sugar and fat ice cream led to a loss of \$20,000 just in ice cream sales. Another noted similar losses: “We replaced the less healthy à la carte snacks with healthy snacks this year and are looking at about a \$90,000 shortfall.” Some directors indicated they had to modify standards in order to break even, especially for à la carte foods. One commented:

To supplement the healthy foods on the menu line, I have to sell unhealthy à la carte foods. This cycle will continue unless more funding is provided. I would like for only healthy à la carte options to be served, but I know that my program, and therefore my business, would fall into a negative cash flow.

Despite good intentions, partially or unfunded directives to improve nutrition standards put added financial pressure on programs. USDA’s proposed nutrition requirements are estimated to increase the combined costs of food and labor by 12% in the first year of implementation and the \$.06 per meal increase promised by USDA does not cover these increased costs.

Whereas survey and interview data collected for this evaluation indicated widespread concern over loss in revenue associated with implementing nutrition standards—especially for à la carte foods—a growing number of national studies question the negative impact on revenues.¹⁴ Researchers suggest losses in à la carte sales may be tempered by an increase in school meal participation, which may in the long run improve revenue over and above previous levels.

The third leg of the trilemma, participation, is just as important to program success as cost and nutritional value. When more children purchase school meals, Child Nutrition Programs receive more revenue from

¹⁴ See review by Wharton, C., Long, M., & Schwartz M. (2008). Changing nutrition standards in schools: The emerging impact on school revenue. *Journal of School Health, 78*, 245-251.

federal reimbursements and student payments. However, several factors negatively affect participation.

- **Higher meal prices.** One finance officer noted, “We have raised meal prices, which has resulted in lost student and adult meal participation and thus lost revenues.”
- **À la carte sales.** Research suggests sales depress participation, and participation increases when à la carte sales are not available.¹⁵
- **Other competitive foods.** If children do not participate in school meals, they may bring food from home; buy à la carte or from vending machines; or opt not to eat at school at all. High school students with open-campus policies may purchase food off campus.

The net result of à la carte and other competitive foods is reduced school meal participation and, therefore, reduced federal reimbursement. Because school meals are held to nutritional standards, these other options may result in children eating less healthy foods. As noted in a national Institute of Medicine report, children who are eligible for free or reduced-price meals may be especially vulnerable to low nutrient intake if they choose not to participate in the school meals program.¹⁶

Despite reports of drops in participation when nutrition standards are introduced, qualitative and quantitative data do not provide a clear picture. Just under half (45%) of program directors who responded to the Program Evaluation Division survey believed children’s unwillingness to purchase healthier foods was a significant barrier to improving standards. Opinions about the effect of improved standards on participation in the survey conveyed wide concern about acceptability of healthy foods. Research by USDA and reports on pilot programs in other states, however, suggest programs can maintain participation by carefully implementing nutrition standards.¹⁷

The effect of the trilemma is clear in North Carolina as Child Nutrition Programs struggle to balance cost, nutrition, and participation. One LEA finance officer’s comment captures these concerns:

We have been very concerned with the financial stability and sustainability of our Child Nutrition Program for years under the current structure. Increases in food and labor costs over the last several years, along with additional unfunded mandates, have continued to place additional financial burdens on the local school district. The federal subsidy from USDA is not keeping up with cost increases, and with no funding from the state, the self-sustainability of these programs is becoming extremely difficult.

¹⁵ Story, M., Nanney, M., & Schwartz, M. (2009). Schools and obesity prevention: Creating school environments and policies to promote healthy eating and physical activity. *The Milbank Quarterly*, 87, 71–100.

¹⁶ Institute of Medicine. (2010). *School meals: Building blocks for healthy children*. Washington, DC: The National Academies Press.

¹⁷ Ralston, K., Newman, C., Clauson, A., Guthrie, J., & Buzby, J. (July 2008). *The National School Lunch Program: Background, Trends, and Issues*. Report No. ERR-61. Washington, DC: U.S. Department of Agriculture Economic Research Service. Available at <http://www.ers.usda.gov/publications/err61/err61.pdf>.

Finding 2. Research on state efforts to address the trilemma reveals challenges and some promising results.

A growing body of research evidence suggests the challenge of balancing cost, nutrition, and participation can be met.

- A series of studies explored ways to increase purchase of healthy offerings, such as changing their location and lowering the price; results indicated increased sales and no adverse effect on overall revenue.
- A 2007 analysis of data from 330 Minnesota school districts found lunch sales did not decline when healthier meals were served; more nutritious lunches did not necessarily cost more.
- A Connecticut healthy snack pilot program increased school lunch participation and did not adversely affect revenue.
- A 21-month long pilot of nutrition standards for all foods sold in a sample of California middle and high schools found increased participation in school lunch and increased revenue overall despite drops in à la carte sales; even with increased revenue, however, expenses rose and outpaced revenue.

The California study provides a cautionary note: increased food and labor costs exceeded revenue by 18 cents per student per day.

North Carolina has direct experience with the challenge of introducing higher nutrition standards. In 2004, the NC Healthy Weight Initiative's 100-member task force established nutrition standards for North Carolina schools.¹⁸ Noting the prevalence of overweight and obesity among the State's children, the report recommended standards for all grade levels and for all foods sold in schools: school meals, à la carte, vending machines, after-school programs, and school events including fundraisers. The report further suggested changes to the school environment and parent involvement to support healthy eating, proposed that the nutrition standards should be voluntary, and recommended gradual implementation, possibly over a 10-year period. Together, the standards added to existing federal requirements for school meals and added requirements for all other foods sold on school grounds, which currently are not subject to federal standards.

Legislation directed a pilot implementation of the standards in elementary schools;¹⁹ seven LEAs and their 124 schools participated from January to May 2005. According to an unpublished report by the Department of Public Instruction's Child Nutrition Services Section, participating LEAs lost more than the \$25,000 allotted to cover potential losses. In addition, the report stated programs continually modified the nutrition standards during the pilot period "to enable the Child Nutrition Program to continue to operate and to avoid loss of student participation."

¹⁸ Andersen, K., Caldwell, D., Dunn, C., Hoggard, L., Thaxton, S., & Thomas, C. (2004). *Eat Smart: NC's Recommended Standards for All Foods Available in School*. Raleigh: North Carolina Department of Health and Human Services, Division of Public Health.

¹⁹ NC Sess. Laws 2004-124, Section 7.17.

By the end of the pilot, none of the seven LEAs met recommended standards and all “lost significant revenues as a result of limited à la carte sales and increased food costs.” The Department of Public Instruction’s report noted outcomes of the pilot related to cost, nutrition, and participation.

