



FULL REPORT

LESSONS THAT MATTER

Strategies To Translate Pandemic-Era
School Meal Innovations to Common Practice

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Abbreviations

CACFP = Child and Adult Care Food Program

ERIC = Expert Recommendations for Implementing Change

NSLP = National School Lunch Program

QSA = Qualitative secondary analysis

SBP = School Breakfast Program

SFSP = Summer Food Service Program

SSO = Seamless Summer Option

USDA = United States Department of Agriculture

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INTRODUCTION

It is well-documented that school meal programs reduce food insecurity and improve diet quality and academic performance among children from food-insecure and households with low-income by providing consistent, nutritious, and balanced meals.¹ Meals are available to all children and those from low-income households may qualify for free or reduced-price meals. School meal programs operate in school through the National School Lunch (NSLP) Program, School Breakfast Program (SBP), Child and Adult Care Food Program (CACFP) and also provide meals during the summer months through the NSLP Seamless Summer Option (SSO) or Summer Food Service Program (SFSP). During school closures resulting from the COVID-19 pandemic, school meal programs across the country dramatically expanded their efforts to mitigate child food insecurity and offer consistent and nutritious meals to families. To expand program reach while mitigating virus spread, the [H.R. 6201 Families First Coronavirus Response Act](#) was passed permitting the USDA to issue a series of waiver flexibilities for child nutrition programs.

In an effort to broadly understand and document implementation innovations during the pandemic, a group of researchers, anti-hunger non-profit

organizations, and advocacy groups formed an ad hoc COVID-19 School Nutrition Implications Working Group (funded by the [Robert Wood Johnson Foundation's Healthy Eating Research](#) and the Center for Disease Control's [Nutrition and Obesity Policy Research and Evaluation Network](#)), for which Share Our Strength is a key partner.³ Throughout the 2020 pandemic response, researchers belonging to this group collected qualitative data from local sponsor staff regarding their experiences implementing the programs and using the waiver flexibilities during the pandemic. Researchers employed a variety of complementary methods to ensure policy relevance and reduce data collection burden, such as developing [a shared "question bank" for semi-structured interviews with school food directors](#).

The innovations stemming from the COVID-19 pandemic have been well-described in the context of the early months of the pandemic by a growing body of literature.⁴⁻⁸ These innovations could reshape meal program operations for future periods of school closures, particularly summer, when meal participation drops and food insecurity rises, but only if they are well-understood and inform future policy and practice context.

Brief Description of the Impact of Waiver Flexibilities

Under these waivers, local sponsors (organizations that administer school meal programs, including public school districts, non-public private schools, summer sponsors, community organizations, and others), adapted and innovated rapidly to meet their community's unique needs. Innovations in meal service went beyond where, how, and to whom meals are served (i.e., community sites/bus routes, in bulk/without onsite consumption, and to parents without a child present) and included the ways in which program leaders and staff communicated and executed waivers, how community organizations were leveraged, and how financial and operational decisions were made.² The waivers also allowed meals to be served at no cost to all children. While the waivers were temporary, it is likely that the innovations they allowed for have permanently reshaped school meal program operations, particularly for future periods of school closures (such as summer months or future national disasters), when meal participation drops and food insecurity rises.



OBJECTIVE

We describe a qualitative secondary analysis of semi-structured interviews conducted with school meal program staff (primarily public and charter school district nutrition directors) in North Carolina and Maryland during COVID-19-related school closures. Primary analyses of these data are described elsewhere, including highlighting factors that hindered or supported program operations.^{9, 10}

We build on these primary studies, focusing on identifying strategies to translate COVID-19-related innovations into recommendations and practice guidelines to both improve and

streamline traditional school meal service and improve operations during future school closures (either planned, such as summers or unplanned, such as natural disasters). To further strengthen our interpretation of findings, we mapped our practice recommendations onto the frequently-cited Expert Recommendations for Implementing Change (ERIC) strategies.¹¹ Lastly, while our focus is on informing future practice, we also add to the body of evidence on school meal program implementation during COVID-19 by aligning and comparing our findings to those from other qualitative studies conducted over the similar time period.⁴⁻⁸

METHODS

Primary Studies

The data presented in this report were collected from two studies conducted between April and September 2020. Semi-structured interviews were conducted with school nutrition directors, site supervisors, and cafeteria managers in North Carolina (n=23) and Maryland (n=17). The North Carolina participants were all school nutrition directors (21 public, 2 charter), and represented all eight education districts defined by North Carolina Department of Public Instruction. Most (74%) represented rural counties, 17% were from suburban/town counties, and 9% from counties with city designations according to the [National Center for Education Statistics locale classifications](#). The Maryland participants were food service directors (n=12), area supervisors (n=3), and cafeteria managers (n=2), and represented 4 out of the 5 regions of the state. A little more than half (53%) were from rural counties, while the rest (47%) were from suburban/town counties. For both studies, semi-structured interviews were conducted via web platform. While interview guides varied across the two studies, both drew items from the aforementioned question bank and thus, focused on similar concepts. Descriptions of the primary studies are in Appendix A and the interview guides are in Appendix B.

