

BARRIERS AND FACILITATIVE PRACTICES IDENTIFIED BY SCHOOL NUTRITION LEADERS DURING THE COVID-19 PANDEMIC

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ABSTRACT

This study investigated barriers and facilitative practices impacting school foodservice meal preparation and distribution during the initial year of the COVID-19 pandemic. Seven self-operated non-contract service school foodservice leaders were interviewed. Participant responses were coded and analyzed, categorized, and themes identified. Barriers identified included: purchasing issues, communication issues, staffing, and equipment needs. Scarcity of ready-made products was the main barrier identified. Facilitative practices included: cooperation with governmental agencies, school districts, and the community, transparency with staff, USDA waivers, and departmental mission focus. Transparent and clear communication with staff was an important facilitative practice. The research identified no ready to use emergency preparedness plans related to pandemic response.

Keywords: Covid-19, pandemic barriers, pandemic practices, remote school feeding

INTRODUCTION

The initial response to the COVID-19 pandemic included temporary shutdowns of most schools in the United States in March of 2020, resulting in students and staff transitioning to virtual education (Education Week, 2020). This transition spotlighted the issue of food insecurity and a continuing need for meal distribution. It was estimated one-third to almost one-half of households with children were food insecure during the COVID-19 pandemic (No Kid Hungry, 2020; Schanzenback, & Pitts 2020). School meals provided through the National School Lunch Program (NSLP) and the School Breakfast Program (SBP) have a vital role in reducing food insecurity in the United States (Kinsey et. al, 2020).

The NSLP served over 30 million children in 2016. The NSLP and SBP is delivered through public and non-profit private schools. The oversight of the programs at the federal level is through the USDA. At the state level, the program is administered by state agencies who operate the NSLP and SBP through the schools. The schools receive cash subsidies and USDA foods from the USDA for each reimbursable meal they serve. For a meal to be reimbursable it must follow specific meal requirements (USDAa, 2017; USDAb, 2017).

The United States Department of Agriculture (USDA) recognized the necessity to continue providing meals to the country's children. This resulted in multiple waivers being granted for multiple regulations related to USDA school nutrition programs. Waiver impacted regulations included requirements for meals to be served to students in group settings, meals distributed within certain time periods, and meals distributed to families only if the student was present at time of pick-up (USDAa, n.d.). The waivers allowed for remote meal service which resulted in creating innovative methods to provide meals to students (Kinsey et al., 2020). Schools offered "drive-thru"

services, developed pick-up sites for meals, and delivery directly to students' homes (Patten et al., 2021).

Additional USDA waivers allowed for transition from the NSLP to the Summer Food Service Program (SFSP). This allowance provided school foodservice directors added flexibility (USDAa, n.d.). The meal composition requirements of the NSLP are more specific than those of the SFSP. Unique challenges in terms of ordering, purchasing, and receiving were issues for many school foodservice's ability to meet the NSLP meal guidelines (USDAa, n.d.). Waiving certain meal pattern requirements allowed school foodservice operators to create meals and menus based on food they could procure. Highly-sought-after food products included those that were prepackaged, needed minimal on-site packaging, and could be transported easily (Bulsaka, 2020).

The purpose of this study was to identify barriers and facilitative practices impacting school meal preparation and meal distribution during the initial school closures and several months into the COVID-19 pandemic as identified by school foodservice directors (SFSD)s. This information is useful in the planning and development of emergency response plans and in daily school foodservice operations.

METHODS

This was a qualitative study. A convenience, purposive sample of seven SFSDs participated in semi-structured interviews conducted between December 2020 and March 2021. The SFSDs oversaw small to mid-sized self-operated school foodservice district operations. School enrollments ranged from 670 students to 12,500 students. Institutional Review Board approval was obtained through the researchers' university.

Interview questions were developed by the researchers based on the research questions of the study. Interview questions were reviewed by a foodservice management professional. The interview protocol consisted of three introductory questions and thirteen open-ended questions designed to investigate departmental operations, meal preparation, emergency preparedness, and the distribution of student meals during the COVID-19 pandemic (Table 1).

Six SFSDs from Kentucky and one from Kansas completed an audio-recorded semi-structured 20-30 minute phone interview. After each interview, the researchers took field notes about the encounter. All audio recordings were transcribed, and transcriptions were reviewed for accuracy.