- **Cost.** Food cost increases of 7% to 12% were attributed to whole grain products, fresh fruits and vegetables, low-fat snack items, and some dairy products; healthier à la carte sale items generated a lower profit margin because they cost more than less healthy items; labor costs increased because fewer convenience foods were used; although school administrators were generally supportive of the efforts to improve nutrition standards, many were concerned about the impact on the financial status of the program.
- **Nutrition.** Industry was unable to meet requests for a variety of more nutritious products; less nutritious foods and beverages were still available because students brought them from home and often shared and/or sold them to other students, and some teachers made them available in their classrooms.
- **Participation.** Student acceptance varied; breakfast participation dropped sharply in some LEAs and then rebounded.

Two central problems affected the 2005 pilot. Participation and revenue may have either not suffered as much or would have had time to rebound if adequate time had been taken to introduce change and to allow students time to adjust to the changes. Start-up “noise” that makes it impossible to discern the effect of the program being tested is frequently an issue in pilot programs, and it requires time to realize the effect of what is actually being tested.²⁰ Also, without adequate funding, schools diverged from the intended nutrition standards out of concerns about falling revenue, thereby weakening any lessons learned; the allotted \$25,000 per district was not enough to implement the nutrition standards.

Despite the challenge of providing healthy foods, Child Nutrition Programs have tried to implement the nutrition standards for elementary schools established by the North Carolina Board of Education in 2006. Of the 110 Child Nutrition directors who responded to the Program Evaluation Division survey, 45 (41%) reported meeting all standards for reimbursable meals in elementary schools and 30 (27%) met all standards for à la carte foods in elementary schools. Fewer had implemented higher standards in middle and high schools, and only 18 programs had met all reimbursable meal standards at all grade levels, K-12.

Significantly revised federal nutrition requirements were proposed in February 2011. The new requirements—which are more detailed and prescriptive than existing standards—may be in place as soon as late 2012, but their details, impact on North Carolina programs, and exact implementation date are unknown.

²⁰ Gilliam, W., Ripple, C., Zigler, E., & Leiter, V. (2000). Evaluating child and family demonstration initiatives: Lessons from the Comprehensive Child Development Program. *Early Childhood Research Quarterly, 15*, 41-59.

Finding 3. Despite numerous federal and state regulations, the lack of formal guidelines for indirect cost assessment at the local level challenges program solvency and creates additional cost pressure on Child Nutrition Programs.

According to federal law, indirect costs may be assessed by Local Education Agencies (LEAs) to school-based federal programs—including Child Nutrition Programs—to support administrative overhead functions that benefit these programs but cannot be readily attributed to them. The U.S. Department of Education (USDOE) ensures that state agencies—in this case, the North Carolina Department of Public Instruction (DPI)—abide by established regulations for determining costs for federal grant-funded programs.²¹ USDOE reviews and approves each state’s methodology for calculating the indirect cost rate for the school districts under the state’s control. DPI analyzes expenditures from financial reports, identifies expenditures as direct or indirect costs, and then calculates the indirect cost rate for each LEA.²² This rate represents the maximum amount each LEA can assess their program for indirect costs.

Two categories of indirect cost rates may be applied to federal grant programs, depending on the terms of the award: restricted and unrestricted.²³ The unrestricted rate is generally higher than the restricted rate. For example, the restricted and unrestricted rates for Fiscal Year 2009-10 in Durham County Schools were 2.6% and 13.2%, respectively. The Child Nutrition Program is unique in that it is the only federal grant program that may be charged the unrestricted indirect cost rate because federal funds can be used to supplant state funds.

Once indirect costs are paid to LEAs they are considered local funds that can be used for any purpose. Indirect costs support administrative and operational costs of the entire district and have become increasingly important as a source of revenue to LEAs in the wake of state and local budget reductions. Pressures to improve academic outcomes persist regardless of reductions, and as a result schools seek revenue from all possible sources including indirect costs from federal programs.

Results from the Program Evaluation Division survey of LEA finance officers found 54% of school districts planned their budgets based on the amount they expected to recover in indirect costs from the Child Nutrition Program. One finance officer who reported a highly successful program commented, “We rely on indirect costs to help offset the state and local funding reductions...the indirect costs collected are saving classroom jobs that would have been eliminated due to these reductions.” Without these funds, the LEA absorbs the indirect costs for the program, often to “the detriment of instructional programs.”

²¹ OMB Circular A-87.

²² The full calculation of the indirect cost rate eliminates excluded and unallowable items from indirect costs, eliminates distorting items from direct costs, and adjusts for the amount of indirect costs recovered in the previous year.

²³ The restricted indirect cost rate is applied to programs with federal funds that cannot be supplanted by state funds.

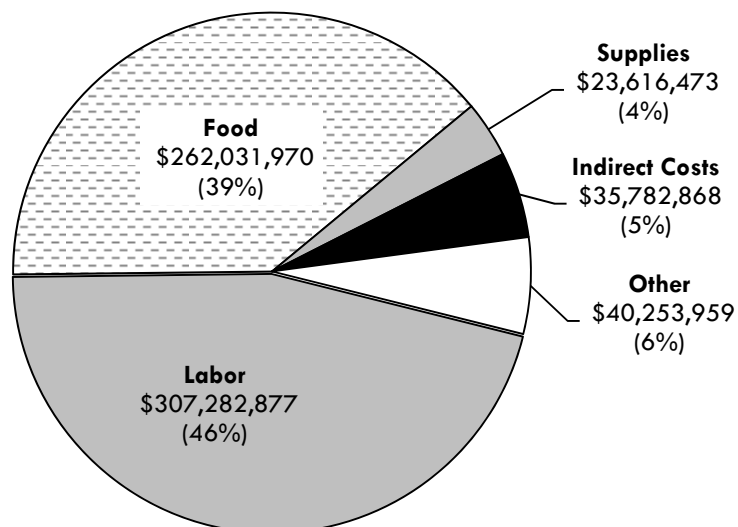
Much of the concern regarding indirect costs assessed to Child Nutrition Programs centers on the belief that paying indirect costs puts additional financial strain on programs that are already struggling to maintain solvency. To examine the effect of indirect costs on program solvency, the Program Evaluation Division performed regression analyses to determine the relationship between operating balance and percentage of indirect costs paid by the program to the LEA. These analyses considered whether indirect costs contributed to program solvency after district size—which had the strongest effect on solvency—was taken into account.²⁴ Results showed indirect costs had a significant effect on operating balance over and above district size.²⁵ However, indirect costs explained a very small amount of the variance (1%) compared to district size (79%). In conclusion, these results indicate that indirect costs do play a small role in determining program solvency, but district size is a far more important factor.