Qualitative Secondary Analysis

For this report, we conducted a qualitative secondary analysis (QSA) on a portion of data from these two studies. QSA is a unique but under-utilized method of re-examining qualitative data with a related but distinct research question. By combining data previously collected from two separate states, we reduced stakeholder burden while increasing the potential policy and practice relevance of our findings. We strictly adhered to prior recommendations regarding ethics and rigor

(e.g., including members of the primary study teams to provide necessary history and context during analysis, systematically ascertaining and documenting how datasets “fit” together, and noting challenges and limitations).¹²⁻¹⁵

To create a combined dataset from the two studies, we created a “data crosswalk” to identify concepts that overlapped across the two datasets, linked those concepts to coded excerpts in the primary datasets, then built a codebook that unified the two datasets and focused on identifying innovations with the potential to inform future policy or practice. Primary datasets were uploaded into Dedoose Version 9.0.17, and two coders (one from each primary study team) applied secondary codes to relevant excerpts. Our coding approach was pragmatic and phenomenological, weaving the directors’ report of their experiences within the real-world narrative of school meal program implementation over the COVID-19 period.^{15, 16} We dually prioritized constructing themes or patterns across the two states as well as eliciting examples of innovations. To ensure methodological rigor, we maintained a detailed audit trail of the coding process, created frequent memos, and met regularly as a study team.¹⁷

To link themes and examples to actionable strategies in order to inform policy and practice guidelines beyond the pandemic period, we mapped our findings onto the ERIC strategies. ERIC is an existing resource that describes 73 discrete implementation strategies intended to improve our ability to identify, select, and tailor implementation strategies to overcome specific contextual barriers.¹¹ The strategies have been vetted through a community of researchers and practitioners with expertise in implementing innovations within complex settings and thus, are helpful in making recommendations for future school meal program implementation.

RESULTS

We iteratively distilled initial findings into five categories for reporting: **(1)** communication across multiple stakeholder levels, **(2)** prioritizing needs of staff, the “unsung heroes”, **(3)** partnerships, **(4)** preparedness and infrastructure, and **(5)** financial structures. We describe the main findings within each category, offer supporting quotes, then provide ERIC strategies and implementation guidance. We also provide a succinct list of federal policy recommendations to align with our practice recommendations and perspectives of our stakeholders.

Communication across multiple stakeholder levels

State administrators and directors. Given the evolving policy situation, state administrators and district leaders created centralized platforms (e.g., town halls, webinars) to disseminate information and communicate regularly.

“ I do think there’s been more conversation [between directors and the state agency], and I really like that...I hope that continues because there’s never anything bad that comes from talking out what you’re doing with somebody else, and having a conversation...That’s a good thing. Building relationships is a good thing. ”

—Director, North Carolina

Many directors found the accessibility of other directors across the state through these centralized platforms helpful, as it enabled them to, as a Maryland director stated, “*kind of bounce ideas off each other and help each other out with how we’re doing things, how they were doing*

things and kind of combine those efforts.”

Participants across levels appreciated that leaders were more accessible and supportive; however, it was often frustrating when the information provided was not always helpful or timely, due mostly to the constantly changing policies at the federal level.

“ There definitely needs to be more, ‘This is what we know, this is when we’re going to know the next part, or why we don’t know this yet. We will let you know by...’ They need to have... if not the answers, at least to know when they can expect an answer so they can move on. Even if there isn’t certainty. ”

—Area Supervisor, Maryland

Meal service staff. Many directors also described increased communication with staff (e.g., weekly all staff meetings, emails/calls, site visits) as protocols and procedures constantly changed. This improved relationships, creating what one Maryland director called a ‘*we’re all in this together and we’ll figure it out as we go*’ mentality, and empowered staff to offer ideas to overcome local operations challenges.

“ The first two weeks, we did a debriefing every afternoon, to try to figure out where the issues were, and how we’re going to handle them the next day, the following days. We’ve continued to do that... I always set a weekly staff meeting. Now, we’re doing at least one or two a week and then doing staff meetings in between, to have more communication and have more people inputting their ideas. ”

—Area Supervisor, Maryland

Families. Participants described various methods to advertise and provide operational updates to families. Directors often reported that they did not advertise their programs prior to the pandemic because there was not a need or they lacked resources or skills. The constant changes in the early pandemic months necessitated communication with families via whatever conduit possible (e.g., social media, word of mouth, website). Some specific strategies included:

1. working through other organizations and/or local sponsors who worked with the same families during summer and were more accustomed to advertising;

“ We used some of the people we worked with on the summer food service programs in the past...they know where the kids are that need the meals...We were communicating directly with them via e-mail. We'd say, 'Okay, this is where we're going to be, and these are the times.' Then they would...let the people in their community know... ”

—Director, Maryland



2. leveraging other staff employed by their school districts such as social workers and communications department staff;

“ ...Social workers, they all know where these kiddos are. So to keep them out of the loop is crazy. Between the social workers, our equity team, the bus drivers, they know where these kiddos are, and just the data, we decided where our first 20 sites were gonna be. Then, what happened was we started getting emails from parents, social workers, community partners. 'Hey, listen. We have a lot of kids in this location. You're not reaching them.' So what we did the first go around is we put all of those folks, those sites on a list and that's where we did 500 boxes. ”

—Director, North Carolina

3. updating websites and using their districts' automatic/robocall systems and local media.

While active strategies (e.g., calls to individual families from social workers) were more time intensive than passive strategies (e.g., website updates), they enabled opportunities for family feedback on site placement, menus, etc., which could streamline operations and reach more students. Despite these increased efforts, there were still challenges with helping families access the program, as well as concerns that the positive attention paid to the program during the pandemic would fade. Several participants noted the need for better communication infrastructure in the future to continue to share information and recruit new families, particularly when school is not in session. As one area supervisor from Maryland stated,

“you can't really advertise it too much.”

