

[Journal of School Health / Early View](#)RESEARCH ARTICLE | [Full Access](#)

A Qualitative Investigation of Parent and Child Perceptions of School Food Allergy Policies in the United States

Rachel L. Vollmer PhD, RD , Virginia Girsch BS , Jaime S. Foster PhD, RD 

First published: 21 November 2021

<https://doi-org.bibliosan.clas.cineca.it/10.1111/josh.13121>

This study was funded by Bradley University's Office of Sponsored Program Research Excellence Grant.

Abstract

BACKGROUND

Many schools implement well-intentioned food allergy policies; however, may not ease parents'/children's worry and concern. The purpose of this study was to (1) explore children's and parents' perceptions their school's food allergy policy and (2) compare these perceptions to the documented school policy.

METHODS

Children ages 8 to 18 with a food allergy and their parents (N = 18 pairs) across the US completed one-on-one semi-structured, audio-recorded phone interviews. School food allergy policies were collected from school websites. Content analysis was applied to the transcriptions by two investigators to identify themes among parents and children.

RESULTS

Parents and children described policies may impact the child's social and/or emotional well-being. Many opportunities for improvement were provided by parents and children. There is a wide variation in food allergy policies across the schools in this study, and overall, parents and children thought that policy enforcement needs to be improved.

CONCLUSIONS

With so much variation in food allergy policies in schools coupled with inconsistent

enforcement, parents and children may feel unsafe or unsupported by the school. Schools should adopt a team- or whole-school approach to develop and enforce policies that help protect children with food allergies.

Since 1997, there has been an increase in school-aged children with food allergies in the United States¹ and approximately 18% of children have had an allergic reaction at school.² A food allergy is defined as an immune response related to a food.³ Children with life-threatening food allergies and a past history of anaphylaxis are protected under the Americans with Disabilities Act of 1990.⁴ Schools have implemented various policies to protect children with food allergies.^{4,5} The most common policies focus on excluding children from environments in which exposure is a risk, for example, separate nut-free tables.⁵ Other policy examples include banning certain food products, smaller lunch tables with more supervision, requiring children with food allergies to wear something to alert others that they have a food allergy, and hand washing before and after lunch.⁴ Aside from the different policies between schools, there is variation in how policies are enforced, which may lead parents and children to feel stressed or anxious about going to school.^{5,6}

Although food allergy policies are well-intentioned, they may worsen the experience for children.⁷ Unfortunately, there is an absence of standardized policies and schools can freely decide which policies they will adopt and enforce. These could be informed by the Centers for Disease Control or other food allergy organizations, but their effectiveness has not been investigated. For example, School Access to Emergency Epinephrine Act helps schools get access to epinephrine, even if there is no child in the school with a food allergy, but this is voluntary and not adopted by all schools.⁸ It is important to get both the child's and parent's perspective as they each interact with schools differently in regards to the food allergy, and compare these perceptions and experiences to the established school food allergy policies. Doing so will help school officials, policy makers, and researchers start to understand which policies should be adopted by schools. Thus, the objective of this qualitative phenomenological study was to (1) explore children's and parent's experience and perceptions of school safety and supportiveness in relation to the child's food allergy and (2) determine how these perceptions differ based upon the school's established food allergy policies.

METHODS

Participants

This study was approved by the Bradley University Committee on the Use of Human Subjects in Research. U.S. parents and children with food allergies (8 to 18 years old) were recruited for a one-time one-on-one phone interview. In order to be eligible to participate, parents and children had to be able to read and write in English and children could not be home-schooled. Participants were recruited through public posts on Facebook, posts in private Facebook groups for food allergies, and snowball sampling through interviewed

dyads.

In the social media posts, eligible and interested parents could click on a link for an online survey using Qualtrics Survey Software. Parents then completed informed consent for themselves, consent for the child, and if the child was present, the child provided assent. If the child was not present at that time, the researchers emailed the parent a separate link for child assent that could be completed at a time that the child was present. Following consent, the online survey asked for parent and child name, phone number, preferred method of contact, and phone interview day and time preference. Parents were then contacted to schedule a one-on-one phone interview for themselves and their child. The names and contact information were not connected to the qualitative data obtained during the interview.