Indirect costs may not contribute much to program insolvency because they are a small portion of total program expenses. Altogether, Child Nutrition Programs paid an annual average of \$35.8 million in indirect costs from Fiscal Year 2007-08 to 2009-10, but this amount represented 5% of annual expenditures. Exhibit 6 shows food and labor costs combined accounted for 85% of expenditures. Because food and labor costs represent the majority of program expenses, program solvency is more likely to be determined by the program’s ability to control these costs.

Although indirect costs are a small portion of Child Nutrition Program expenses, the controversy surrounding them persists in part because they are assessed at LEA discretion. As discussed in Finding 1, programs have limited ways to control costs. In contrast, LEAs decide whether to assess indirect costs to the program each year. LEA administrators have discretion to charge the full amount, a partial amount, or nothing at all.

Exhibit 6

Indirect Costs Were 5% of Average Annual Child Nutrition Program Expenditures



Average Annual Expenditures Total = \$668,968,147

Note: Annual averages calculated based on data from Fiscal Year 2007-08 to 2009-10.

Source: Program Evaluation Division based on financial data from the Department of Public Instruction.

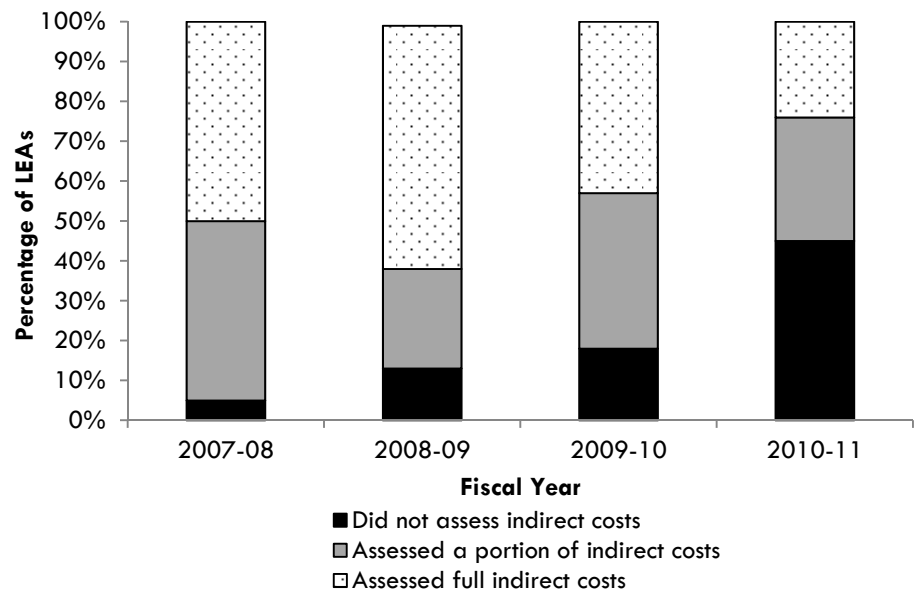
²⁴ District size was defined as average daily school attendance in the LEA between Fiscal Years 2007-08 and 2009-10.

²⁵ This result was statistically significant at $p < .05$.

As shown in Exhibit 7, the decision to assess indirect costs can change from year to year. For example, 95% of LEAs assessed full or partial indirect costs to their Child Nutrition Program in Fiscal Year 2007-08 compared to 55% in Fiscal Year 2010-11. Although Exhibit 7 shows a decrease in the number of LEAs assessing indirect costs over time, 59% of LEA finance officers responding to the survey planned to assess indirect costs in Fiscal Year 2011-12, and 15% of finance officers had yet to decide.

Exhibit 7

LEA Indirect Cost Assessments Can Change Year to Year



Source: Program Evaluation Division based on financial data from the Department of Public Instruction and survey of LEA financial officers.

According to LEA finance officer survey responses, over 80% considered the Child Nutrition Program’s available cash resources and financial viability before deciding whether to assess indirect costs. Most finance officers (74%) worked together with program directors to determine how much indirect costs could be recovered from the program. One finance officer stated, “We work with our Child Nutrition Program to determine the amount that is fiscally responsible to charge. If the program were not profitable, we would reduce the amount of indirect costs. We are currently at 50% or less of the amount we can charge.” However, half of the responding finance officers believed indirect costs should be charged to the program because it is allowed under federal guidelines. So long as programs follow guidelines and correctly identify indirect costs, federal regulations explicitly state they may be assessed regardless of program solvency. As one finance officer commented, “Child Nutrition Programs are an important and expensive part of education operations. As such, Child Nutrition needs to share in the burden by paying a portion of the operational expenses.”

State guidance on the assessment of indirect costs has not alleviated concern about indirect costs contributing to program insolvency. In Fiscal Year 2009-10, DPI included language in the annual agreement with each LEA to administer the Child Nutrition Program that would require districts "to waive indirect cost fully or partially when the assessment of this cost contributes to a financial loss in the Child Nutrition Program." However,

LEAs had different interpretations of the appropriate amount of indirect costs to assess that would not affect program solvency. To provide clearer guidance, DPI staff formed a committee with program directors and LEA finance officers to develop language for the annual agreement. Based on the recommendation of this committee, DPI updated the 2010-11 agreement to read, “the district shall assess indirect cost in a manner that promotes the financial solvency of the Child Nutrition Program.”

Financial solvency for the Child Nutrition Program is defined as having at least one month’s operating balance. Between Fiscal Years 2007-08 and 2009-10, 60 out of 114 programs averaged less than one month’s operating balance, and over half of these programs paid indirect costs to LEAs.²⁶ On average these programs paid \$184,658 in indirect costs and operated at a loss of \$53,266. If indirect costs had not been assessed, these programs likely would have been solvent.

Indirect costs are a source of financial pressure on the cost factor of the trilemma. On the one hand, indirect costs are a source of financial pressure on what are in many cases already beleaguered budgets. If indirect costs are seen as discretionary, then Child Nutrition Program staff may well believe their program should not be made to pay indirect costs when the budget is already tight. On the other hand, federal and state policies and regulations clearly allow the assessment of indirect costs. As pressures on public school budgets rise, LEA administrators and boards of education are likely to feel a need to raise revenue from every possible source.

The requirement to pay indirect costs to the district puts more pressure on Child Nutrition Programs to generate enough revenue to cover these costs. As discussed in Finding 1, most programs sell à la carte items—which are not currently required to meet nutritional standards—to cover expenses. Programs may have to operate counter to their intended purpose—to provide nutritious school meals—in order to cover program costs. One program director stated, “We do not pay any indirect cost and we are in the black. If we had to pay, there is no way we could stay in the black without some à la carte items that do not qualify as healthy!”