Three researchers individually analyzed each transcript, performed an initial analysis and preliminary coding of the responses obtained during the interview. Following the procedure outlined by Merriweather, Smith, and Walsh (2014) codes were subsequently compiled into themes and sub-themes. The three researchers, after individually coding and categorizing discussed their findings, agreed upon overarching themes and sub-themes. Once themes and sub-

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Table 1. Interview Guide Questions

Question #1	What is your name and job title?
Question #2	What are some of your responsibilities every day?
Question #3	What do you like about your job?
Question #4	How has the COVID-19 pandemic affected your foodservice operation?
Question #5	When schools closed in March, how did you modify your foodservice operations? (... how did foodservice production affect the ability to distribute meals?) <ol style="list-style-type: none"> Purchasing? Staffing?
Question #6	How have you been distributing meals to students that are doing schoolwork virtually (delivery, pickup, etc....)? <ol style="list-style-type: none"> How has this transformed over time?
Question #7	How often are you distributing meals?
Question #8	What would you say have been some of the biggest barriers that have slowed or inhibited the distribution of meals to students during this time?
Question #9	Prior to schools closing in March, did you have a disaster management plan in place? If so, what types of disasters did you have plans for?
Question #10	Have there been any barriers to meeting USDA requirements?
Question #11	How has the USDA provided support to your district during COVID-19?
Question #12	How has the (state of the school district) Department of Education supported your foodservice operations during COVID-19?
Question #13	Have you implemented any policies or quality improvement procedures to prevent issues from arising when distributing student meals? <ol style="list-style-type: none"> If you could go back to the beginning of COVID-19 and could anticipate the challenges faced, what would you have done differently? What would your advice be to other directors in your field? Are there any policies/procedures that have been put in place for future "disaster management?"
Question #14	Are there any food/products that you would like to be available to you that would improve your ability to provide meals to your students?
Question #15	What has been the hardest part of your job during the COVID-19 pandemic?
Question #16	Is there anything you would like to add about what you have learned during your adaptation to your meal production and delivery during the pandemic?

themes were agreed upon, the researchers contacted two participants by phone. The two participants were informed of the themes and subthemes as well as the researchers' interpretations of the results. The participants agreed with the researchers' findings.

RESULTS AND DISCUSSION

The COVID-19 pandemic response resulted in changes and additional requirements in the preparation and delivery of school foodservice meals to the children the schools served. Identified were barriers (Table 2) and facilitative practices (Table 3) to meal preparation and delivery as well as a lack of emergency preparedness plans useful to the response to the COVID-19 pandemic. Barriers identified included: purchasing issues, communication issues, staffing, and equipment needs. Facilitative practices included: cooperation between governmental entities, other school districts, and the community, transparency with staff, USDA waivers, and departmental missions.

Barriers

Purchasing

Six participants stated the lack of available pre-packaged menu items was a barrier to distributing meals during the pandemic. This barrier was described by Foodservice Director (FSD) A, "...it was hard to find prepackaged items because they were in such high demand."- FSD B indicated some items were not an option, "We have been on a search for pre-packaged, individually wrapped vegetables ... Having those portioned and pre-packaged would make the packing process much easier and more efficient." Patten, et al. (2020) noted a similar barrier through their qualitative study of 34 School Foodservice leaders. The participants indicated having difficulty procuring food and paper items.

Communication issues

Kenney (2021) noted poor communication between multiple levels of government and changing guidance as issues SFSDs identified that effected operational parameters. Likewise, three participants mentioned communication as a barrier. This was stated most often as a lack of transparency or prior notice from USDA. This barrier was described by FSD F, "The waivers have been tremendously helpful. But ...you have plans in place, and then there's a waiver...initially I do feel like there was a bit of a barrier in getting information from them (USDA) to us."

Lack of communication was also an issue within the district itself. This was illustrated by FSD E, "...they (school administration) feel like they have to have their hands so tightly wrapped around every single thing and are not necessarily dependent on their 'experts in house.'"

FSD G discussed the need to begin communicating the upcoming plans for the next school year, "We need to be thinking about what next year looks like. If I'm going to have to tell my families' 'Hey you're going to have to start paying for meals again if you don't qualify' ... That's a conversation we need to start having."

