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Peer and Community Networks Drive Success in Rural School Meal Programs

Challenges and strategies for meeting students' nutritional needs in remote areas

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The Kids' Safe and Healthful Foods Project, a collaboration between The Pew Charitable Trusts and the Robert Wood Johnson Foundation, provides nonpartisan analysis and evidence-based recommendations to make sure that all foods and beverages sold in U.S. schools are safe and healthful.

Overview

More than half of public school districts in the United States are in rural communities where millions of students struggle with poverty and hunger. According to the U.S. Department of Agriculture, 24 percent of rural children lived in poverty and 686,000 rural households with children were food insecure in 2014. About 95 percent of rural schools participate in the National School Lunch Program, and many also operate federally funded breakfast and snack programs. But because of their remote locations and smaller populations of students and potential employees, these districts face acute challenges in delivering healthy meals.

To explore the issues that rural school nutrition professionals, particularly those in small districts, confront in ensuring that all students in need receive healthy meals, the Kids' Safe and Healthful Foods Project—a joint initiative of The Pew Charitable Trusts and the Robert Wood Johnson Foundation—commissioned an in-depth study of rural district meal programs. The analysis also examined the evidence-based strategies and practices that can lessen or remove those hurdles.

The study used the National Center for Education Statistics' definition of "rural." The center assigns each district to one of four categories—city, suburb, town, or rural—based on proximity to a Census Bureau-defined urban center. Information from two nationally representative surveys of school districts was used to define "small" districts as those with fewer than 2,500 students. Researchers conducted a literature review of peer-reviewed studies and government reports on rural school meal programs; interviews with rural education or nutrition experts, and school food program directors; and focus groups with directors in Indiana, Louisiana, and Texas. Additionally, more than 50 rural school nutrition experts, including leaders from the education, government, industry, and nonprofit sectors, gathered in September 2016 to review the findings and develop recommendations for policymakers at the federal, state, and local levels.

The project's analysis identified five challenges that, while not unique to rural districts, factor heavily in the success of their nutrition programs and examined the strategies these districts use to overcome the challenges they face:

1. **Administrative capacity**. A common issue, especially in very small rural districts, is the limited number of nutrition staff available to perform the administrative duties associated with operating a school meal program, including purchasing, invoicing, and creating menus. Peer networking, external consultants, and effective use of technology can help districts overcome limited staff capacity.
2. **Qualified staff**. Recruiting experienced nutrition staff can be difficult in rural districts, which tend to have fewer qualified people in the labor pool compared with larger, urban areas. Training staff can be difficult in rural settings, where school nutrition personnel often have responsibilities outside of meal program operations and may have difficulty finding time for professional development. Many rural districts address these potential barriers by working with nearby higher education institutions to promote school nutrition careers and adapt training formats for staff members who cannot travel long distances for in-person professional development.
3. **Dispersed student population**. Bus rides of up to two hours each way limit the time students have to eat during the school day, especially at breakfast. Some districts are using inventive serving strategies, such as "breakfast-after-the-bell" and "grab-and-go" options, to expand student access to school meals and give students more time to eat.

4. **Food and supply options**. Because of their remote locations, many rural districts have difficulty finding vendors that offer desirable delivery schedules; competitive prices; and high-quality food, supplies, and equipment. Forming or joining purchasing cooperatives, sourcing locally, and collaborating with community businesses help rural districts purchase products to meet their requests.
5. **Equipment and infrastructure**. Many schools nationwide serve meals in outdated kitchens, but rural districts tend to suffer most acutely from some of the problems associated with old infrastructure, such as lack of storage space to accommodate the larger quantities of fruits and vegetables that schools are serving. Pursuing public or private grants and seeking community support in the form of matching funds or grant-writing assistance can enable rural school nutrition programs to overcome kitchen equipment and infrastructure limitations.

Although this research focused on the problem areas listed above, it also found that certain characteristics of rural schools and communities could help student meal programs tackle these challenges. Attendees at the 2016 convening and focus group participants indicated that smaller student populations and less administrative bureaucracy and organizational complexity can allow rural schools to implement changes, such as modified lunch and recess schedules to give students more time to eat, more easily than larger districts.