In summary, federal regulations define indirect costs, control the method used to calculate allowable rates, and allow LEAs to assess them to Child Nutrition Programs. However, LEA discretion on *when* and *whether* indirect costs are assessed becomes particularly salient when programs are insolvent.

Finding 4. North Carolina is among a minority of states that do not supplement federal Child Nutrition Program funding beyond the required state match.

The federal government requires each participating state to match a portion of federal program funds. In Fiscal Year 2009-10, North Carolina’s state match was \$8.7 million, or 1.4% of total expenditures, for the

²⁶ As noted previously, Sampson County Schools was excluded from analysis because the district’s accounting processes did not provide comparable data.

program statewide.²⁷ Of this money, North Carolina spent \$1.4 million (16.5%) to provide free breakfast to all kindergarten students, \$6.7 million (77.8%) as part of a block grant for administration of Local Education Agencies (LEAs), and \$489,347 (5.6%) on other expenses related to the program.

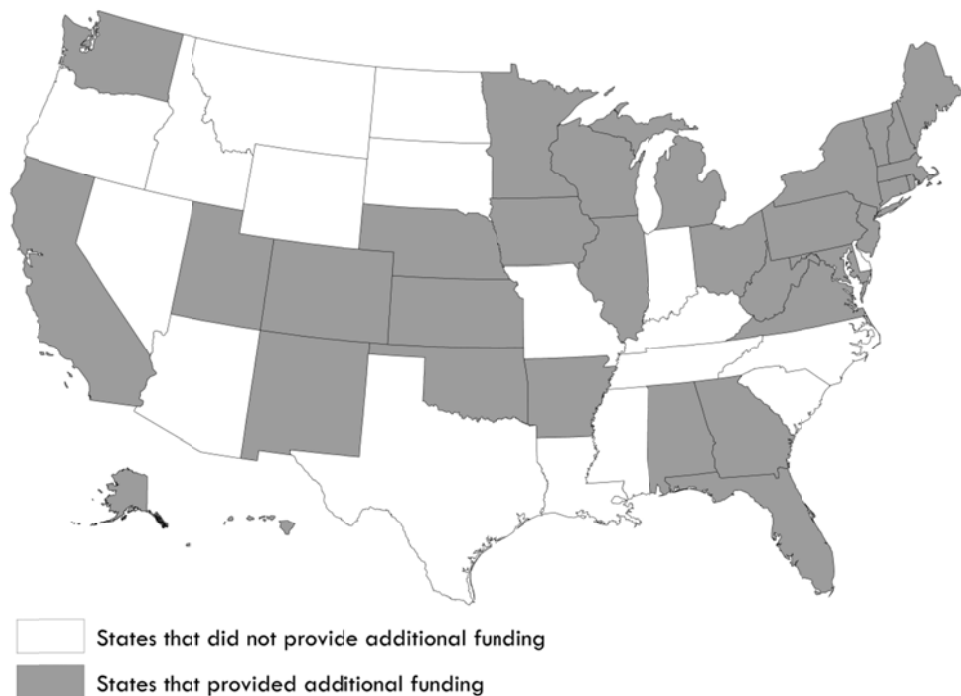
Each LEA receives a block grant from the State for LEA central administration. Part of this block grant must be spent on the Child Nutrition Program to meet the federal match requirement: each LEA, regardless of size, must expend \$45,000 to help pay the salary of the Child Nutrition director. As of Fiscal Year 2011-12, LEAs are no longer funded to provide kindergarten breakfast but are instead required to provide free breakfast to students who qualify for reduced-price meals.

North Carolina does not provide any funding for the Child Nutrition Program beyond the state match. All program costs, including food, labor, equipment, and supplies are paid from federal reimbursements for school meals and revenues generated through school meal and à la carte sales.

Most other states (32) provide Child Nutrition Program funding beyond the required state match. Exhibit 8 shows which states provided additional funding in 2007 (the most recent year national data were available). These additional resources may help to alleviate pressure on Child Nutrition Program finances.

Exhibit 8

32 States Provided Additional Funding for Child Nutrition Programs in 2007



Source: Program Evaluation Division based on data from the School Nutrition Association.

²⁷ The U.S. Department of Agriculture calculated North Carolina’s state match at \$7 million. LEAs are required to spend at least \$45,000 per year from the central administration block grant on the Child Nutrition Program, but some choose to spend more.

Three funding strategies were identified among states that provided supplements.

- **Flat amount.** State legislatures appropriated additional funds that could be used by the state department of education or LEAs. For example, Georgia provided a flat amount to be used at the discretion of local Child Nutrition Programs.
- **Labor.** States may fund staff salaries and/or benefits. For example, Alabama has appropriated funds to pay for salary increases and all benefits since 1991; including the required federal match, the state provided \$130 million in Fiscal Year 2010. Following the formula used to fund teachers, West Virginia appropriated \$52 million in Fiscal Year 2010 to cover all child nutrition staff salaries and benefits.
- **Meal reimbursement.** Programs received state funds as per-meal reimbursements according to a range of options. For example, Florida provided funding to help cover the cost of breakfast in elementary schools; Virginia and Ohio funded breakfast by providing incentives for increased student participation; and Pennsylvania provided incentives for programs that implemented higher nutrition standards.

A 2009 study by the Government Accountability Office identified five states and 35 districts in 19 other states that had eliminated reduced-price meals in some or all grade levels. Program administrators reported increased school meals participation and revenue from federal reimbursements. Although these increases did not eliminate the need for state funding, the report identified other benefits such as a decreased staff burden to collect unpaid meal fees and a lower rate of unpaid student fees (debt that, if unpaid, must be assumed by districts).

The Program Evaluation Division interviewed program administrators in the 11 other southeastern states and found states that had provided supplemental funds in 2007 continued to do so; in 2010, Arkansas added a discretionary supplement by allowing LEAs to use state funds for child nutrition.

Interviews with administrators in other states suggested the additional funding alleviates financial pressure and enables programs to provide higher-quality foods. However, systematic data do not track this claim or confirm that the added funding supports improved nutritional standards for children or keeps programs from operating at a loss.

Analyses conducted by the Program Evaluation Division projected potential costs of adopting one of the three approaches adopted by other states (see Exhibit 9). If North Carolina opted to provide additional funds to the Child Nutrition Program beyond the required state match, systematic data should be put in place beforehand to document the effect of those additional funds in terms of participation, program solvency, and/or nutritional quality of foods provided.

Exhibit 9: Potential Strategies for Supplemental Child Nutrition Program Funding in North Carolina

Potential Strategy: Appropriate a Flat Amount

	Percentage of Total Annual Program Cost	
	1%	5%
Statewide Cost	\$6.7 million	\$33.4 million

Note: Basing a flat amount on a percentage of total annual program costs is presented only as an option; any amount could be chosen at the General Assembly's discretion.