Recommended Implementation Strategies and Future Research

Findings demonstrate that while imperfect, increased communication during pandemic operations improved relationships across levels. We identified four ERIC strategies to sustain frequent and better-quality communication across levels beyond the pandemic, and to build momentum for improved marketing efforts toward families. These strategies align with findings from other studies suggesting the value of regular statewide calls⁸ and centralized, tailored technical assistance.⁴ In terms of reaching families while our data suggest that program operators were more

creative and comprehensive in their efforts to reach families, we could not determine whether their efforts reached families or what individuals were involved. Other studies conducted in the early pandemic period reinforce that communication with families was challenging and inadequate,^{5, 6, 18} which has been a historical challenge for school meal programs during out of school times.^{19, 20} Future research is needed to investigate ways to leverage existing local communication and marketing resources to develop and distribute program information, obtain family feedback, and identify strategies to increase internal capacity for communication with families.

| ERIC STRATEGY | GUIDANCE FOR SCHOOL MEAL PROGRAMS |
|---|---|
| 1. Create a learning collaborative and/or centralize technical assistance | Continue regular calls or town halls with state partners and directors to facilitate a collaborative learning environment to share ideas and improve operations during “normal” times and/or create a consistent, but tailorable, technical assistance model from state leaders to all sites. |
| 2. Organize implementation team meetings | Convene school meal program staff, such as meal service staff, cafeteria managers, and directors, frequently (weekly or bi-weekly), and ensure opportunities for team building, to troubleshoot local challenges, reflect on lessons learned, and support mutual learning <i>[overlaps with Staffing category]</i> . |
| 3. Develop and distribute educational materials | Develop multi-pronged marketing strategies (e.g., social media, mailbox flyers) that are culturally acceptable and at an appropriate reading level. This may include partnering with others in the school district or individual schools, such as public information officers, social workers, teachers, principals, etc. to assist with development and/or distribution. |
| 4. Obtain and use family feedback | Enable channels (e.g., social media, public forums) to formally acquire parental feedback on meal delivery, site placement, meal times, and menus, and to frequently assess family-level barriers. |



Prioritizing needs of staff, the “Unsung Heroes”

Participants highlighted the important role of meal service staff, often described as “unsung heroes,” who demonstrated adaptability, flexibility, and persistence in the face of many obstacles. Staff “*became whatever you wanted them to be,*” (Director, North Carolina), took on new roles and acquired new skills, which earned them recognition and appreciation from other school and district personnel.

“ I think the impact on our staff has been great, just seeing that self-worth, and that they truly were the hero on the line. I think that’s going to impact us moving forward and people are going to maybe treat the staff more respectfully. Not that they weren’t respectful, but I think they’re going to be in a different light moving forward than where they were prior to COVID... their piece of the bigger pie of a whole school system, I think is definitely valued and visible and more prominent than it’s ever been. ”

—Director, Maryland

The increased involvement of staff in decision-making (as described in the above Communications section) not only took pressure off of the director and led to more efficient operations, but also made staff feel more invested in their role and daily responsibilities, and strengthened bonds across staff members.

“ I’m really proud of my staff for thinking outside of the box while I was more focused on making sure the sites operated. And they thought of new ways to make things more efficient at their individual sites. So, while the sites ran all very similar, each site came up with their own unique way to do things. ”

—Director, Maryland

“ People can get in a rut, they like their places and the way they do things. I think by having to work with different people in the district, it’s taught them that there are other ways of doing things. I think it’s built some comradery between them. ”

—Director, North Carolina

Directors acknowledged the importance of the psychological and physical safety of their staff, and prioritized removing as many barriers as possible to make sure staff were “comfortable coming into work” (Maryland Director). While many directors experienced staffing shortages (e.g., due to COVID-19-related fears or paid leave), directors took various actions to incentivize staff to work while maintaining safety: offering childcare on site, providing bonus or overtime pay, rearranging work spaces to allow for social distancing, holding team building activities, or changing shift schedules. Directors perceived that these accommodations increased staff morale, and had additional benefits such as allowing staff to gain new skills, work with new team members, and take on new leadership roles.

“ People... received [more one on one training] during this time. A specific example is a lady that had been preparing fruit, she started cooking vegetables because nobody else was there to do it. I saw people really blossom. It taught me I’m going to have to work a little harder with managers and say, ‘Don’t just delegate to one area. Work with that person one on one and cross-train,’ and get them working as a group. ”

—Director, North Carolina

As one director pointed out, the pandemic taught them the importance of strengthening relationships with staff and appreciating the role of staff. This is important to acknowledge year round so that in times of crisis, miscommunication between staff and leadership does not become an obstacle to operations.

“ We found that we had some communication issues out of our office to our staff [prior to COVID-19], which we worked on fixing. Information was not being shared quickly enough....[Now], I always set a weekly staff meeting, then doing meetings in between, to have more communication and have more people inputting their ideas. The key thing was, we had staff out in these schools that we thought we were communicating with, and they were finding out that they really were not being communicated in a timely manner. That was key. Now we go back and say, ‘Okay, this is what you do every day.’ ”

—Director, Maryland

Recommended Implementation Strategies

Our findings align well with other studies from the early pandemic period that staff dedication and commitment to feeding children was unparalleled, and that the stigma associated with the program was reduced. While the pandemic shone new light on the important role of meal service staff, staff recruitment and retention remains a key challenge and appreciation for the program has waned.²¹ Thus, we identified three strategies to prioritize staff needs and legitimize their role, including revising professional roles. Additionally, our study participants identified clear advantages of more engagement of staff in decision-making, suggesting the value

of organized, regular implementation team meetings. Finally, altering incentive structures to enable and motivate staff to work and providing disaster-specific training²² can also help programs be more prepared for future emergencies.^{4, 5, 18}

An additional strategy that is not directly aligned with any in the ERIC compilation is to generate public recognition campaigns through local media channels to continue to uplift the voices of directors and staff. This is important not only for the morale of current staff, but to recruit new hires into a profession where they will feel valued and recognized for their important work feeding children.

| ERIC STRATEGY | GUIDANCE FOR SCHOOL MEAL PROGRAMS |
|--|---|
| 1. Revise professional roles | Engage existing staff members in re-assessing staff roles based on professional skills and interests, and re-design characteristics of meal service staff by adjusting salary, benefits, and opportunities for training and professional development (particularly related to emergency preparedness). |
| 2. Organize implementation team meetings | Convene school meal program staff, such as meal service staff, cafeteria managers, and directors, frequently (weekly or bi-weekly), and ensure opportunities for team building, to troubleshoot local challenges, reflect on lessons learned, and support mutual learning <i>[overlaps with Communication category]</i> . |
| 3. Alter incentive structures | Establish and document staff incentive structures both during the school year and during closure periods, including overtime pay and child care provision, in order to ensure coverage. |

Partnerships

The types of community partners (e.g., internal school district staff, community organizations, local volunteers) and the ways in which they were leveraged during pandemic meal service varied among directors, but for most directors the situation necessitated a type of teamwork that they were not accustomed to.