This report examines the results of the study and outlines strategies that rural districts can use to overcome barriers as well as ways that policymakers and national organizations can help:

- School districts and community members can collaborate to share information and resources; attract and retain qualified school nutrition professionals; and purchase, prepare, and serve high-quality food for a rural student population.
- Professional organizations for school nutrition workers and nonprofits with an interest in children's health can facilitate networking and training opportunities for rural school meal programs.
- Local, state, and federal policymakers can expand funds for technology and kitchen upgrades, and provide technical assistance to ensure that rural districts have the resources they need.

With support from all levels of government and their local communities, rural school meal programs can build on the creative strategies they are already using to provide healthy, appealing foods that meet their students' nutritional needs.

Administrative capacity

Like school districts across the country, virtually all those in rural communities participate in the National School Lunch Program (NSLP).[1] But unlike urban and suburban districts, which typically have a diverse staff to handle the planning, preparing, and serving of healthy school meals, rural and especially small districts often have limited personnel. Many rural school nutrition directors single-handedly manage all of the administrative and food preparation tasks of their departments.

For example, Julie Nelson is the head cook for the public schools in Wilmot, South Dakota, a remote community with a population of less than 500.[2] She and her two-person kitchen staff are responsible for running the meal program for the district's three schools. "I have my hands in every part of food service. I do the ordering, menu planning, cooking, and inventory," Nelson said. "Many days I do menu planning at home because I am out on the floor serving students during the school day."

Further, rural school nutrition directors sometimes manage programs in more than one district, stretching their already limited time and resources. In other cases, a rural district may not have a dedicated nutrition director. For example, one district in Indiana relies on someone in the central office to manage its program, but he is also responsible for overseeing custodial and transportation services.

And these administrative capacity concerns exist at several levels, including for superintendents, which can compound the strain for all administrators.[3] The pressure of overseeing multiple departments without sufficient staff and support can lead to difficulty in other areas, such as applying for additional funding or providing staff training and professional development. To overcome the challenges associated with a small staff, rural districts are looking for external resources.

Peer support

Rural school nutrition directors find that peer networks allow them to exchange practical information with their counterparts in similar school districts and reduce feelings of isolation.[4] This analysis identified formal and informal arrangements that enabled nutrition directors to communicate and collaborate. Informal networks of staff in neighboring districts or via group email lists are reliable forums for sharing insights on operating successful programs, as well as other activities, such as engaging in cooperative purchasing networks and identifying mentors. The summer before the U.S. Department of Agriculture's (USDA's) updated school nutrition standards took effect in fall 2012, Jeff Andel, food service director for Schuyler (Nebraska) Community Schools, which includes seven schools and serves about 2,000 students, gathered with nine other directors for a daylong meeting to discuss implementation plans for the upcoming changes. The group has kept in touch over email. "When a new director comes on board in the area, we add them to the email list to exchange tips and answer questions," Andel said.

More formal approaches have also demonstrated success. For example, members of the New Mexico School Nutrition Association's executive board meet quarterly and have monthly calls with representatives of the state child nutrition agency to discuss progress and any challenges.

External assistance

By providing resources and technical assistance, state agencies can help alleviate the administrative burden on rural school nutrition programs, especially when staff can call or email a designated agency person with specific questions or concerns. For example, the Texas Department of Agriculture, which oversees child nutrition programs for the state, has five regional offices with staffs that can answer program-related questions from districts in their region. Similarly, the Kansas State Department of Education employs about a dozen child nutrition consultants, many of whom have offices in the communities served, to provide technical assistance to local districts.

In one focus group, several rural nutrition directors said they had contacted their regional representative or other directors in their region and reported that being able to contact a person they knew who understood their local needs was less intimidating than emailing or calling the state office. Popular topics on which state agency professionals can provide technical assistance include menu planning, completing production records, and professional development opportunities.

External paid or volunteer consultants, such as registered dietitians, local chefs, or retired school nutrition directors, can support rural programs by helping develop creative and varied menus and providing staff training. Further, schools can look to their communities for support such as recruiting volunteers for the kitchen or

cafeteria, or for administrative tasks, including grant-writing. Jennifer Zellefrow, nutrition director for the Moniteau School District in western Pennsylvania, brings in student dietitians from a local internship program to conduct nutrition education in the classroom. In Louisiana, county extension staff, family and consumer scientists, and local 4-H agents employed by the Louisiana State University College of Agriculture extension office are available to assist directors with nutrition education for students and families.