Potential Strategy: Fund Labor

	All Salaries and Benefits	Mandated Increases
Statewide Cost	\$270.9 million	\$3.6 million

Note: Increases in salaries or benefits are mandated by the state; the amount in the table is based on increases in retirement and hospitalization insurance from Fiscal Year 2010-11 to 2011-12.

Potential Strategy: State-Funded Lunch Reimbursement

	Reimbursement Level		
	\$0.05 per meal	\$0.15 per meal	\$0.25 per meal
Statewide Cost	\$ 7.9 million	\$ 23.7 million	\$ 39.6 million

Note: Estimates based on data provided by the Department of Public Instruction of 158 million lunches sold in FY 2009-10.

Source: Program Evaluation Division based on cost data provided by the Department of Public Instruction.

Finding 5. With limited options to ensure financial viability, Child Nutrition Programs have adopted other strategies to address the trilemma.

Whereas research indicates some schools experience an initial decrease in revenue after implementing nutrition standards, a growing body of evidence suggests schools can have strong nutrition standards and maintain financial stability. Innovative strategies can help reduce costs, increase healthy foods, and increase participation. Approaches include procurement strategies, behavioral economics, and careful implementation of change.

The North Carolina Procurement Alliance is a purchasing consortium housed in the North Carolina Department of Public Instruction to help Child Nutrition Programs control costs. Created by Child Nutrition Services Section administrators in 2008, the alliance is a voluntary opportunity for program directors to obtain high-quality products at the lowest price. Currently, directors from 84 of the 115 Local Education Agencies (LEAs) are members; program administrators reported this membership is larger than any other school nutrition purchasing group. Based on program director survey responses, 48% of those not in the alliance belonged to a different purchasing group.²⁸

Alliance members issue a single statewide Invitation for Bids and Contracts on food and supplies. Companies that submit bids on products must offer the same price to all participating programs. The alliance has led to greater competition among producers in many rural parts of the state and

²⁸ Other reasons for not belonging to the alliance were waiting to see the long-term cost-savings before joining (42%); could get better pricing on their own (26%); did not have time (16%); or had been a member but did not save money (10%). Because respondents could check all that applied, these items are not mutually exclusive.

lower food and supply costs overall. Alliance members' food and supply costs have decreased by an average of 6% since Fiscal Year 2007-08. It has reduced the administrative burden on individual program directors because one bid document minimizes the duplication of effort if each director creates their own.²⁹

Some programs have created buying groups within the North Carolina Procurement Alliance and reported considerable savings. Previously, programs in northeastern North Carolina had been subject to high food and supply prices because the rural location of these districts resulted in little to no competition among suppliers. Programs in 13 northeastern counties created a buying group and saved 10% on the food and supplies they were able to purchase through the alliance between Fiscal Years 2009-10 and 2010-11. This group received a best practice award from the U.S. Department of Agriculture (USDA).

Innovative programs help Child Nutrition Programs procure fresh fruits and vegetables and other healthy foods. Program directors reported the USDA's Fresh Fruits and Vegetables Program is a successful way to increase these foods in schools. This federally funded program provides money for fresh fruits and vegetables for snacks at the 169 participating schools. North Carolina was selected as a pilot state for the program in 2004, and it developed many of the management and monitoring tools that are now in use by other states. USDA asked North Carolina to share resources and provide training for other states. In Fiscal Year 2011-12, the State will receive \$3.9 million for this program.

The North Carolina Farm to School Program provides LEAs with increased access to purchase local fresh fruits and vegetables. This program, which is operated by the North Carolina Department of Agriculture and Consumer Services (NCDACS), resulted in produce sales of nearly \$1 million from North Carolina farmers to public schools within the past year, making it one of the strongest Farm to School programs in the country. It is considered a model by many states and organizations interested in growing their programs. The program's steady growth and success have been attributed to NCDACS's ability to incorporate locally grown Farm to School products into their current operations for routine storage and delivery of USDA commodities to schools.

Behavioral economics has been used to encourage healthier food choices and increase participation in school meals programs. Explains Joanne Guthrie of USDA's Economic Research Service, Child Nutrition Program staff members know what children need to eat—the question is how to get children to eat the food by focusing on presentation and acceptance. Behavioral economic theories combine behavioral psychology with economic decision models and provide strategies to help address the trilemma. Some of the ideas are as simple as rearranging where foods are located in the cafeteria or renaming foods. Researchers explain these changes “nudge” children to make the healthier choice—salad instead of fries, plain instead of chocolate milk, or fruit instead of dessert.

²⁹ The Program Evaluation Division report entitled *Purchasing Consortiums and Merging Community Colleges Could Save \$26.2 Million Over Seven Years* (June 2011) identified purchasing consortiums as a way for independent entities to achieve economies of scale.

Cafeteria design, for example, can help children make healthy choices. Researchers at Cornell University found children could be coaxed into making a healthier choice by moving the salad bar to a central location; putting the chocolate milk behind the plain milk; creating a “healthy express line” for students not buying desserts and chips; placing nutritious foods at the beginning of the line; and keeping ice cream in a freezer with a closed opaque top.

Survey responses and interviews with Child Nutrition Program directors indicated behavioral economics approaches have been implemented in North Carolina.

- **Cafeteria design.** Several directors rearranged serving lines to put the fresh produce at the beginning of the line instead of the end so children fill their trays with healthier options.
- **Suggest healthy options.** Research has shown that cafeteria workers simply suggesting a student take fruit increases the number of students eating the fruit by as much as 70%.³⁰ Brunswick County reported having implemented this approach.
- **Renaming foods.** Findings from one study suggested changing the name of carrots to “x-ray vision carrots” doubled consumption. The Pitt County Child Nutrition Program director plans to revamp the menu this year to change the names of items from things like “turkey chunks in gravy” to something more appealing.
- **Packaging.** The Wake County Child Nutrition Program director saw an increase in sales when she replaced whole apples with apple slices to accommodate children who had lost teeth in elementary school or were wearing braces in middle school. Stokes County offers prepackaged salads for students to grab and go.

Evidence and experience demonstrate the importance of thoughtful implementation of improved nutrition standards. Despite the best intentions behind offering healthier foods in schools, simply offering them is not enough: no food is nutritious until it is actually eaten. Careful implementation is also important to the bottom line because reduced participation means reduced revenue. Thoughtful introduction of nutrition standards is necessary to encourage children to select and to actually consume nutritious foods.

Implementation strategies that could improve successful adoption of nutrition standards without reducing participation were identified as lessons learned in the Department of Public Instruction’s pilot of higher nutrition standards.