Staffing

Four participants identified labor issues as a barrier related to the pandemic, and their employees' fear of the unknown impacted operations. FSD F stated, "Staffing has been an issue I have never experienced before ... staff older in age don't want to risk exposure or potentially expose their spouse." FSD G noted that changes in menus and delivery changed staff's daily schedule, which resulted in budgetary complications as well "... (we) had to think about the safety of our staff ... and we also had to honor our staff's contract time. We

Table 2. Meal Preparation and Distribution Barriers identified by School Foodservice Directors

Identified Barriers	School Foodservice Director quotes
Purchasing	Foodservice Director A: "Obviously it was hard to find prepackaged items because they were in such high demand so that was tough...There were some issues with obtaining supplies such as packaging for food, to-go boxes, etc."
	Foodservice Director B: "Yes, we have been on a search for pre-packaged, individually wrapped vegetables that we can deliver to students. Having those portioned and pre-packaged would make the packing process much easier and more efficient."
	Foodservice Director E: "The issue for a lot of other school districts, they did not have the culinary capacity to do that (prepare and package foods for delivery), and they were dependent on convenience items in order to fulfill requirements"
	Foodservice Director G "I think one of the biggest things that every school district saw was the shortage around individually wrapped items."
	Foodservice Director E "We can't get the same type of glove and it's not that the inconsistency is bad, but ordering is more difficult. And the price of gloves is double."
Communication Issues	Foodservice Director F "The waivers have been tremendously helpful. But it's ironic because it's almost like you have plans in place, and then there's a waiver...but it was nice to eventually have them ... initially I do feel like there was a bit of a barrier in getting information from them to us."
	Foodservice Director E "People wouldn't listen to what we needed. Our sales were way down, involvement, number of meals served, the amount of people we were able to reach, how we could serve our community ... they (school administration) feel like they have to have their hands so tightly wrapped around every single thing and are not necessarily dependent on their 'experts in house'."
	Foodservice Director G "We need to be thinking about what next year looks like. If I'm going to have to tell my families 'Hey you're going to have to start paying for meals again if you don't qualify versus everyone getting fed for free this year. That's a conversation we need to start having."
	Foodservice Director A "A lot of our staff too was also high risk so it was scary to have them working during this time when we had no idea what could happen."
Staffing	Foodservice Director D "We were actually short-staffed in the beginning of all of this due to employees not wanting to come back to work because of COVID. So, finding help was one of the biggest barriers we faced in the beginning."
	Foodservice Director F "Staffing has been an issue I have never experienced before but this year it presented as an issue ... staff older in age don't want to risk exposure or potentially expose their spouse."
	Foodservice Director G "... now all of a sudden, (we) had to think about the safety of our staff ... and we also have to honor our staff's contract time. We don't have the space in our budget now to pay people to stay extra."
	Foodservice Director C "It is just a piece of equipment that will be able to seal packed meals that we have made. This equipment will make things much easier when transporting it to students. So, I am hoping that is something that we will be able to get soon."
Equipment	Foodservice Director G "We don't have enough storage space. When we have kids in the building, we have to obviously have the food we are going to serve to them. And then doing the meal pick up bags ... we use a lot of freezer items, and our freezers are only so big so when you've got both of those things going on, we don't have enough space in our freezer."
	Foodservice Director E "The issue for ... school districts, they did not have the culinary capacity to do that, and they were dependent on convenience items ... for us it was the aluminum containers or plastic bags."
	Foodservice Director F "We didn't have the equipment to prepare that amount of food."

don't have the space in our budget now to pay people to stay extra." Other research investigating school foodservice during COVID-19 also identified safety of the school foodservice staff as a concern of school foodservice leaders (Kenney et al., 2021; Patten et al., 2020).

Equipment

Four participants discussed equipment issues as a barrier. FSD C shared their equipment need: "It is just a piece of equipment that will [enable] us to seal packed meals... This equipment will make things much easier when transporting it to students." FSD G stated, "We don't have enough storage space ... our freezers are only so big."

FSD E provided added insight: "The issue for ... school districts, they did not have the culinary capacity to do that, and they were dependent on convenience items ... for us it was the aluminum containers or plastic bags."

Facilitative practices

There were also common themes that were identified as facilitative practices the SFSDs used as they navigated their way through meal production and delivery during the pandemic response.