Technology

Electronic information management systems ease the administrative workload for school nutrition directors and help them manage critical daily operations. The Texas Department of Agriculture, for example, purchased nutrition-analysis software for all school districts in the state, which enables directors to efficiently design and adjust their menus to meet nutrition requirements. Electronic point-of-sale systems free up time previously spent on meal-counting and claims paperwork. One district in rural Texas also uses an electronic system for equipment maintenance. Freezers and refrigerators are linked to a software program that alerts staff when the temperature fluctuates, allowing the small team to monitor food safety while running other facets of their program.

Community Eligibility Provision

Many rural school nutrition directors, administrators, and state agency professionals who participated in the September 2016 convening for this research described how their programs were able to reduce paperwork and increase students' access to healthy meals under the Community Eligibility Provision (CEP) of the Healthy, Hunger-Free Kids Act of 2010.*

The CEP allows schools and local education agencies in communities with high poverty rates to provide free breakfast and lunch to all students. Any school or district in which 40 percent or more of the students come from families receiving federal food or antipoverty assistance may use the provision. This approach eliminates the burden of collecting applications and determining each family's eligibility for free or reduced-price meals. Convening participants noted that this could be especially helpful for school meal programs with small staffs.

* U.S. Department of Agriculture, "School Meals: Community Eligibility Provision," accessed June 12, 2017, https://www.fns.usda.gov/school-meals/community-eligibility-provision.

Qualified staff

Operating a school meal program is a complex task that requires skills and knowledge from a range of disciplines, including nutrition science, food safety, business administration, and marketing. Hiring personnel with expertise in these diverse arenas is often difficult in rural areas because of the constrained labor pools. A 2015 study by the Kids' Safe and Healthful Foods Project, "Serving Healthy School Meals: Staff Development and Training Needs," found that school nutrition directors from small and very small districts, such as those in many rural areas, were less likely (28 and 8 percent, respectively) than those from large and very large districts (63 and 64 percent, respectively) to have bachelor's degrees in food-related fields, such as nutrition, food service management, and baking/culinary arts.[5]

Rural school nutrition professionals also report needing more training. The same study found that rural cafeteria managers were significantly more likely to need training in menu development, food purchasing, and federal reimbursement requirements than were their counterparts in other types of districts.[6] Typically, school nutrition directors are responsible for these duties, but in rural districts with smaller staffs, cafeteria managers sometimes perform such operational tasks.

More staff hours, training, and the ability to offer competitive benefits are common staffing needs identified by rural school nutrition directors.[7] This study found that overcoming those hurdles to recruit and retain qualified employees who share a vision for school nutrition and the role it plays in children's wellness and academic success is key for the success of rural meal programs. Rural districts across the country are using creative solutions to attract qualified professionals and invest in their continuing education and skill development.

Promoting rural school nutrition careers

Changing the way administrators, teachers, parents, and community members view school nutrition programs and professionals is a key strategy for recruiting and retaining qualified staff, as well as maintaining morale. Schools can collaborate with local and state universities and the broader community to promote school nutrition careers. For example, several participants in the Louisiana directors' focus group had dietetic students from Louisiana State University intern with their programs to receive hands-on training from cafeteria managers. Some school nutrition programs also provide courses and experiential learning opportunities for their own students. In one rural Indiana district, older students can volunteer to spend an hour a day with cafeteria staff learning about running a school meal program and helping prepare food. In the district's high school home economics classes, students create sample menus, conduct nutrition analyses, and compete to have their meals featured on the cafeteria menu.

Directors in focus groups described how increasing salaries and providing comprehensive benefits packages with health insurance helped attract qualified school nutrition candidates. Rural directors can also emphasize the predictable schedule of school food service work, particularly compared with restaurant shifts, including time off on weekends and holidays and during summer break. In Indiana, one school nutrition director tries to shorten staff commutes, which can be up to 18 miles between schools in his rural district. "I try to place them where they're geographically located around the school, which has made their lives happier," he said. "In the long run, I felt like it was worth taking care of my staff."

Retaining staff by expanding meal program offerings

One commonly reported challenge was providing workers with enough hours to make it worth their time or to qualify for benefits. Expanding the school's offerings by adding after-school snacks, dinner, or the USDA's Fresh Fruit and Vegetable Program can help lengthen shifts for some staff. One Indiana district was able to extend shifts for two staff members by about two hours a day through participating in the federal program.

Adapting staff training opportunities

Bringing training to school nutrition professionals in rural districts is an effective way to enhance program quality and promote employee satisfaction, and in very small districts, it can also alleviate the problem of finding staff to cover for those who are out for training. Alternatives, such as videos and online tutorials, can provide staff who may not have the time or resources to attend traditional conferences or regional in-person sessions with critical information.