Procedure

Data were collected from May to September of 2019. The semi-structured interview script and questions were developed by the research team after a review of the literature. A pilot interview was conducted with a parent and child who met eligibility criteria and revisions to the questions were made (Table 1). Following the pilot interview, parents and children who provided consent were contacted to schedule the phone interview, which were conducted by two trained researchers. Interviewers were a trained undergraduate student who also had completed a research methods course and a faculty advisor who has extensive experience in qualitative data collection. The undergraduate researcher was also trained in appropriate interview techniques by the faculty advisor. Parents and children each completed their own individual interview with the researcher. Parents were usually present when the child was completing his or her interview, but did not answer any of the questions for the child. Interviews were typically 15 to 20 minutes and 20 to 30 minutes with children and parents, respectively. All interviews were audio-recorded. Data were collected about parent and child demographics and the child's food allergy including what the child was allergic to, the perceived severity, and occurrence of reactions at home and at school. Parents and children each received an incentive valued at \$20 shipped to them following the interview.

Table 1. Pilot and Revised Phone Interview Questions for Parent and [Child] with Food Allergies

Pilot Interview Script	Final Interview Script
Can you tell me about what your biggest concerns are related to your child's [your] allergies in school?	Can you tell me about what your biggest concerns are related to your child's [your] allergies in school?
Can you tell me about how your school addresses your concerns when you bring them to the school's attention?	Can you tell me about how your school addresses [reacts to] your concerns when you bring them to the school's

Pilot Interview Script	Final Interview Script
	attention?
Who do you go to when you have concerns about an allergen exposure at school?	Who do you go to when you have concerns [want to talk to someone] about an allergen exposure at school?
Can you tell me about the things that make you feel that your school environment is safe or unsafe for your child [you] considering their [your] allergies?	Can you tell me about the things that make you feel that your school environment is safe or unsafe for your child [you] considering their [your] allergies?
Can you tell me about the things that you feel that your school's policies are safe or unsafe for your child [you] considering their [your] allergies?	Can you tell me about the things that you feel that your school's policies [rules] are safe or unsafe for your child [you] considering their [your] allergies?
Can you tell me about the things that make you feel your teacher's behaviors/actions/sentiments are safe or unsafe for your child [you] considering their [your] allergies?	Can you tell me about the things that make you feel your teacher's behaviors/actions/sentiments are safe or unsafe for your child [you] considering their [your] allergies?

At the end of the interview parents were also asked to provide information about their school including the location and school name. This information was used to obtain the school's food allergy policies. These policies were downloaded from the school's website and/or reading the school's handbook and/or guidelines, health and wellness policies, etc. If a school did not have a food allergy policy on the website, the school was contacted via phone for more information. All participants were from different schools.

Data Analysis

All audio-recorded interviews were transcribed. Two researchers independently coded the parent and child transcript using content analysis⁹ without qualitative analysis software. The researchers analyzed the transcripts by dyad (parent and child) so that the experience of both the parent and child could be captured. Each researcher created codes for the transcripts and then met to discuss these codes. Codes were finalized during the discussion and then themes were developed. Saturation occurred when no new codes emerged from the data and each code was fully understood.⁹ Content analysis was also applied to the school food allergy policies. Codes from the dyad's transcript were compared to the codes developed from the school's food allergy policy. For reporting purposes, filler words (ie, um, like) were removed to allow for ease and clarity in reading. Descriptive statistics were utilized to summarize the demographic and food allergy characteristics using Statistical Package for the Social Sciences software (SPSS, version 19.0, IBM, Armonk, NY, USA, 10504).

RESULTS

A total of 18 parent-child dyads completed interviews and data saturation was reached. Parent-child dyads were from various regions of the United States and the most common allergies were tree nuts and peanuts (Table 2). A total of 4 themes were discovered in the qualitative interview data: social/emotional well-being, opportunities to improve safety, policy enforcement, and child empowerment (Table 3).