“ [The pandemic] also has taught me that teamwork is the best work. Departments that we normally wouldn’t think of teaming up with, that they became a vital part of feeding the kids.” ”

—Director, North Carolina

As stated in the Communications section, school district staff with existing relationships with students (e.g., social workers and bus drivers), helped to market the program and provided insight on site placements. These partnerships were often mutually beneficial—social workers could *“pick up food for the week, that gave them the opportunity to check in on students”* (Maryland Director) who were hard to get in contact with while schools were closed, and bus drivers could remain employed during school closures.

“ [The transportation director] had to come up with a whole new bus system, and keep in mind, transportation takes all summer to come up with these routes. She had two or three days to come up with a route that would not miss any student.. They came up with routes that would ensure they could feed every kid if that was needed. It was a really good team effort, and transportation really stepped up.” ”

—Director, North Carolina

In terms of partners outside the district, directors relied on local organizations such as churches and non-profits to acquire “one time” resources such as personal protective equipment, styrofoam/plastic packaging, funds for delivery vehicles, etc. Other partners enabled them to procure food (e.g., local farms), outsource preparation (e.g., restaurants or catering companies), and package bulk meals (e.g., working with vendors to develop heating instructions for frozen meals, outsourcing sealing and packaging), and develop safety protocols (e.g., health department). Many described the mutual benefits of these partnerships in terms of maintaining revenue streams and providing for the local community during the pandemic.

“ We went to our local orchard, we bought \$6,000 worth. We’re trying to feed our local people as well.” ”

—Director, Maryland

“ Once [restaurants] found out that the reimbursement rate that they could receive would be enough to at least keep some of their staff employed, it seemed like a win-win. And they were really tremendous. I mean, some of the things they presented were incredible. Quinoa with grilled chicken and roasted vegetables...catfish and polenta... strawberry banana breakfast breads...It’s just been incredible the types of things they’ve come up with...Just watching the sheer volume of the restaurant bringing in 1,000 pieces of homemade oat grain blueberry bread—why can’t we do that during the school year instead of buying frozen waffles? It may give us an opportunity to do more local but also more nutritionally balanced than the processed food we’re getting now. ”

—Director, North Carolina

The use of individual volunteers was inconsistent—some directors declined help from volunteers out of concern for exposing their staff to COVID-19 and/or not having time to train them, while others used them for help with distribution and communication during that “*oh my gosh, what are we going to do’ phase*” (Director, Maryland). Many directors stuck to those who were already part of their school district community rather than outside volunteers (e.g., National Guard volunteers offered by state leadership) to meet their needs.



“ We had challenges with Spanish-speaking families, we had bilingual facilitators coming to help. So that was really a great asset to us, our bilingual facilitators out there talking to families. ”

—Director, Maryland

Directors were hopeful that working with new partners, particularly those within their own school district, would bring about sustained appreciation and recognition of the value of the school nutrition department. Similar to the finding related to staff needs, directors felt this would have positive implications for funding and support from local entities, staff morale, and student participation. Some were wary, however, that enthusiasm for the program among new partners would wane post-pandemic.

Recommended Implementation Strategies

Sustaining valuable partnerships beyond the pandemic could both support the local economy and improve the quality and variety of school meals. We recommend formalizing mutually beneficial partnerships with local organizations through resource sharing agreements or coalitions, strategies also recommended by

other studies.^{6, 23} Such strategies can potentially streamline efforts and reduce resources needed to reach families.¹⁸ Additionally, strategies to ensure that nutrition directors and programs are valued and engaged in decision-making processes with school district personnel and across all levels, should be investigated.⁶

| ERIC STRATEGY | GUIDANCE FOR SCHOOL MEAL PROGRAMS |
|--|--|
| 1. Build a coalition | Cultivate mutually beneficial partnerships with local service organizations or other school district employees (e.g., social workers, transportation) that reach the same families, and align efforts in order to streamline services, share resources, and communicate. |
| 2. Develop resource sharing agreements | Formalize relationships with local suppliers, producers, vendors, caterers and restaurants that have resources needed to implement meal programs, in order to improve menu variety, use funds locally, and/or secure grants. |
| 3. Engage with executive boards | Promote involvement of school meal program leaders in governing structures such as school boards, local school health councils, and school district administrative teams, including periodic review of current and needed implementation processes. |

Preparedness and infrastructure

In coding content related to waivers, we identified best practices related to preparedness and infrastructure. For example, while directors acknowledged that they could not have operated or stayed financially solvent without the waivers, the lack of timely information from USDA and state agencies as the waivers were rolled out created more roadblocks than necessary. Directors were constantly concerned about the financial state of their program, which prevented them from making decisions that could improve operations, and suggested that future waivers “*blanket the state,*” with “*state agency and USDA meeting immediately, figure out what waivers they want and communicate that immediately, and not make counties go back and request a waiver*” (Maryland director). Additionally, waivers should account for the long-term financial impacts of short-term program changes.

“ [The government] needs to figure out how they’re going to keep these services alive until things get back to some type of normal. I’m not saying make us profitable again, I’m saying give us enough resources to keep things running without so many ridiculous rules that we can’t actually serve the people. ”

—Director, Maryland

In the early months of the pandemic, operational shifts sometimes necessitated infrastructure and resource changes, such as purchasing new freezers or sealing machines, purchasing food locally from new vendors, or centralizing operations to a few kitchens within the district. With the uncertainty of the waivers and skyrocketing food and supply costs, directors were creative and thrifty with these infrastructure changes, seeking to obtain grant funding, spend as little money as possible, and waste as little food as possible.