The Institute of Child Nutrition's website features a number of valuable training resources in formats and on topics that appeal to school nutrition professionals in rural districts, including its No Time to Train curriculum, which offers condensed lessons on a variety of topics and does not require special audiovisual equipment.[8] Some focus group participants reported that providing such short but frequent training, rather than longer sessions, expanded their opportunities to offer important continuing education and professional development and yielded positive results with staff.

Accommodating dispersed student populations

Bus rides can take up to two hours each way for students living in rural areas, which limits the time children have to eat during the school day, especially at breakfast. As one nutrition director in rural Louisiana said, students meet the bus as early as 5:30 a.m. and "when they arrive at school, [they] don't have 20 minutes to sit and eat breakfast. And they're not allowed to eat on the bus."

Bus schedules can also limit flexibility at lunch, because to get home by dinnertime many rural students must board buses immediately after the last bell. Districts therefore often schedule extracurricular activities for those children during the lunch period, making it difficult for nutrition staff to ensure that students have adequate time to eat healthy meals.

Flexible schedules with administrator support

Expanding student access to school meals often requires support from administrators and other school staff. A 2016 study by the Kids' Safe and Healthful Foods Project, "School Meal Programs Innovate to Improve Student Nutrition," found that working with administrators to develop lunch and recess schedules that provide enough time to eat was an effective strategy for maintaining or increasing student participation in meal programs. Yet, only 21 percent of districts nationwide were using this strategy.[9] This latest research found that rural districts, in particular, could benefit from school schedules that increase student access to nutritious meals.

Inventive serving strategies

The prior research also found that serving breakfast outside of the cafeteria was among the most successful strategies to increase participation in the program for all districts, regardless of geography or size.[10] A number of rural districts interviewed were using breakfast-after-the-bell strategies to encourage participation. These approaches increase access to nutritious breakfasts by serving students in the classroom, distributing "grab-and-go" meals via conveniently located kiosks, or extending the break between first and second periods so students have time to eat. "Breakfast after the bell has been hugely successful. We can feed almost 100 percent of elementary and intermediate students breakfast every day in our rural district. That's nearly 4,000 children," said Ginger Jones, director of student nutrition for Deming (New Mexico) Public Schools.

One rural Indiana district has an open breakfast policy that allows students to participate in the breakfast program at any of the district's four schools, three of which are within walking distance of one another. "Our high school students can have breakfast at the elementary schools if they are doing peer teaching in the morning. Similarly, our elementary school students can eat breakfast with their older brother or sister at the intermediate or high school location," the nutrition director said. Another Indiana district permits high school students to take food out of the cafeteria during the lunchtime "power hour," when activities, clubs, and tutoring are offered concurrently with meal service. "That makes the entire school the cafeteria," the nutrition director said.

Although no districts evaluated in this research had policies that allowed students to eat on the bus, a few districts provided students with after-school snacks before they boarded their buses at the end of the day.

Food and supply purchasing options

Finding vendors who are willing to sell high-quality food at competitive prices to geographically isolated school nutrition programs can be a challenge, especially because those districts tend to purchase smaller quantities than do their larger, urban counterparts. Studies have found that cost and availability limit access to healthy foods, especially high-quality produce, in rural communities.[11] Directors in rural districts also need flexible delivery schedules, as Nelson, the South Dakota head cook, explained: "All of my food vendors come from two hours away. I have to plan my menus accordingly because of that delivery time, especially to keep produce fresh."

These challenges extend beyond food vendors to those providing supplies and equipment. For example, several rural districts in Indiana had difficulty placing bids for kitchen equipment and experienced longer waits for repairs. One district found that companies were less likely to respond to a request for an equipment bid because the district needed only one or two pieces at one time. In another district, difficulty recruiting a professional repair team to fix a remote school's broken freezer resulted in spoilage of a week's worth of food.