- **Gradual change.** Make gradual modifications in the kinds and amounts of foods and beverages available to students; districts that had been making menu modifications for three or more years experienced fewer problems.
- **Communication.** Inform and involve students, parents, school personnel, school administrators, community, media, and other

³⁰ Schwartz, M. B. (2007). The influence of a verbal prompt on school lunch fruit consumption: A pilot study. *International Journal of Behavioral Nutrition and Physical Activity*, 4:6. Available at <http://www.ncbi.nlm.nih.gov/pmc/articles>.

stakeholders about the importance of making menu modifications well in advance of implementation.

- **Staffing.** Provide adequate staff, resources, and time to train school nutrition personnel in making menu modifications.
- **Funding.** Ensure school districts have an adequate fund balance to sustain revenue losses; local boards of education must be prepared to deal with loss in program revenues.
- **Purchasing.** Give Child Nutrition Programs enough lead time to prepare to implement nutrition standards so they can purchase appropriate items through competitive bidding and formal contracts.

Child Nutrition Program directors described strategies to introduce students to new food items. Pitt County and Camden County schools encourage students to try new fruits and vegetables by introducing them in the classroom. Ashe County schools offered taste tests and free samples to students and held cooking demonstrations of vegetable recipes to encourage students to try new items.

Small changes and gradual introduction of new foods can limit fluctuations in student participation. Child Nutrition Program directors mentioned the benefits of gradual introduction of whole wheat products. For example, one director introduced wheat dinner rolls one year and wheat hamburger buns the next year.

Cleveland County provides caloric information for menu items to middle and high school students, and Stokes County provides information on Farm-to-School items featured in the school meal. Onslow County and Stanley County schools send health information about the school menu to parents.

In sum, Child Nutrition Programs face the challenge of balancing program costs, nutrition standards, and student participation in the school meals program. Although some programs are financially solvent and can readily pay indirect costs, data suggest that as many as half struggle to maintain solvency. Indirect costs alone do not determine solvency, but they make it difficult for struggling programs to maintain solvency. Improved nutrition standards are needed to address childhood overweight and obesity, but they add to financial pressure on programs because nutritious foods are more costly. Innovative programs, practices, and implementation strategies, however, can help achieve the goal of improved nutrition for schoolchildren.

Recommendations

Findings from this report illustrate fiscal and nutritional challenges facing Child Nutrition Programs. The best way to establish the cost and processes needed to address these issues would be to conduct a new, well-designed pilot that would determine what is needed for programs to fully implement current state nutrition guidelines and, at the same time, maintain solvency. However, a pilot program is not advisable because of the impending implementation of new federal nutrition requirements that will have precedence over state guidelines. Although at present the content and timing of the federal requirements are uncertain, current information suggests they may be more prescriptive than existing federal and state requirements and may be introduced as soon as late 2012. As a result, action aimed at addressing standards and adequate funding should be considered after the revised federal standards are introduced.

The following recommendations represent actions the General Assembly can take now to address other findings raised in this report. These actions will not be affected by the impending federal nutrition requirements.

Recommendation 1. The General Assembly should require a minimum of one month's operating balance before Local Education Agencies can assess indirect costs to Child Nutrition Programs.

Local Education Agencies (LEAs) have discretion on whether to assess full, partial, or no indirect costs to Child Nutrition Programs. Although Child Nutrition Program annual agreements contain language that directs LEAs to assess indirect costs in a manner that promotes program solvency, defined as at least one month's operating balance, data collected for this evaluation show programs that had less than this balance were assessed and paid indirect costs to their LEAs.

To ensure the financial solvency of Child Nutrition Programs so they can focus on their primary aim of providing nutritious meals to schoolchildren, the General Assembly should amend state law to define program solvency as at least one month's operating balance and should direct LEAs not to assess indirect costs until the program food services account has met this threshold. The determination of solvency should be based on a rolling three-year average of the number of months' operating balance to eliminate the practice of making the decision to assess indirect costs on a year-by-year basis. Using the three-year rolling average also would give programs time to improve their financial situation before indirect costs could be assessed. Once program solvency is established, LEAs would have discretion over assessment of indirect costs up to the approved amount.

A rolling three-year average smooths out year-to-year fluctuations in months operating balance and more accurately reflects the trend towards solvency. The example in Exhibit 10 describes calculations to determine ability to pay indirect costs in FY 2011-12 for a Child Nutrition Program in a hypothetical school district, based on the rolling average of Fiscal Years 2008-09 to 2010-11. In this example the program would not be considered solvent and would not be required to pay indirect costs in FY 2011-12. Although the program had over one month's operating balance in FY 2010-11, the three-year rolling average shows this program is not as financially stable as it would appear based only on the most recent year.

Exhibit 10

Sample Calculation of Rolling Three-Year Average of Month's Operating Balance

Fiscal Year	Months' Operating Balance for the Year
2008-09	0.56
2009-10	0.91
2010-11	1.13
3-year average	0.87



Charge Indirect in FY 2011-12?

No

Source: Program Evaluation Division.

Statutory changes would continue to allow LEAs to plan their budgets based on anticipated program revenues and help to ensure programs are not assessed indirect costs when they are insolvent.

To monitor LEA compliance, the General Assembly should direct the Department of Public Instruction's Child Nutrition Services Section to

- calculate the rolling three-year average of the number of months' operating balance for each Child Nutrition Program;
- stipulate whether or not each LEA can charge indirect costs to its Child Nutrition Program in their annual agreement; and
- review financial information annually to ensure indirect costs are not being paid by Child Nutrition Programs with less than one month's operating balance.

Recommendation 2. The General Assembly should fund administrative support for the North Carolina Procurement Alliance to promote optimal pricing for Child Nutrition Program foods and supplies.

At present, the Procurement Alliance is housed in the Department of Public Instruction and is supported by one contractual part-time administrator. Funding for administrative support would bolster to the alliance's goal of obtaining optimal pricing for participating Child Nutrition Programs. To date, participants have realized annual average savings of 6% on food and supplies. Recurring funding of \$80,000 would provide assistance with support activities that are time-consuming and important to the day-to-day operations of the alliance. The tasks completed with this administrative funding would include

- completing paperwork and maintaining electronic files for the alliance;
- preparing nutrient analyses;
- negotiating and coordinating bids and contracts with vendors and manufacturers;
- developing new suppliers to improve competition;
- writing and managing grants for the program; and
- expanding the selection of items available for purchase through the alliance, such as equipment and additional food items.