“ I had my employees go out to schools that had just received deliveries that were not a part of the 10 schools that were gonna operate, and bring all that food into our freezers in our central warehouse. So, we became the distribution center. So that I knew we were saving money and we weren’t spending. So we didn’t order any food products until we had just about exhausted everything that we had, counting our USDA commodity foods. ”

—Director, North Carolina

Many directors spoke about actions they had taken to be better prepared to quickly adapt operations should it be necessary in the future, such as creating lists of alternative vendors, documenting all operational changes, and recording trainings delivered to staff on new procedures. Several expressed the need for state and federal leadership to be more prepared and to enable more flexibility about future transitions to emergency or summer meal feeding.

“ ...We’ve got to learn the lessons from this situation. We’ve also got to learn from our mistakes, and we’ve got to get our local leaders, state leaders, national leaders to understand that when a disaster happens, it’s too late then. We need to have our plans and process in place. We need to make this a priority. We need to know that when this happens and you have loss of jobs, you have folks that are not- you can send them money, but you’ve got to be able to have a plan and a process to feed those hungry children. Because they can’t advocate for themselves, so we’ve got to have a plan and a process and a group of people that are advocating for our children every day, today, tomorrow. ”

—Director, North Carolina

Recommended Implementation Strategies

To ensure a swifter and less chaotic response during future disasters and/or planned periods of school closures, we identified three ERIC strategies for the USDA and Local Sponsors. Formal guidance from the USDA for emergency feeding could reduce the uncertainty and hassle of waivers, and enable more efficient adaptations by local sponsors. Formal commitments could be obtained by state agencies from operators to serve meals during emergencies. Such guidance must first come from Congress to permanently establish nationwide waiver authority for use during future emergencies.

Several other studies recommend such a strategy.^{4, 5, 18} Patten et al note that such commitments should be flexible based on the specific conditions of the emergency, and should include specific implementation guidance. Along with that, technical assistance and professional development is needed for staff and directors to be more prepared.^{4, 22} As COVID-19 operations subside and directors and state and federal agencies plan for future unplanned school closures, nutrition professionals should draw upon experts and best practices for risk reduction during disasters (e.g., Sendai’s Framework for Disaster Risk, as described by Patten et al). Finally, funds and technical support should be allocated to helping programs maintain structural upgrades that were enabled by the pandemic response but are deemed useful for future operations.

| ERIC STRATEGY | GUIDANCE FOR SCHOOL MEAL PROGRAMS |
|--|---|
| 1. Obtain formal commitments | Federal and state agencies create flexible written commitments to swiftly enable flexibilities during future disasters and periods of school closures. |
| 2. Develop an implementation blueprint | Federal and state agencies and local directors work together to develop and distribute a formal blueprint or protocol for future disasters and periods of school closures, including the goal of implementation, scope of change, time frame and milestones, and achievement metrics. This includes defining and describing the anticipated program changes (e.g., waivers), anticipating needs and challenges (e.g., volume of food needed, supply chain challenges), and identifying the stakeholders involved across levels. |
| 3. Change and/or maintain physical structure and equipment | Local directors assess whether existing structures and equipment can be maintained for future disasters or periods of school closures, and plan for additional infrastructure needs for various program changes (e.g., centralized meal distribution). |

Financial structures

In terms of the financial structure of the program, many directors felt that COVID-19 amplified the existing disconnect between federal and state leaders and local implementers. Directors felt like the decision makers had “a very unrealistic idea of what we do every day” (North Carolina Director) and needed to re-visit their priorities.

“ At the USDA and the state agency, the people that are making these decisions are not people that have an operational background. And so they’re...thinking, ‘This is possible.’ But they’ve never actually tried to make the things work that they’re telling us about. They need to talk to operators, people out here actually trying to make things work before they make these decisions. ”

—Director, Maryland

“ I would love for the decision makers, and the people controlling the purse strings to be with me on a Monday morning with me at breakfast, and see the kids lining up, because that’s the last meal that they had was Friday the week before, or after the summer. We literally increase our orders by 25 to 30, 35 percent more because we know kids are going to eat us out of house and home. I am so proud of what my folks do every day when I hear a child say, ‘Wow, I look forward to coming to school just to be able to have a meal.’ And that’s not a priority? ”

—Director, North Carolina



Directors also described a mismatch between the financial decisions made by leadership during normal operational periods and the supposed bottom line of the program, which is feeding hungry children. Amid the frustrations about the constantly changing waivers and lack of preparedness and communication from leadership, the prevailing sentiment was that operations under waiver flexibilities could and should pave the way for meals to be offered to any child free of charge.

“ USDA needs to understand and needs to realize that if you’d want to continue having our children as an expense instead of an investment, all you’re going to do is get in our way. Help us not have to fight what we’re having to deal with. Remember what we did during COVID, remember that afterwards, continue that same support. ”

—Director, North Carolina

It is important to note that funding decisions are determined by Congress and implemented by the USDA. [This resource](#) depicts the funding pathway from Congress to the cafeteria.

Directors provided many justifications, including that it could reduce stigma, eliminate school lunch debts, and expand reach (and thus, reimbursement amount) to areas in the district that were previously missed. Additionally, universally free meals would reduce operating costs and increase efficiency by eliminating “microscopic management and all the administrative money” (North Carolina director). At the end of the day, these directors felt that an investment in the program would be an investment in the well-being of children.