Table 2. Demographic and Allergy Characteristics Reported by Interviewed Parents and Children (N = 18)

Characteristic	Parents	Children
Age (mean ± SD)	42.7 ± 10.9	9.8 ± 2.3
Sex (N, % women/girls)	18 (100%)	9 (50%)
Location of parent/child (N, %)		
West	5 (28%)	
Midwest	9 (50%)	
South	2 (11%)	
Northeast	2 (11%)	
Child's allergy (N) †		
Tree nuts	12	
Peanuts	11	
Other legumes (beans, lentils, and peas)	5	
Eggs	5	
Sesame	4	
Shellfish	3	
Soy	3	

† Frequency does not add up to 18 due to children having multiple allergies.

Table 3. Summary and Description of Qualitative Themes Discovered from Parent-Child Interviews with Example Quotes

Theme	Description	Example Quotes
-------	-------------	----------------

Theme	Description	Example Quotes
Social/emotional well-being	Parents and children wanted to balance safety with normalcy to avoid possible exposure, bullying, and exclusion in the school setting.	“There have been some incidences where I've gotten milk thrown at me and where I've also gotten yogurt spilled all over me.” Child, ID #11 “About the party, holiday parties. It is kind of sad because like, now, you don't get to have something to eat for fun or something.” Child, ID #13
Opportunities to improve safety	Schools could improve safety by reducing cross-contamination risks, designating nut-free spaces, banning foods without ingredient labels, restricting use of food for rewards/celebrations/parties, and requiring anaphylaxis training for all school personnel, parents, and classmates.	“My worries are about like, if they bring food to the classrooms or class parties or just bring any food into the classrooms.” Child, ID #18 “Probably the biggest concern is that somehow he is going to consume a product with peanuts in it. Whether that's in the classroom, because, um, I know there's serious treats. I know there will be candy as a reward if it's made in a factory and then um, at lunch, he does sit at a separate table, but you never know if someone has peanut butter and they don't wash their hands afterwards, and then

Social/Emotional Well-Being

Parents discussed the importance of balancing safety with normalcy. They wanted their children to be safe, but not at the expense of making their child seem different, which they thought could encourage bullying. Parents tried to achieve this balance by providing safe alternatives for celebrations at school that were as comparative as possible to what the other children were consuming. Parents and children discussed how some school policies physically secluded children, including nut-free tables that physically secluded children, placing all allergic children in one classroom, and excluding allergic children from extracurricular activities. One dyad reported a fairly traumatic experience for a child in which a cake was brought in for a classmate's birthday. The parent was not notified before the cake was brought, nor was she contacted once the cake was brought in. The teacher's solution was to send the child into the hallway while the rest of the class celebrated the classmate's birthday and ate cake. The child described how she felt,

“*I was just kind of a little bit embarrassed to be sitting out in the hall with a bunch of people walking by in the hallway. That was kind of embarrassing, and really sad that I was out in the hallway while everyone else was inside the classroom and just eating and having fun.*” Child, ID #4

”

Opportunities to Improve Safety

Parents and children discussed several safety concerns and also reflected on how schools could improve. Cross-contamination was a common concern among parents and children. This included improper cleaning of children's desks if students ate in the classroom, lunchroom tables, playground equipment, and school buses. For example, one parent discussed how the school playground is open to community members during weekends or hours when school is not in session, which made her feel unsafe about her own child using the equipment. Proper hand-washing at the start of the school day or after lunch and/or recess was also something that parents were concerned about. One child discussed her concerns,

“*My school does switching here where we switch to different classrooms, so at my desk, I don't really know if they do snacks, but it could be possible that somebody could bring a snack and since the other room isn't a nut-free classroom, they might bring something that has nuts and eat it on my desk and me just not knowing.*” Child, ID #13

”

Dyads also discussed the safety provided by nut-free spaces whether it be a classroom or a lunch table. Due to the exclusiveness that a separate lunch table brings, some parents and children suggested making an entire school campus nut-free or having a separate table for those children who bring nut products to eat. Therefore, the child with the allergy would not be segregated from the rest of his or her classmates. While parents and children reported that their school had a nut-free classroom or table, they felt that it could provide a false sense of security because children had other allergies that lunchroom staff or children may not be aware of, such as dairy or gluten.