This support would ensure continued savings for Child Nutrition Programs and could promote additional savings by adding to the number of participating vendors, pursuing direct manufacturer purchasing, increasing the number of food and supply items available through the alliance, and expanding into food service equipment purchasing. Because the added support would reduce the administrative burden on participating Child Nutrition Program directors, the investment also could increase alliance membership. Together, these benefits should result in increased total savings to Child Nutrition Programs: even if the alliance as a whole realized only an additional 5% savings (\$480,000), this would amount to a return on the General Assembly's investment of six dollars for each dollar spent.

Recurring funds for this support should be included in the budget for the Department of Public Instruction starting in Fiscal Year 2012-13. The need for continued administrative funding should be reviewed periodically as the alliance expands to include a greater volume of sales; a modest fee charged to participating districts based on purchases eventually could be introduced to supplant state funding.

The Child Nutrition Services Section should report annual savings associated with participation in the alliance beginning in October 2013.

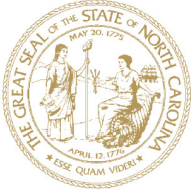
Agency Response

A draft of this report was submitted to the North Carolina Department of Public Instruction to review and respond. The agency response is provided in the following pages.

Program Evaluation Division Contact and Acknowledgments

For more information on this report, please contact the lead evaluator, Carol H. Ripple, at carol.ripple@ncleg.net.

Staff members Catherine Moga Bryant and Pamela L. Taylor made key contributions to this report. We gratefully acknowledge Duke students Elizabeth Friedland, Amy Fryt, and Alice Yen, and Program Evaluation Division interns Korinne Chiu and Safa Sajadi for their assistance. John W. Turcotte is the director of the Program Evaluation Division.



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DEPARTMENT OF PUBLIC INSTRUCTION | June St. Clair Atkinson, Ed.D., *State Superintendent*

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October 3, 2011

Mr. John W. Turcotte, Director
Program Evaluation Division
North Carolina General Assembly
Legislative Office Building, Suite 100
300 North Salisbury Street
Raleigh, NC 27603-5925

Dear Mr. Turcotte:

The North Carolina Department of Public Instruction appreciates the opportunity to review and comment on the Program Evaluation Division's study of the Child Nutrition Program as directed by NC Session Law 2010-225. We concur with the findings and recommendations as described below and would like to commend the staff of the Program Evaluation Division for their objectivity, their diligence throughout the study, and their thorough understanding of the complexity of North Carolina's Child Nutrition Programs at both the state and local levels. We applaud the division's efforts to involve local Child Nutrition Administrators and Finance Officers in the study as these professionals are critical to the efficient and effective operation of the Child Nutrition Programs in the Local Education Agencies (LEA). Our responses to each finding and recommendation are shown below.

Finding 1: Viability of Child Nutrition Programs depends on a delicate balance of cost, nutritional value and student participation.

We concur with the Program Evaluation Division's finding that the viability of the state's Child Nutrition Programs depends upon an intricate balance of cost, nutritional value and student participation. The "trilemma" described in the report is consistent with the department's observations of local Child Nutrition Program operations. Program administrators are challenged to balance food, labor, equipment and other costs with the cost of implementing unfunded nutrition standards while simultaneously promoting optimal student participation. As indicated in Figure 3, the requirement to achieve and/or maintain financial solvency while implementing state-adopted nutrition standards often creates conflicting goals and expectations within the local Child Nutrition Program.

Finding 2: Research on state efforts to address this trilemma reveals challenges and some promising results.

North Carolina was among the first states to test nutrition standards in public schools for achievability, affordability and student acceptance. In 2005, the department conducted a pilot program to measure the impact of nutrition standards (as proposed in the document "*Eat Smart:*

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North Carolina's Recommended Nutrition Standards for all Foods available in School") on the state's Child Nutrition Programs. The pilot program was conducted in 124 elementary schools. Findings from the pilot program indicated healthier foods cost more to purchase and prepare than less healthful ones. For example fresh fruits, vegetables and whole grain products were more expensive than pre-packaged convenience items. Labor cost increased during the pilot program because fewer convenience foods were used; instead school nutrition personnel prepared more fresh foods. The pilot program also revealed that student acceptance of new menu items varied; student participation in the school breakfast program dropped sharply but rebounded after a few weeks. At the time the pilot was conducted, there were few commercially-prepared products that were low in fat, sugar and calories available for use in the school nutrition marketplace. The limited availability of these products reduced the variety of foods and beverages to which students had become accustomed, and subsequently participation declined.

As suggested in the report, there are many opportunities available to provide nutritious, appealing foods to students. Since the 2005 pilot projects, the Child Nutrition industry has made tremendous strides in re-formulating student-appealing foods and beverages to meet nutrition standards for fat, trans fat, saturated fat, sugar, sodium and calories. Many new products are now available for use in the state's Child Nutrition Programs; unfortunately their reformulation has come at a cost to the manufacturers and that cost is being transferred to the local Child Nutrition programs. While a greater variety of foods and beverages is available to appeal to students' palates in 2011 than were available in 2005, these products are more expensive than the products they replaced. As the Child Nutrition industry continues to respond to demands for more healthful products in the school nutrition program, the challenge of providing an adequate variety of student-appealing foods will become less daunting and we anticipate student acceptance of these newly formulated products will continue to increase.

However, generating adequate revenues to support the Child Nutrition Program will continue to be challenging. These newly-formulated products will not generate the revenues required to sustain the program as the profit margins for these items is minimal. Child Nutrition Directors and Finance Officers will continue to be challenged to balance rising food and delivery costs and increasing labor costs with the provision of healthful, student-appealing meals, thus sustaining the trilemma.

Finding 3: Despite numerous federal and state regulations, the lack of formal guidelines for indirect cost assessment at the local level challenges program solvency and creates additional cost pressure on the Child Nutrition Program.

The department provides continuous guidance to LEA administrators about the Federal regulations associated with the assessment of indirect cost in the Child Nutrition Program. In addition, both the Monitoring and Compliance and Child Nutrition Services sections of the department routinely monitor LEA compliance with indirect cost requirements. Each year, the department provides the pre-approved unrestricted indirect cost rate to each LEA that may be applied in the Child Nutrition Program; the department also instructs LEAs as to the specific budget codes to which the approved indirect cost rate may be applied within the Child Nutrition Program. The decision to assess indirect cost to the Child Nutrition Program fully, partially or not at all ultimately resides with LEA administrators and the local Board of Education.

Finding 4: North Carolina is among a minority of states that do not supplement federal Child Nutrition Program funding beyond the required state match.