“ If you and I go to a business meeting at a restaurant and we have lunch, the IRS says as long as we conduct business after lunch, we can deduct that as a business expense. Well, a child’s job and their business is to learn. So why don’t we just...pay for the lunch? It uses the same logic they use for a business lunch. Students’ business is learning. They do it before and after lunch. That’s the kind of change I’d like to see. ”

—Director, Maryland

“ Our children are an investment, they’re not an expense, and I think that’s where we need to change our whole philosophy. Our children are not an expense. And I think that’s when a lot of our folks that are handling the money, is they see them as an expense. They’re an investment. They’re an asset, not a liability. ”

—Director, North Carolina

Recommended Implementation Strategies

Given the time frame of data collection for this study (in the early months of the pandemic response, when long-term planning was difficult), we do not have insight on the financial concerns of directors as waivers were extended or expired. However, the sentiments of directors on the need for revised financial structures and flexibility align with a prevailing theme within the emerging qualitative literature, which is that COVID-19 demonstrated the feasibility of an **altered financial structure that eliminates**

the administrative billing process and offers meals to all students at no cost, regardless of income status. Such a policy change would enable program operators to revise their own roles to focus more on food sourcing, menu development, and education and promotion. While our findings suggest improved relationships with state and federal agency leaders, we identified a unique strategy to improve leaders' understanding of local financial needs: to shadow school meal program directors and staff during everyday meal service.

| ERIC STRATEGY | GUIDANCE FOR SCHOOL MEAL PROGRAMS |
|--|---|
| 1. Alter incentive/ allowance structures and make billing easier | Devise responsive financial structures that enable local sponsors to adopt and implement programs during periods of school closures. This includes institutionalizing flexibilities and issuing waivers with longer timelines to acknowledge the necessary recovery period and allotting time to develop innovations. |
| 2. Revise professional roles | Allow directors to focus more on creating a nutritious and appealing product (meals) rather than administrative program components. |
| 3. Shadow other experts | Provide ways for state and federal leaders to observe and take part in every day local program operations to understand local funding needs. |

DISCUSSION

Similar to the rest of the emerging literature,^{4-8, 18, 23} we found that there was no one approach that worked best for meal service during the pandemic. It is clear that operations varied substantially between Local Sponsors based on a variety of factors, and that the flexibility allowed for by the waivers enabled Local Sponsors to best leverage what was available to them.

We highlighted 5 best practice categories throughout this report, and identified implementation strategies to prioritize in future research, policy advocacy, and practice. These strategies align with the [USDA's Nutrition Security Actions](#),²⁴ including:

- **Meaningful support:** providing nutrition support throughout all stages of life
- **Healthy food:** connecting all Americans to healthy, safe, affordable food
- **Collaborative action:** developing, translating, and enacting nutrition science through partnerships
- **Equitable systems:** prioritizing equity every step of the way

While qualitative data are not intended to be generalizable, our analysis of data across two states using similar data collection tools enables us to better translate findings to broad, actionable practice recommendations. The ERIC implementation strategies we identified could enable school meal programs to accomplish these recommendations. If well-implemented, these strategies could better connect children with healthy food, create collaborative action (e.g., equipping child nutrition operators with needed resources, empowering staff, and preparing for future emergencies), and encourage equitable systems (e.g., giving local operators a larger voice in operations, bringing together diverse partners). To carry

out these strategy recommendations, we need accompanying practical action steps to put them into practice amidst the current uncertain policy climate and ongoing operational challenges. Future efforts to develop these action steps can build from an existing foundation of research linking ERIC strategies to the specific contextual barriers they are designed to overcome.^{25, 26}

To align with the Nutrition Security Actions, such research should make equity a priority. A frequently employed framework to guide nutrition-related research is Dr. Shiriki Kumanyika's *Getting to Equity Framework*, which includes four components: increasing access, reducing deterrents, building community capacity, and increasing social and economic resources.²⁷ McLoughlin et al operationalized these components for school meal programs in 2020.¹⁸ When investigating and refining the ERIC strategies proposed here through barrier identification, we should apply this framework. For example, as noted in several recent studies^{5, 18} and recommended by the USDA Nutrition Security Action Report, strategies to inform and obtain feedback from families should reduce deterrents and bridge language barriers through inclusive language, diverse images, and culturally appropriate foods and recipes.

In addition to prioritizing equity, we need to elicit input from other school meal program stakeholders, including children and families and state agency leaders. This input is needed in developing action steps and honing in on strategies to address specific barriers that emerge. A national working group of stakeholders could work together to develop an implementation plan. We do not want to lose the opportunity to learn from the challenges of the early pandemic and put those lessons into action for the future.

PRACTICE AND POLICY RECOMMENDATIONS

Our findings have important implications for practice and policy. These recommendations are a valuable resource as the public health community has requested the dissemination of learnings from operating school meal programs during the COVID-19 pandemic. Understanding how school meal programs adapted to pandemic challenges is vital for informing policy, preparing for future emergencies, and maintaining financially viable programs.

Based on the findings from this study, we recommend the following key practices:

1. Increase communication with families to promote school meal programs—utilizing multiple avenues of communication.
2. Reassess staffing structures and roles, and provide incentives to retain staff and boost morale.
3. Cultivate relationships with a variety of school and non-school partners that work with families to streamline efforts, access resources, and better reach families.
4. Develop a formal blueprint for how to handle operations during unanticipated school closures and know ahead of time the type of infrastructure changes that will need to be made.
5. Flexible financial structures must be in place to allow school meal professionals the ability to implement necessary program changes and address challenges associated with the pandemic, as well as making the program easier to operate during typical times.

A full list of specific examples of practice recommendations can be found [here](#).

In terms of policy recommendations that enable ERIC strategy implementation and meet USDA's Nutrition Security Actions, our data suggests the need for state and federal policy makers to provide more financial and operational support to local sponsors to enable programs to operate more efficiently and reach more children. Directors were nearly unanimous in their request for better communication from federal and state leaders, as well as continued consideration of no-cost school meals for all.