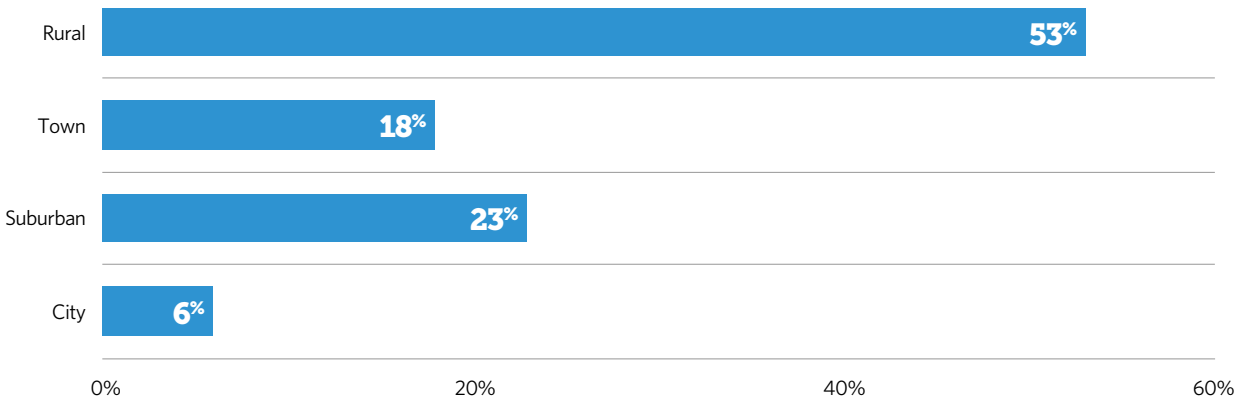
Purchasing cooperatives

To overcome limited vendor availability and pricing options, rural school districts are collaborating with each other and with nearby businesses with similar food service needs to increase their purchasing power and obtain locally sourced products. In some rural communities, nutrition programs from multiple schools or districts have formed purchasing cooperatives, which allows them to increase their individual buying power and access better prices, service, and delivery schedules. These co-ops can also serve the interest of vendors because small individual districts are not placing separate orders.[12] "There are 16 districts in our co-op, and we purchase

Figure 1

Most U.S. School Districts Are Rural

Share of school districts by community type, 2013-14

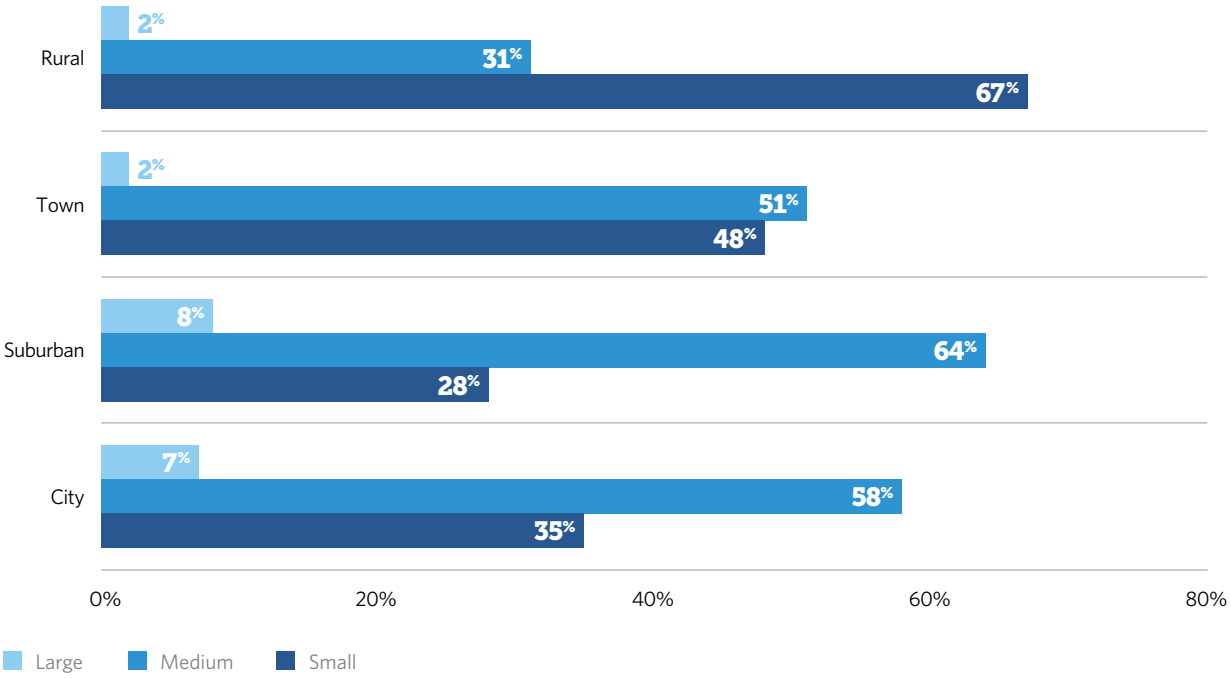


Source: National Center for Education Statistics, "Local Education Agency (School District) Universe Survey Data 2013–14," https://nces.ed.gov/ccd/pubagency.asp