We concur with the finding that North Carolina is among a minority of states that does not invest state resources in the Child Nutrition Program beyond the minimum required. The Child Nutrition Program was originally authorized as a “partnership among federal, state and local governments cooperating” to provide nutritious meals for students during the school day. For the past 15 years, North Carolina’s Child Nutrition Program has been supported predominately by the federal partner; current data indicate the US Department of Agriculture has provided over half (62%) of the funds for program operation in the form of reimbursement to LEAs for qualifying meals served to students. Thirty-seven percent (37%) of funds to operate the Child Nutrition Program are generated from the sale of meals to students and adults, including the sale of *a la carte* foods and beverages. The state’s contribution to the program has been in the form of the required state revenue match of approximately \$7 million annually and constitutes less than 1% of the funds received for the operation of the local Child Nutrition Programs.

While there is little state funding for the Child Nutrition Program, it is important to note that the NC General Assembly establishes, via statute, the minimum rate for salaries for Child Nutrition personnel and establishes the required rate for their employment benefits. It has been our observation that some NC’s Legislators are often surprised to learn that the salaries and benefits of Child Nutrition personnel are statutorily prescribed and are similar to other state employees, but unlike other state employees, Child Nutrition personnel are not included in the state appropriation for salaries or benefits. Child Nutrition Programs are often required to sell additional foods and beverages to students in order to pay for the state-mandated salary and benefit increases.

The Program Evaluation Division has done an exemplary job of identifying possible strategies for supplementing the Child Nutrition Program using state funds. One of the strategies suggested by the division is an annual allotment of state funds that would gradually increase the state’s investment in the program from less than 1% up to 5%. Another strategy suggested by the division is the option of funding the salaries and/or benefits of Child Nutrition personnel using the same funding formula that is applied to other state personnel (and is described in the paragraph above). While it is unlikely the state would have the resources to fully fund the salaries/benefits of Child Nutrition personnel in the same manner as all other state employees, a state appropriation to fund future salary and/or benefit increases would begin to address the salary/benefit gap between Child Nutrition personnel and other state employees. Finally, state funds could be used to provide a per-meal supplement which would help support the inclusion of more healthful foods and beverages in the Child Nutrition Program. Ideally, a per meal supplement would be provided equitably to all schools participating in the school breakfast and lunch programs and would be reimbursed to LEAs upon serving “reimbursable meals” that meet the highest standards for quality and nutrition.

Results from the 2005 pilot program described in Finding 2 suggested the cost associated with implementing state-adopted nutrition standards in all elementary schools to be approximately \$20 million annually or \$25.00 per elementary student. Based on this data and the continuous monitoring of each of the LEA’s Child Nutrition Program financial statements, the department and the State Board of Education have consistently identified state funding for the Child Nutrition Program among their top funding priorities as reflected in their annual budget requests.

While it is recognized that the state is operating in one of the most challenging budgetary environments in its history, the department would support the gradual investment of state funds in the Child Nutrition Program as a means of expanding state support for the program. We consider these funds to be an investment in the current and future health and well-being of our state's most valuable resource – its students.

Finding 5: With limited options to ensure financial viability, Child Nutrition Programs have adopted other strategies to address the trilemma.

We agree with the finding that Child Nutrition Programs have been progressive in identifying and adopting strategies to address the trilemma. LEA Child Nutrition Directors are among the most resourceful professionals in the education system. When faced with financial, nutritional and operational challenges, these committed professional have been successful in implementing various management and marketing strategies designed to maximize efficiency, promote student participation and reduce costs. Many of those innovative strategies are described in the Program Evaluation Division's report.

In 2007, the department began to project economic conditions that could potentially place the state's Child Nutrition Programs in the midst of a "Perfect Storm." With the intent of helping LEAs reduce costs and minimize the administrative burden associated with the formal procurement process, the Child Nutrition Services Section formed a state-wide Child Nutrition Purchasing Alliance in 2008. The purpose of the Alliance was to enable LEAs to combine their collective purchasing power in order to obtain the highest quality food and supplies for the Child Nutrition Program at the most affordable prices. While participation in the Alliance is voluntary, to date, over 75% of LEAs in North Carolina have chosen to join the Alliance. Child Nutrition Directors who form the membership of the Alliance also constitute the decision-making body of the purchasing group. The impact of the Alliance on Child Nutrition budgets has been noteworthy; some LEAs have reported a reduction in food and supply costs by 10%. Other LEAs have indicated their membership in the Alliance has enabled them to purchase higher quality foods, which in turn, promotes optimal student participation.

Recommendation 1: The General Assembly should require a minimum of one month's operating balance before LEAs can assess indirect cost to the Child Nutrition Program.

The department agrees that indirect cost should be assessed to the Child Nutrition Program by the LEA in a manner that promotes the financial solvency of the program. This practice is consistent with the recommendation of a 2009 Task Force of LEA Child Nutrition Directors and Finance Officers which concluded that the language of the annual agreement between the LEA and the department to administer the Child Nutrition Programs should be modified to reflect the importance of assessing indirect cost in a manner that promotes and preserves the financial solvency of the Child Nutrition Program. Financial solvency was defined by the Task Force as having a one-month operating balance or the ability of the Child Nutrition Program to meet its monthly financial obligations. This language was included in the 2010, 2011 and 2012 annual agreements between the LEA and the department to operate the Federally-funded Child Nutrition Programs.

The department proposes that the State Board of Education adopt policy regarding the assessment of indirect cost to the Child Nutrition Program in a manner that is consistent with this recommendation and that the Board review and update the policy annually or as needed to reflect the changing economic conditions in North Carolina's Child Nutrition Program. Such policy could reflect the rolling three-year average (as described in the report), would provide specific guidance to LEA administrators and local Boards of Education for determining the financial solvency of the LEA's Child Nutrition Program and would specify the conditions under which indirect cost may or may not be assessed to the Child Nutrition Program.

Recommendation 2: The General Assembly should fund administrative support for the North Carolina Child Nutrition Procurement Alliance to promote optimal pricing for Child Nutrition Program foods and supplies.

The department also supports the recommendation to fund administrative support for the Child Nutrition Procurement Alliance. The Alliance has expanded rapidly in the past two years and has generated a sufficient volume of sales to begin purchasing some items directly from the manufacturer (Free and open competition are always required when using federal Child Nutrition funds). Purchasing directly from the manufacturer has generated additional cost savings to the LEAs that are members of the Procurement Alliance.

Alliance members (all of whom are LEA Child Nutrition Directors) volunteer their time to perform various duties associated with formal, competitive purchasing. As the Alliance has grown, members have expressed the need for administrative support to manage routine procedures. The administrative support recommended by the Program Evaluation Division would enable continued expansion, efficiency and accountability for the Alliance while offering continued cost-savings for the LEA's Child Nutrition Programs.

Again, thank you for the opportunity to review and comment on the Program Evaluation Division's report. We look forward to collaborating with Legislators to seek solutions to the findings and to implement the recommendations included in the report.

Sincerely,



June St. Clair Atkinson

JSA/LH/lc