Parents and children also felt that training related to recognizing and treating anaphylaxis or allergy reactions was needed for teachers, staff, including paraprofessionals such as lunchroom aides, administration, bus drivers, and their classmates. Some parents and children reported that the school had a nurse, which made them feel safe in that there was a health care professional in order to administer epinephrine when needed, but they did not feel confident in anyone else's abilities. Parents and children thought training should be mandatory and should be something more than watching an instructional video. For

example, according to one parent,

“Everything is on a volunteer basis when it comes to epi-pen training and CPR and so forth like that, and unfortunately, the school district cannot enforce that with the teachers.” Parent ID #14

”

Parents and children felt that schools should not allow any food to be brought in the school without a food label, such as home baked goods. Parents and children also thought that using foods as treats and/or rewards or classroom activities (eg, pizza party for reading accomplishment) should be banned in schools. Dyads discussed that non-food items could be given out as rewards such stickers, pencils, or more recess time. They viewed this as a win-win. It would not exclude any children who cannot eat the food and it is better for the health of all children in the school. For example,

“I don't think they necessarily need food, so they could do more activities and games at the parties instead of having them revolve around food.” Parent, ID #17

”

Policy Enforcement

Parents and children reflected on how well the food allergy related policies were followed in schools by teachers, staff, parents, and administrators. This was attributed to lack of awareness and/or concern of others and poor communication. For those parents and children who had been going to the same school with the same classmates for several years, they felt that the concern, awareness and trust of others had improved over time. For example, other parents would check to make sure what they were bringing to a school celebration was safe for the child to eat. However, parents and children also reported experiencing push-back or resistance about the food allergy policies from school administration, other parents, or teachers. For example, other parents would complain that their child was restricted in what he or she could eat based on the allergies of another child,

“*I was almost in tears. I understand your kid likes peanut butter and jelly, but if they don't wash their hands and touch my daughter, my kid could be in the hospital. And they're like 'ohhhh', and then there's some parents that are like, 'well, what is my kid supposed to eat if they can't have peanut butter and jelly?' So, that's been a little bit of a learning curve, and a lot of the parents, because we've been in so many classrooms, the parents have figured out who we are and are just trying to protect our kids.*”
Parent, ID#16

”

Another example included the Parent-Teacher Association (PTA),

“*They (PTA) do a teacher appreciation stuff twice a year. And one of the days is always a trail mix. That triggers me and I'm on PTA now, so I brought it up, could we name something else, does it have to have nuts? And they're like, 'no, the teachers really like it.' And I'm, 'okay, but can we not have the nuts because you have not just my kid, but a bunch of other kids who are contact reactive.' So the teachers may not wash their hands, it gets stepped on, it's all across the school. So, that's my biggest thing.*” Parent, ID#15

”

A change in administrative staff or teachers also could result in policy enforcement changes. Parents and children reflected that this could be a positive or negative thing. Even a change in teacher from year to year, or day to day, could impact the way a policy was enforced. For example,

“I know that some teachers do different things. We've had a teacher who always had the kids wash their hands before coming back into the classroom after lunch. But then some teachers do not. So, those, I guess maybe, might be, the unsafe things.” Parent, ID #18

Child Empowerment

Due to concerns and challenges with policy enforcement, parents and children discussed ways in which the child was empowered to protect himself or herself. Parents reflected that they are not able to be in school with their child and will not be able to protect the child forever, so it is important that he or she learn to prevent exposure. This included teaching and trusting the child to read food labels, self-carrying epinephrine, allowing the child to take charge and advocate for himself or herself, and rules (eg no sharing food) that would prevent allergic reactions. For example,

“One, just one small concern we had this year was in the cafeteria, and there was kind of a trend of kids sharing foods. But, my daughter is really good about if she doesn't know, she won't eat it. She's really good about kind of being in charge of her allergies.” Parent, ID#3

Comparison of Documented School Food Allergy Policies and Dyad Interviews

The food allergy policies varied greatly between schools (Table 4). Commonly found policies referenced Epi-pens or a food allergy or anaphylaxis emergency plan, which included what the child was allergic to, symptoms of reactions, and how it should be treated. Some other commonalities included policies related to foods at celebrations, lunchroom/food service, and home-made foods, although there was variation in what those policies were. Less common policies including allergy bullying, confidentiality of food allergies, ban on food in the classroom and school transportation, encouraging children to be their own advocates, and food allergy education for all students. Interestingly, in the same wellness policies that food allergies were included, one school had a policy on only allowing healthy snacks. They provided healthy snack ideas, many of which were nut-based products such as crackers with peanut butter, nuts, seeds, or trail mix, and granola bars.