Figure 2

Two-Thirds of Rural Public Schools Have Fewer Than 400 Students

Distribution of U.S. public schools, by size and community type



Note: "Large" schools have 1,200 students or more, "medium" means those with 400 to 1,199 students, and "small" refers to schools with 399 or fewer students. Percentages may not equal 100 percent because of rounding.

Source: National Center for Education Statistics, "Local Education Agency (School District) Universe Survey Data 2013–14," https://nces.ed.gov/ccd/pubagency.asp

everything—milk, bread, paper goods, and cleaning supplies," said a nutrition director from rural Louisiana. Said another: "It's just amazing. My milk prices went down 8 cents per carton since I joined." Additionally, joining a purchasing co-op connects rural school districts with their peers for networking opportunities.

Co-ops may be local, regional, or statewide. The Alabama Department of Education manages a procurement program that is open to any school that participates in the NSLP. An advisory committee conducts product tests with students to inform its selection of foods for purchase.[13]

Another advantage of purchasing co-ops for small, rural districts is the ability to buy more USDA Foods—domestic agriculture products purchased by the USDA for NSLP-participating schools.[14] Although USDA Foods are offered at discounted rates, they are typically ordered in large quantities (i.e., a minimum threshold is required by the USDA and states for food purchases), which a small district may have difficulty using on its own. Some state agencies and national organizations, such as the School Nutrition Association and the Institute of Child Nutrition, offer training and technical assistance on joining or forming a purchasing co-op.

Local sourcing and collaboration

Some rural districts have had success buying products and services directly from local companies and farmers. In South Dakota, Nelson wanted to serve more fresh fruits and vegetables than her regional food distributor could provide her district, so she engaged her local grocery store as a vendor. "I deal with any extra expense because I want my kids to have a wide variety of fresh produce," she said. In some cases, nutrition directors may not have access to a produce vendor in their areas and so may be able to purchase fruits and vegetables only from a local grocery store.

Forging partnerships with local businesses, as well as hospitals and universities, has been another strategy to overcome vendor challenges in rural districts. In Indiana, one small district partnered with a nursing home that was already working with a food distributor, which helped both institutions obtain food and supplies at competitive prices. Another rural Indiana district engaged a nearby technical university for equipment repair services. In Pennsylvania, director Zellefrow partnered with a local company to develop pizza recipes using a whole-grain crust that her students enjoy.

Infrastructure limitations

Many schools nationwide manage to serve healthy meals despite working in outdated kitchens designed mainly to handle prepackaged foods rather than fresh dishes. Rural districts, in particular, lack sufficient storage space to accommodate infrequent vendor deliveries. The Kids' Safe and Healthful Foods Project's 2013 report "Serving Healthy School Meals: U.S. Schools Need Updated Kitchen Equipment" found that rural schools needed an average of $65,000 in kitchen equipment and that 43 percent of rural districts did not have enough space for storage, preparation, or serving.[15] Additionally, rural districts were significantly less likely than other districts to have a plan for equipment replacement and upgrades (21 vs. 26 percent) or a line item in their annual budget for capital equipment purchases (37 vs. 42 percent).[16] Jones, of New Mexico, noted that in her district, "Schools are usually holding a week's worth of product at each location, and keeping it fresh is a big challenge."

These barriers, combined with reduced administrative capacity to identify and apply for funding, have made replacing and upgrading school kitchen equipment a difficult task in rural districts. Fortunately, effective strategies, such as advocating for federal and state funding support and engaging the community, have helped rural districts overcome some of these challenges.

Public–private support and community engagement

Federal equipment assistance grants administered by the USDA have helped thousands of schools across the nation upgrade their kitchens. The department distributes the funds to state agencies, which in turn award grants of at least $5,000 to eligible schools.[17] Several rural districts included in this study had applied for USDA equipment grants, and some also had applied for state funds for equipment, storage, and technology.