While many of these implementation strategies can be promoted regardless of policy change at the federal level, the vast majority would be facilitated by federal agencies that through policy levers, could act to provide more funding and support, loosen implementation requirements, and increase program reach to food insecure children. There are two policy recommendations that would help with this during a future pandemic:

1. **Permanently establish child nutrition program waiver authority and other flexibilities during emergency situations.** State agencies and school meal professionals should know before a pandemic occurs what program requirements will be relaxed, that consistent options will be available nationwide, and be provided with a simple and streamlined process for waiver adoption. School meal professionals should be given as much flexibility as possible.
2. **Provide additional funding and flexible financial structures (such as universal free meal service) as soon as possible to ensure that school meal programs remain financially solvent.** This will help FNS Directors focus on feeding kids, and allow them to make the best, most efficient decisions related to reaching them.



Many of the learnings from this study can also inform policy recommendations to improve meal programs during a typical school year. These include:

1. **Make certain waiver flexibilities a permanent option during anticipated school closures (e.g., summer) to make it easier for children to access meals.** FNS Directors gained a lot of experience in how to best reach kids when they are not in school and made investments that facilitate this type of meal service. Allowing some of the COVID flexibilities, such as non-congregate meal service, to be options during other school closure periods will ensure that kids are still able to access needed meals.

2. **Increase access to no-cost, healthy school meals for all through both federal and state-level policies, such as expanding the Community Eligibility Provision or eliminating the reduced-price category, to streamline administrative processes and bring the benefits of school meals to more children.** There were many benefits to the universal free meal service implemented during the pandemic such as reduced operating costs, school lunch debt elimination, and reduced stigma that would improve program operations during a typical school year.

LIMITATIONS AND FUTURE DIRECTIONS

School meal program operations involve many stakeholders, and while our use of QSA methods expands our sampling frame, findings still represent only one perspective (school nutrition directors and supervisors/managers) from two states. Our data also does not capture the important perspective of families. These perspectives are needed in order to ensure the programs address family-level participation barriers. Our analysis was not conducted with specific attention to health equity. Future studies should prioritize understanding inequities in implementation of COVID-19 waivers across sponsors with various demographic characteristics (e.g, rurality, racial/ethnic makeup of children in catchment area) to refine best practices that prioritize more equitable program reach.

CONCLUSION AND NEXT STEPS

Our study serves as an important step toward providing pragmatic recommendations for implementation strategies that improve the impact of school meals programs and promote nutrition security. To strengthen the relevance and breadth of our recommendations, we are conducting a second set of semi-structured interviews with (1) state agency representatives from states in regions that have not yet been represented in COVID-era school meal program research and (2) nutrition directors within those states. These interviews will contribute new perspectives to our recommendations, and will enable us to examine changes in our concepts of interest over the first 2 years of the pandemic response in order to further refine our implementation and policy recommendations. It may also enable an understanding of the potential influence of state-specific policies or norms on program operations

As school meals programs continue to innovate in the face of an ever-uncertain policy climate, it is important that our practice and policy recommendations be responsive as well. This includes guidance on site-specific barriers, facilitators and costs of various implementation strategies. Additionally, empirical implementation research is needed to test which strategies (or combination of strategies) have the greatest impact on program reach and ultimately, child well-being.

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APPENDIX A: DESCRIPTION OF DATA FROM PRIMARY STUDIES

| | OBJECTIVES | PARTICIPANTS | INSTRUMENT DEVELOPMENT | DATA COLLECTION TIME PERIOD | QUALITATIVE DATA COLLECTION METHODS | DATA CODING AND ANALYSIS |
|---------------------------|--|---|---|---|---|--|
| North Carolina | Understand reach and implementation of school nutrition programs across North Carolina during COVID-19 | 23 food service directors (21 public, 2 charter) | Items adapted from repository intended to address policy-relevant concepts of interest | 05/27/20 to 08/12/20 All directors have a single interview | Semi-structured zoom video interviews | Hierarchical, two-phased consensus coding: initial excerpting using socio-ecological model; sub coding based on Consolidated Framework for Implementation Research Analysis: Across and between-SEM level analysis to identify unique and overlapping themes and make local, state, and federal recommendations |
| Maryland | Mixed methods RE-AIM analysis (reach, effectiveness, adoption, implementation, maintenance) of school meal service during COVID-19 | 12 food service directors, 5 site supervisors and cafeteria managers; 2 state leaders | Items adapted from repository intended to address policy-relevant concepts of interest; or, adapted to align with survey, with extensive input from partners (MSDE) | 07/01/20 to 09/28/20 Some directors have single interview, other have briefer interviews at two time points | Semi-structured phone interviews | Initial excerpting by categories of interest from the survey, organized hierarchically Analysis: Categories created that aligned with quantitative survey data in order to better understand directors' biggest challenges and facilitators |
| Secondary Analysis | Identify implementation innovations that can translate to best practices in order to expand program reach | All directors, site supervisors, and managers, excluded MD state leaders | — | | Aligned primary study data through data crosswalk and unifying codebook | Initial structural coding by “best practice” categories of interest to compile inventory, followed by process/action coding to identify processes for each practice. Analysis: team-based matrix coding to identify and most promising/ relevant practices and processes for further testing. |

APPENDIX B: INTERVIEW GUIDES

MARYLAND

Communication

First, I want to talk about communication.

- Tell me about the communication between you and leadership as decisions were being made and pandemic operations were implemented. What were the key priorities or concerns in your county and how were they communicated?
- What were the biggest challenges you faced related to communication with leadership?
- I assume you had to reduce operations when schools closed. Tell about your communication with families—was anything different than with usual school closures or summer?
*can you describe your observation of reach and impact on the community
- I know there is a lot of uncertainty about what is going to happen next school year. How can communication challenges be addressed as we transition to the school year?