Table 4. Frequency of Food Allergy School Policies of Schools that Participating Children Attended

School Policy	N (%)
---------------	-------

School Policy	N (%)
Epinephrine	
Written request for epinephrine self-carry and administration	5 (28)
Designated epinephrine administration staff (eg nurse)	4 (22)
Anaphylaxis emergency action plan	4 (22)
Child allowed to carry and administer epinephrine based on age/maturity	2 (11)
Lunchroom/Food Service Policies	
School meal modifications available (eg nut-free, gluten-free, etc.)	8 (50)
No sharing food (snacks or lunch)	5 (28)
School staff ensures table cleanliness	4 (22)
School menu posted online with allergy information	4 (22)
Prevention of cross-contamination (eg changing gloves, disposable serve ware)	2 (11)
Assigned lunchroom seats	1 (6)
Children with food allergies must wear special ID	1 (6)
Separate table for children consuming peanuts, treenuts, or sesame seeds	1 (6)

When each school's food allergy policies were compared with the codes in the interviews, several policies were identified that made parents and children feel safer including, no food for celebrations (eg birthdays, holidays), all foods must have a label with an ingredient list, required hand washing, and required staff and teacher allergy education awareness and epinephrine training.

DISCUSSION

Much of the existing food allergy research has focused on managing the food allergy,¹⁰ varying school food allergy policies,¹¹⁻¹⁶ and the training of school staff to handle food allergies.¹⁷⁻²⁰ There are far less studies on how school food allergy policies impact children and families.^{5, 21-23} This present study is unique because it attempts to explore the lived experiences and perspectives of both children and parents while comparing that to schools' documented food allergy policies.

In this study, parents and children shared many concerns about exposure risk, but also tried to balance their caution with the child's social/emotional well-being. To reduce isolating children with food allergies during celebrations or parties, participants in this study, as well

as previous studies have recommended a ban on food in the classrooms.^{4, 5, 21, 24} However, this policy is contraindicated by school food security recommendations which promote offering breakfast in the classroom as a gold standard to improve food access to children.²⁵ And, as previously stated, certain common allergen foods were listed on healthy food lists, which increases the risk for allergen exposure.

Nut-free spaces made parents and children feel safer, although there was variation in whether this was lunch tables, classrooms, or the entire school campus. Allergen safe tables at schools is a common policy to protect children with food allergies^{4, 5}; however, this does isolate the children with food allergies and could lead to bullying.⁴ Interestingly, one study found that children who were allowed to self-carry epinephrine and attended schools that required hand-washing were more likely to experience bullying, while separate lunch tables were not related to risk of bullying.²⁶ This may be because friends were allowed to sit with the allergen child if they also had an allergen-free lunch, thus these friends may take on a protective role and reduce social isolation.^{4, 26} Smaller lunch tables may also allow more monitoring of possible exposure risk⁴ because parents and children in this study worried about how well the tables were monitored by staff.

The readiness of school personnel to recognize, manage, and treat an allergy reaction was a concern as well. Among the schools that had a policy regarding training, it was unclear if training was mandatory. This is consistent with a large survey in which almost a quarter of parents did not feel comfortable that the school and/or daycare could manage food allergy emergencies.⁶ Additionally, teachers may not be prepared to treat a food allergy reaction, including signs of a reaction, the use of epinephrine, and the confidence to intervene.^{18, 27-29} A previous study found that teachers, and even some school health professionals, may be unwilling to give intramuscular injections during an allergic reaction.³⁰ Many schools implement education and training; however, nurses were the most likely to be trained and only about one third of schools reported that teachers were also trained.¹⁷ This is concerning because even if a school has a full-time nurse, he or she may not be available at the time of the reaction, so it is necessary to train other school personnel, including teachers, cafeteria staff, playground supervisors, and bus drivers and/or monitors.¹⁷ Anaphylaxis training can have long-term positive effects on school personnel knowledge and confidence of preventing, recognizing, and treating reactions.^{18, 31}

In this study, parents and children were frustrated with inconsistencies in policy enforcement, which is consistent with previous studies.^{5, 22} Similar to the study by Dupuis and others,⁵ the policies provided by schools ranged from vague or almost nonexistent to very detailed. However, it is important that schools follow their stated policies as this caused parents and children to have anxiety about allergen exposure in this study and a previous study.⁵ When parents thought that policies were being poorly enforced, or not enforced at all, they felt that it was necessary to contact school administration and remind them of the legal risks the school was exposing itself to.