When small districts lack sufficient administrative support, they may seek external assistance to identify funding or acquisition options and apply for grants. Some nonprofit organizations provide small school districts with resources. For instance, the Vermont School Boards Insurance Trust offers funding support to the state's schools for grant-writing services, specifically targeting federal and state kitchen equipment awards.[18] Local organizations may also provide matching funds or donate gently used or like-new equipment to schools.

Some districts also undertake their own fundraising efforts. One school nutrition program in rural Indiana offers catering services to the community and uses the revenue to pay for kitchen equipment upgrades. Regardless of the approach, leveraging support from the community helps bolster the success of rural districts seeking funding for kitchen infrastructure improvements.

Recommendations

Based on the findings from this study and specific suggestions discussed at the September 2016 convening, the Kids' Safe and Healthful Foods Project recommends that school districts, policymakers, national organizations, and community partners embrace the following practices to support rural school districts in serving healthier meals and snacks to students:

Local

- School nutrition directors who work in rural areas can engage in informal or formal peer-to-peer support networks to exchange ideas and solutions for successfully operating their meal program.
- Community members, including local chefs, registered dietitians, and retired school nutrition directors, can volunteer to share their time and expertise with rural schools by helping to develop menus or apply for grants.
- Eligible rural districts can participate in the Community Eligibility Provision to make free healthy meals available to all students and reduce the administrative burden on school nutrition staff.
- Rural districts can collaborate with local colleges and universities to promote school nutrition careers and increase the number of qualified candidates in the labor pool.
- By participating in federal child nutrition programs, such as the Fresh Fruit and Vegetable Program in elementary schools, rural districts can offer their staffs more hours and the opportunity to earn a higher compensation and benefits.
- Administrators and school nutrition directors can collaborate to develop lunch and recess schedules that allow students with long bus rides enough time to eat at school. Rural districts could also explore policies to enable students to eat on the bus.
- School nutrition programs in remote areas can form or join purchasing cooperatives with one another or with local hospitals or technical schools to leverage group buying power for food and supplies.
- Businesses in the community, with support from local school boards, can provide funding for kitchen infrastructure and equipment upgrades, such as through grants or matching of state or federal awards.

State and national

- Professional organizations for nutrition directors, school business officials, and superintendents can facilitate collaboration between rural school nutrition professionals and administrators by creating networking opportunities at the national, state, or regional level.
- State agencies that oversee school meal programs can provide resources, such as grants to expand the use of technology and regional consultants to provide technical assistance to local districts, to alleviate administrative burdens in rural districts with limited staff capacity.

- State agencies and national organizations can modify training programs to provide more short, frequent modules and web-based learning opportunities for staff members in small and rural districts who find it difficult to access and afford professional development.
- State agencies can manage statewide purchasing cooperatives and provide outreach to rural districts to encourage them to join. National organizations can expand training and technical assistance to rural districts in all states to help them join, form, and operate in a purchasing cooperative.
- Policymakers at the state and federal levels can make additional funds available for kitchen equipment upgrades. State agencies can prioritize grant awards for rural districts that need to update aging infrastructure or expand storage capacity.
- Federal policymakers can continue to provide funding for the Community Eligibility Provision, which can help rural districts with small staffs reduce administrative burdens.

Conclusion

The findings in this report show how schools and districts can collaborate with one another, their local communities, state and national agencies, and organizations to build on the progress already made in school nutrition and build a culture of health in rural areas across the country. Although these districts face distinct challenges in running successful school nutrition programs, they are using a variety of effective practices to overcome those barriers, including cooperative purchasing, local partnerships, and regional training. Rural schools are leveraging their assets, such as strong school-community relationships and streamlined administrative systems, to develop creative strategies for purchasing food and supplies while offering healthier meals and snacks. Policymakers can support rural districts' progress and long-term success in expanding student access to healthy foods in school by making resources and technical assistance readily available.

Appendix A: Study design and methodology

This research project sought to examine rural and small school districts' ongoing challenges and strategies for running successful school meal programs. For the purposes of this research, a rural district was defined using the National Center for Education Statistics' criteria, which assign each district to one of four categories, based on proximity to a Census Bureau-defined urban center.[19] The researchers defined small districts as those with fewer than 2,500 students based on information from two previous nationally representative surveys by the Kids' Safe and Healthful Foods Project.[20]

This research consisted of a literature review, key informant interviews, and focus groups. The methodology for each component is described below.