Cooperation with governmental agencies, school districts and the community

FSD B discussed the importance of reaching out to other school districts, "One of the biggest pros ... was that we were able to partner up with other school districts and help each other." FSD B stated, "The Department of Education has been very helpful in the transition from The National School Lunch Program to the summer feeding program." FSD C added, "we were given USDA dollars that we have been able to use for processing and produce." FSD D sought assistance due to staffing shortages: "finding help was one of the biggest barriers...It got to a point where I was asking for help from churches, other schools, etc." FSD E found assistance through software: "I bought a subscription to *Survey Monkey* and that is our

Table 3. Meal preparation and distribution facilitative practices identified by school foodservice directors

Identified Facilitative Practices	School Foodservice Director quotes
Cooperation with governmental agencies, school districts, and the community	Foodservice Director B “One of the biggest pros that came from this was that we were able to partner up with other school districts and help each other.” Food Service Director B “The department of education has been very helpful in the transition from The National School Lunch program to the Summer Feeding program.” Foodservice Director C “we were given USDA dollars that we have been able to use for processing and produce.” Foodservice Director D “finding help was one of the biggest barriers...It got to a point where I was asking for help from churches, other schools, etc.” Foodservice Director E “I bought a subscription to Survey Monkey and that is our RSVP system. We could already have the meals built and when they call, they say the name and we take out their meals.” Foodservice Director G “The summer feeding section of KDE (Kentucky Department of Education) have been really amazing, and I have felt very supported by them. I feel like they are like ‘just get your kids fed’”.
Transparency with Staff	Foodservice Director A “I also learned that it is important to be honest and transparent with your staff. If there is a situation where you have no idea what you are doing, be honest about it.” Foodservice Director F “Strong leadership is important. Good communication. I make sure as soon as I get information to relay it to my ‘employees’. Even if it is not set in stone.” “It just works better when we are transparent about things.”
USDA Waivers	Foodservice Director B “Since the transition to the summer feeding program it has been much easier to meet USDA requirements...I don’t know what we would have done if we were still on the National School Lunch program.” Foodservice Director G “they have worked pretty quickly at getting those waivers out.”
Departmental Mission Focus	Foodservice Director G “It’s okay to not know what you are doing, but that is not an excuse to give up...” Foodservice Director B “what I have learned during this time is that our foodservice workers are the most adaptable, flexible, and dependable group of folks...they were always ready to work with a good attitude.”

RSVP system.” The software was used to notify the kitchen staff when a family had arrived to pick up their meals.

Transparency with Staff

Most of the school foodservice leaders discussed the importance of being open and transparent with their staff, including delivering difficult messages. FSD A explained, “I also learned that it is important to be honest and transparent with your staff. If there is a situation where you have no idea what you are doing, be honest about it.” Similarly, FSD F stated, “Strong leadership is important. Good communication. I make sure as soon as I get information to relay it to my ‘employees’. Even if it is not set in stone.”

USDA Waivers

The USDA waivers gave the school foodservice leaders increased flexibility to provide meals to their students. “Since the transition to the summer feeding program it has been much easier to meet USDA requirements...I don’t know what we would have done if we were still on-the National School Lunch Program.” noted FSD B. FSD F agreed. “The waivers have been tremendously helpful.”

Departmental Mission Focus

Most of the FSDs reflected positively on their department’s mission and focus to feed their students. FSD B praised her staff and their willingness to meet the needs of the students, “...our foodservice workers are the most adaptable, flexible, and dependable group of folks. They have had to learn how to pack food and basically change the entire way they work.”. Most of the FSDs discussed their department’s mission and focus to feed their students. Kenney et. al (2021) found a similar sentiment in their research. Noting staff members’ commitment to their work and the feeding of students.

Emergency Preparedness

Though not identified by the participants as a barrier, researchers noted there were no emergency preparedness plans in place that were useful in response to the pandemic. Most of the emergency management plans were written to be used in response to a weather disaster or when the school is used as a shelter. FSD C explained “it (emergency plans) was mostly for tornados and earthquakes. We try to keep all kinds of non-perishables just in case of an emergency. There was nothing [for] this pandemic though.” FSD A made a similar observation “there really is no handbook on how to handle this...truly flying [by] of the seat of our pants...We had plans for like tornados, a flood...we never had anything that covered something like COVID...”