In this study, the awareness of the school personnel was not the only concern. Parents and children also discussed the resistance from other parents and classmates. When food is banned, classmates' parents can be vocal often criticizing the policy or even ignoring it.³³ This is concerning because when parents outwardly resist or ignore food allergy policies in the school, it may send a message to their child that it is okay to be inconsiderate of the dangers posed to the allergic child, and may even provide confirmation that the allergic child should be singled out.³³ Only one school had a documented policy regarding food allergy bullying, and conversely, one school required children with food allergies to wear a different color name tag. This tag may be well-meaning, but a previous study found that disclosure can be a traumatic experience for a child.⁷

Limitations

Although this study helps add to the literature on the lived experiences of parents and children with food allergies, it is not without limitations. Even though saturation was reached, this sample was homogenous and future studies should investigate food allergy policy experience across more diverse demographics. Additionally, this study does not capture the lived experience of children younger than 8 years old or children who are transitioning to college. Furthermore, all parents in this study were mothers and therefore, the experience of the child's father could not be captured.

Conclusions

Overall, parents and children were concerned about safety at school in regards to food allergies. The major concerns revolved around cross-contamination, teacher and staff training, and policy enforcement. Parents and children also had concerns regarding the social and/or emotional well-being of the child. When comparing the themes discovered from the interviews and the documented school policies, it is clear that there is wide variation in what schools are doing to protect children with food allergies. Most schools had policies regarding teacher and staff training and cross-contamination including no food in classrooms, mandatory hand-washing, or separate lunch tables. However, only one school considered the social and emotional well-being of the child with a policy against food allergy bullying and student confidentiality. Parents and children were often frustrated with policy enforcement and advocated for themselves by communicating with other parents, teachers, or school administration to handle their grievances. Legislators, boards of education, and school administrators need to be cognizant that school food policy is complex and must consider anti-obesity, healthy food standards, food security and promoting food access and safety for children with allergies.³⁵

IMPLICATIONS FOR SCHOOL HEALTH AND EQUITY

While parents and children in the present study did mention banning peanuts school-wide, this is not recommended because schools cannot guarantee that an allergen will not enter the school and may give a false sense of safety.³⁴ This is amplified by inconsistency in policy

enforcement in this study and previous studies which have shown that teachers and staff do not monitor children's lunches well enough to enforce this policy.^{4, 23} Parents' and children's cross-contamination concerns also extended to the bus and playground equipment, and a previous study found that reactions can occur at recess and on the bus.⁴ Therefore, a ban on eating any food on the bus or on the playground can help decrease allergen exposure, particularly where adult supervision is low.⁴ Parents and children were also concerned about cross-contamination in any area food was consumed, especially if they were not aware of the cleaning procedures. With COVID-19, schools have implemented intensified cleaning procedures by cleaning surfaces more often or more thoroughly and social distancing guidelines. While this study took place prior to COVID-19, it is possible that parents and children with food allergies may have felt some security with these new cleaning procedures and the risk of cross-contamination. If not already a policy, schools should ban the use of food for celebrations and parties, as it is also a recommended anti-obesity policy.³² Instead, to be inclusive, celebrations and parties can be a time for children to play games together without the use of food. Prizes such as pencils, stickers, or other tangible items can be given as rewards or prizes. Alternatively, if a complete food ban is not ideal for a school, parties and celebrations can have a short list of acceptable food items, for example popsicles, that would be safe for all. This does, however, require that schools enforce this policy without exception. Clear communication between school administration and staff, teachers, and parents is critical.