Literature review

Researchers gathered information from published studies and government reports, primarily after 2009, that examined the operations of rural and small school districts to understand the challenges schools in those locations face in implementing the USDA's healthier nutrition standards for school meals and snacks. In total, the research included 17 peer-reviewed studies, nine published reports, and seven other sources, such as conference presentations and abstracts, across a range of topics, including administrative, funding, staffing, and infrastructure challenges facing rural districts. The information gathered from the literature review was used primarily to develop the interview and focus group guides.

Key informant interviews

The interview sample consisted of five academic researchers with expertise in rural education and nutrition and five school nutrition directors from rural districts representing a variety of geographic areas. All interviewees received a verbal description of the study, key topics for discussion, and instructions for participating, and gave their consent before commencing their interviews. Semi-structured interview guides were used to prompt the discussion. Questions focused on the challenges faced and progress made in rural and small school districts in implementing the USDA's healthier nutrition standards for school meals and snacks. Two researchers conducted each interview, which were held by telephone from May 16-27, 2016, averaged one hour in length, and covered the entire guide. The lead interviewer followed the guide, reading aloud instructions and questions. In some cases, follow-up questions were posed to probe for more details. Upon completion of the interviews, researchers reviewed recordings and notes taken during the sessions and used standard content analysis methods to identify common themes and areas of divergence across the interviews.

Focus groups

Participants in the focus groups represented 13 rural school districts (nine districts had 50 percent or more students eligible for free or reduced-price meals). One group was held in each of the following locations: Shreveport, Louisiana (four participants); Indianapolis (six participants); and San Antonio (five participants). Two districts had two staff members attend the focus group. Locations were chosen to represent a variety of regions. Participants were recruited from rural school districts in areas surrounding the focus group locations, typically within a two-hour drive. All focus group participants received an email invitation and signed a consent form before the discussion.

Two researchers facilitated the focus groups in person, using a semi-structured discussion guide. Participants received the key topics ahead of time. The questions focused on the status of school meal programs, including challenges faced by rural and small districts, solutions adopted, and policy recommendations to foster success. Focus groups took place during June and July 2016. Each group covered the topics in the guide and lasted an average of an hour and a half. One researcher took extensive notes and ensured that the conversation was recorded, while the other facilitated the discussion. In some cases, follow-up questions were used to probe for additional details.

All participants received a $25 incentive, and each district got a $50 gift card to reimburse for fuel costs. Upon completion of the focus groups, researchers reviewed the audio recording and notes and used standard content analysis methods to identify common themes and areas of divergence across the discussions. Researchers also employed NVivo 10 software to code the notes using three broad themes: challenges, strategies, and requests. Automatic coding was supplemented by hand, with researchers reviewing transcripts for additional themes. Researchers came to a consensus on recoded and subcoded themes.

Convening

From Sept. 11-13, 2016, approximately 50 leaders from the nutrition, education, government, industry, and nonprofit sectors traveled to St. Louis to develop strategies for leveraging assets and overcoming barriers facing school nutrition programs in rural communities. The Kids' Safe and Healthful Foods Project hosted the meeting, which included a series of facilitated, research-based discussions directed at identifying how schools and other sectors can work collaboratively to support the growing culture of health in small districts across the country.

Appendix B: Strengths and limitations of the study

When drawing conclusions from this research, both its strengths and limitations should be considered. The major strength of the study is its contribution to a small collection of research on the challenges to and facilitators of success for operating school nutrition programs in rural districts. The interviews and focus groups were intensive and allowed for in-depth examination of the issues under study. Further, the interview and focus group questions were revised as soon as novel information and findings emerged. Participants were diverse in terms of their experience, roles, and geographical locations, which allowed for varied perspectives on each topic.

The main limitation of the study was the use of self-reported data, which can contain bias from, for example, recall error (when people do not remember the past accurately), "recency" effects (an emphasis on the most recent issues experienced, even if they were not the most significant), and social desirability (in which participants feel pressured to take positions others will support). The researchers attempted to mitigate those biases by providing the discussion topics ahead of time so participants could reflect on possible answers and review any needed information, asking open-ended questions that avoided signaling desired responses, revising questions for clarity during the data collection process, and allowing enough time for data collection so participants would not feel rushed or pressured. As with all qualitative research, the format of this study emphasizes the detailed experiences and knowledge of the participants and is not intended to generalize a population. However, the interview participants and focus group locations were chosen to be as representative as possible of the geographic diversity of rural sites.

Endnotes

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