CONCLUSIONS AND APPLICATIONS

Conclusions

Some of the barriers, such as shortage of prepackaged products and paper goods, discussed by participants were issues that naturally evolved out of an emerging situation. These probably could not have been prevented, though the impact of the barriers may have been minimized with more comprehensive emergency management plans and in place agreements with vendors.

Government agencies with oversight of school nutrition programs received both praise and censure related to their communication and response. This was consistent with Patten et al. (2021) finding that school foodservice leaders indicated that governmental agencies provided important guidance, but at times were slow with their guidance or that the communication was confusing. In such a dynamic time, communication is key to keeping organizations up to date with what is being proposed and initiated. The transparency the school foodservice leaders provided to their staff was key in keeping the staff motivated and engaged. This lesson should not be a

surprise, as transparency and open communication are generally found in well-run organizations (Gregoire, 2017).

This study uncovered a lack of emergency policies regarding pandemic preparedness. Emergency management procedures were in place for natural disasters but did not translate to COVID-19 pandemic response. Kenney et al. (2021) concluded that school foodservice is a critical aspect in the nutritional wellness of millions of children, but the structures in place at the beginning of the pandemic were not responsive in an emergency. Barriers identified through this research could be minimized in the future by designing menus and delivery practices for remote meal service needed in disaster response. Some toolkits and emergency processes related to COVID-19 have been developed to help SFSDs navigate the process of providing meals during remote learning (SNA, n.d.). These toolkits are an important resource that can continue to be developed and expanded using the practices implemented by the SFSDs and the lessons they learned and continue to learn while navigating through the COVID-19 pandemic.

Applications

This research highlighted the need for access to easy to produce and package menu items for food delivery and pick-up. Though schools are opening across the United States and on-site feeding is occurring once again, a new expectation may develop for meal provision when school is not in session or when non-traditional instructional days are utilized. SFSDs may be called upon to provide remote meals more often and on short notice.

The SFSDs noted specific equipment needs to help them manage expectations the school districts had in providing food to students. Several of the SFSDs were able to obtain equipment requested including a \$13,000 blast chiller. The need for increased storage and freezer space was not easily remedied during the pandemic; however, the proposed School Food Modernization Act of 2021 as well as current USDA equipment grants available, may provide monetary assistance in the acquisition of identified equipment needs (GovTrack.us, 2021; USDAb, n.d.).

It would be beneficial if lessons learned from the modifications in meals for school children during the COVID-19 pandemic be systematically documented and incorporated into written policies, procedures, and menus for use during similar responses. Patten et al. (2021) found school foodservice employees want to share their expertise from what they learned through COVID-19 and from previous experiences to assist in developing improved and broader disaster response plans. The lessons learned can be used to develop emergency management plans for the school foodservice departments or can also become a separate plan related to remote feeding. In addition, lessons learned in menu development and streamlined packaging and transport during this emergency could benefit the delivery of the SFSP. Kenney et. al (2021) recommended to include in a comprehensive emergency management program a written plan to coordinate communication between the different stakeholders involved in the production and distribution of meals during an emergency.

Much was learned by each SFSD during the pandemic. These lessons should not be forgotten but documented and used to help in the continuing provision of meals. As stated by FSD G, "It (the response to the pandemic) allowed me to see... how can I use this going forward to make my program better, my managers stronger, better leaders, how can I make myself a better leader? What can I do to make lunch fun again and get kids excited about coming back to see us?"

Study Limitations and Future Research

This study did not include participants who are part of a contract foodservice company. It would be beneficial to see if SFSDs who are employed through a contract foodservice management company identify similar barriers. The study's participants were from small to mid-sized school districts; thus, barriers and facilitative practices may be different for large school systems.

Another limitation to this study was the low number of participants and the lack of geographic diversity in the study participants. It would be beneficial to investigate barriers and facilitative practices identified by a larger and more geographically diverse group. Barriers and facilitative practices could be different in urban and or coastal areas.

Future research could include documenting the techniques that lessened the impact of the identified barriers and collecting information regarding the processes and procedures used by SFSDs followed during the pandemic. This information can be used to develop or improve toolkits with aligned training for SFSDs and frontline staff to include menus, recipes, packaging processes, and distribution practices for remote food delivery. As the pandemic has evolved, different barriers and facilitative practices may be impacting school FSDs such as prolonged staffing and supply chain issues. Continued investigation into how operations have evolved over time would be beneficial and provide additional information to provide more comprehensive emergency response plans and toolkits.

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