Making children and parents feel safer at school may include alterations to food allergy training for teachers and staff. Making training mandatory may increase completion rates among school staff, and schools should consider consequences if a staff member does not complete the training.¹⁷ Some teachers and staff may not feel comfortable being responsible for epinephrine injection, thus, even if they have had the mandatory training, they may still not feel confident in their ability to help a child who has a reaction.³⁰ At the very least, mandatory training should prepare all school personnel need to know how to recognize a reaction, not leave the child alone, and call for emergency medical care.⁵ In this study, even though several schools did have policies regarding teacher/staff training, parents and children were also concerned that this was not enough. It may be helpful for the schools to allow parents and/or children to provide this training or also attend this training so that they can feel more secure in the school's preparedness to handle an allergy. Even though the school nurse was often a trusted staff member in the school, handling food allergy reactions should be delegated to only one person.⁵ Additionally, if teachers were familiar with allergies or had a history of having other children with food allergies in their classrooms, parents did feel more comfortable. If possible, schools may want to consider having teachers be designated/certified to have children with food allergies in their classroom, which would signify that they have the knowledge and confidence to handle an allergic reaction. Schools could even incentivize this certification to reward teachers for taking on extra responsibility, for example giving them a smaller class size. Furthermore, a child's peers could also be trained on how to administer epinephrine when developmentally

appropriate, similar to cardiopulmonary resuscitation training children receive in health classes.⁵

In this study, parents and children discussed how over time, resistance and communication improved as the other parents and classmates became more aware and knowledgeable about the child's food allergy. One school in this study required food allergy education for students as part of the health class. The child who went to this school reviewed this experience as positive and has even presented on the food allergy they have. The supports the recommendation that schools should adopt a "whole-school approach" that involves all members of the school community including the students, teachers, staff, administration, and parents serving as team. This team could develop policies that focus on clear communication, training individuals on how to manage and treat reactions, and how to minimize exposure risk.³² Training and/or education for students could be integrated into health or sciences classes.⁵

Even if there were changes in how policies were enforced, clear, consistent, and transparent communication about the child and his/her food allergy seemed to ease the anxiety felt by parents and children in this study. This was especially true regarding communication from the child's teacher. When comparing the school allergy policies in this study, only one indicated that managing the child's food allergy in school would be a team approach with a detailed procedure of the line of communication. Miscommunication or no communication will decrease trust between parents and the school.⁵ Schools and teachers should seek input from children with allergies and their parents regarding the policy decisions that are being made.⁵ Additionally, schools should include communication policies so that parents aware of who is involved in managing the child's food allergy at school. For example, one school detailed the line of communication when a child may have been exposed or if a parent wanted to discuss something related to the child's allergy. Therefore, a decision tree to help parents figure out who they should reach out to at the school or when they will be contacted about their child's food allergy will provide clear communication expectations. Additionally, schools and/or school districts may find it useful to conduct audits of the efficacy of the policies and how policies are enforced in order to reduce their liability and improve the safety of the children with food allergies. This could also be an avenue for parents and children to provide input and share their experiences.

Human Subjects' Approval Statement

This study (protocol #103-18) was approved by the Bradley University Committee on the Use of Human Subjects in Research.

Conflict of Interest

All authors of this manuscript declare they have no conflicts of interests.

REFERENCES



1 Branum AM, Lukacs SL. Food allergy among children in the United States. *Pediatrics*. 2009; **124**(6): 1549- 1555.

[Crossref](#) | [PubMed](#) | [Web of Science®](#) | [Google Scholar](#)

2 Nowak-Wegrzyn A, Conover-Walker MK, Wood RA. Food-allergic reactions in schools and preschools. *Arch Pediatr Adolesc Med*. 2001; **155**(7): 790- 795.

[Crossref](#) | [CAS](#) | [PubMed](#) | [Web of Science®](#) | [Google Scholar](#)

3 Gupta RS, Dyer AA, Jain N, Greenhawt MJ. Childhood food allergies: current diagnosis, treatment, and management strategies. *Mayo Clin Proc*. 2013; **88**: 512- 526.