Challenges and Innovations

Second, I want to talk about challenges that your program encountered during COVID-19, and how your program adapted or overcame them. I'm sure there are quite a lot, but I'm wondering if you can think of a few specific examples of the challenges your program had and how you overcame them. (*probes: procurement, preparation, distribution, staffing*)

- How were these challenges address? What resources/guidance helped you address them? (*probes: communication from leadership, guidance on websites, webinars, etc*)?
- On the survey, most respondents indicated that they did not need additional resources or assistance at their sites. Would you agree with that? (If so) how did that happen in your program? (*probes: coordination with Natl Guard, community support, volunteers, other \$\$ sources*)
- Did your program use any resources?

Okay, tell me about something innovative, or something that you have been most proud of, in terms of your program as a whole or at any specific sites (*probes: procurement, preparation, distribution, staffing*).

USDA Waivers

I want to talk about your experience with the USDA waivers.

- How much of what has been different about your food service during COVID-19 is related to the USDA waivers? Any additional thoughts on the process of using these waivers?
- How did you communicate waiver flexibilities with your program or agency staff? What questions arose from the waivers?
- How did you determine the operational changes that would take place as a result of the waiver flexibilities?

Summer

- How was your transition to summer meals?
- Where there any changes to the program? Where there any changes in meal participation rates from your students during the summer months? If so, why do you think participation changed?
- Did you have a reduction of number of sites during the summer? How was this communicated to the communities?
- Tell us about any communication you've received about pEBT from the state? Did this communication include information for school meal provisions?
- How was pEBT affected your program (probes: families asking, affect on participation, affect on site operations)

Financial Impact

I would like to know more about the financial impact the pandemic has had on your program.

- What additional expenses did you have for meal distribution during COVID-19. (e.g., extra cleaning supplies, masks, added janitorial hours and/or increased janitorial pay, transportation costs for mobile program, added staff costs, packaging costs). What resources did you use to help with these additional costs?
- Did you have a loss of revenue? How did the lost revenue affect your budget and what will be most helpful to your program's financial health in the short and long-term?
- What financial relief is needed in order support future program needs?

Future

Let's spend some time talking about the future of the program.

- What are your biggest concerns about the future of your program? (*Probes: Cost, Meeting Student Needs, Procurement/Distribution Challenges*)
 - › Immediate—back to school
 - › Long-term—when things get back to “normal”
- Tell us your plans for transitioning from what you've been doing now to the next phase. How prepared to you feel? What challenges do you anticipate?
- How are you planning to communicate future operational changes with your program staff? District administration? And the community?
- What are you optimistic about, based on what you have you learned? What suggestions do you have to improve any part of the current process (procurement, preparation, distribution), not necessarily just during emergencies?

NORTH CAROLINA

Pre-COVID and Site Selection

I want to start by just seeing how things are going with your program. Tell me a little about what you're hearing and seeing.

Okay, let's back up a bit. I want to talk about what was "normal" with your program before all of this happened so that we can understand just how much has changed. Tell me about how your program operated before all this happening. Which programs were you operating before? (e.g., National School Lunch Program, School Breakfast Program, Summer Food Service Program, At-Risk Afterschool Meals Program, Seamless Summer Option). And which ones have you been operating during the pandemic?

1. In terms of food sources, preparation and distribution, what is different with your program than what you would usually do.
 - a. Sources: order from distributor, local products, cost of food/supplies
 - b. Preparation: food quality/nutritional value, scratch cooking
 - c. Distribution: delivery methods, types of meals (breakfast, lunch, snack, supper), days per week meals provided, number of meals distributed at once
2. Thinking back to when schools first closed, tell me about the decision-making process for selecting distribution methods and sites. What factors did you consider?
 - a. Factors: Staff, experience with summer, safety, "readiness" or preparedness, equity, ability to use school buses to transport meals
 - b. School district leadership involvement

Processes/Challenges during COVID

Okay so you've told me a little bit about how the food sources, preparation, and distribution have been different than they used to. Is there anything else that comes to mind about how things are different now than they were before?

1. Waivers: How much of what has been different, like what you described before, is related to the USDA waivers? Any additional thoughts on the process of using these waivers?
2. Programs: Are there other non-USDA programs in your district/area that are also feeding kids?
 - a. Which programs, who is running, just during pandemic, how it affects meals
3. Staff. What does your staffing/volunteer situation like right now, compared to how it was before?
 - a. Fewer staff willing/able to come in, fewer staff asked to come in, staff being asked to do different kinds of work, etc.

- b. Communication between sponsor and site staff/volunteers
 - c. Who is staffing meal distribution (child nutrition staff, volunteers, principals, other school staff, bus drivers, etc.)
4. Longevity/Need: What are the things you've been thinking about in terms of keeping your program going, both as the pandemic continues as we return to normalcy?
 - a. Funding, needs from local or state govt
 - b. Biggest concerns for meeting needs of students
 - c. More children in need of free meals with rising unemployment
 5. Role of Partners
 - a. New partners
 - b. Existing partners taking on new roles

Tell me about some of the biggest challenges you've faced, and the strategies you have used to address them as the pandemic has evolved.

Tell me some things that you or your program have done that you are most proud of, or something impressive happening at any of your sites.

Future Practice

I know it has been tough to think too far into the future, but let's try. Is there anything about the process during the pandemic that could be useful to meet the needs of students when things are normal again?

1. What have you learned about how we can be better prepared for future emergency school closures (as a nation, state, or district)? Is anyone in your district taking action?
2. What have you learned that can help us improve any part of the current process (procurement, preparation, distribution), not necessarily just during emergencies?

Imagine that 10 years from now, we are faced with another disaster like COVID-19. What would you say **MUST CHANGE** in the next 10 years to put your school foodservice program in the best position to respond? Dream big.

Summary

Okay, those are all my questions for you. [If time, sum up what was discussed]. Is there anything about this process that did not come up that you think is important for us to know?