[Crossref](#) | [PubMed](#) | [Web of Science®](#) | [Google Scholar](#)

4 Young MC, Muñoz-Furlong A, Sicherer SH. Management of food allergies in schools: a perspective for allergists. *J Allergy Clin Immunol*. 2009; **124**(2): 175- 182.

[Crossref](#) | [PubMed](#) | [Web of Science®](#) | [Google Scholar](#)

5 Dupuis R, Kinsey EW, Spergel JM, et al. Food allergy management at school. *J Sch Health*. 2020; **90**: 395- 406.

[Wiley Online Library](#) | [PubMed](#) | [Web of Science®](#) | [Google Scholar](#)

6 Gupta RS, Springston EE, Smith B, et al. Food allergy knowledge, attitudes, and beliefs of parents with food-allergic children in the United States. *Pediatr Allergy Immunol*. 2010; **21**(6): 927- 934.

[Wiley Online Library](#) | [PubMed](#) | [Web of Science®](#) | [Google Scholar](#)

7 Dean J, Fenton NE, Shannon S, Elliott SJ, Clarke A. Disclosing food allergy status in schools: health-related stigma among school children in Ontario. *Health Soc Care Community*. 2016; **24**(5): e43- e52.

[Wiley Online Library](#) | [PubMed](#) | [Web of Science®](#) | [Google Scholar](#)

8 US Centers for Disease Control and Prevention. *Voluntary Guidelines for Managing Food Allergies in Schools and Early Care and Education Programs*. Washington, DC: US Department of Health and Human Services; 2013.

[Google Scholar](#)

9 Merriam SB, Tisdell EJ. *Qualitative Research: A Guide to Design and Implementation*. San Francisco, CA: John Wiley & Sons; 2015.

[Crossref](#) | [Google Scholar](#)

10 Spina JL, McIntyre CL, Pulcini JA. An intervention to increase high school students' compliance with carrying auto-injectable epinephrine: a MASNRN study. *J Sch Nurs*. 2012; **28**(3): 230- 237.

[Crossref](#) | [PubMed](#) | [Web of Science®](#) | [Google Scholar](#)

- 11 Cicutto L, Julien B, Li NY, et al. Comparing school environments with and without legislation for the prevention and management of anaphylaxis. *Allergy*. 2012; **67**(1): 131- 137.
[Wiley Online Library](#) | [CAS](#) | [PubMed](#) | [Web of Science®](#) | [Google Scholar](#)

- 12 DeSantiago-Cardenas L, Rivkina V, Whyte SA, Harvey-Gintoft BC, Bunning BJ, Gupta RS. Emergency epinephrine use for food allergy reactions in Chicago public schools. *Am J Prev Med*. 2015; **48**(2): 170- 173.
[Crossref](#) | [PubMed](#) | [Web of Science®](#) | [Google Scholar](#)

- 13 Gupta RS, Rivkina V, DeSantiago-Cardenas L, Smith B, Harvey-Gintoft B, Whyte SA. Asthma and food allergy management in Chicago public schools. *Pediatrics*. 2014; **134**(4): 729- 736.
[Crossref](#) | [PubMed](#) | [Web of Science®](#) | [Google Scholar](#)

- 14 Kassab D, Robinson EA, Singal B, Akin C, McMorris M. Prevention strategies used in Michigan schools to prevent food allergy reactions. *J Allergy Clin Immunol*. 2009; **123**(2): S191- S191.
[Crossref](#) | [Web of Science®](#) | [Google Scholar](#)

- 15 Morris P, Baker D, Belot C, Edwards A. Preparedness for students and staff with anaphylaxis. *J Sch Health*. 2011; **81**(8): 471- 476.
[Wiley Online Library](#) | [CAS](#) | [PubMed](#) | [Web of Science®](#) | [Google Scholar](#)

- 16 Zadikoff EH, Whyte SA, Desantiago-Cardenas L, Harvey-Gintoft B, Gupta RS. The development and implementation of the Chicago public schools emergency EpiPen(R) policy. *J Sch Health*. 2014; **84**(5): 342- 347.
[Wiley Online Library](#) | [PubMed](#) | [Web of Science®](#) | [Google Scholar](#)

- 17 Hogue SL, Muniz R, Herrem C, Silvia S, White MV. Barriers to the administration of epinephrine in schools. *J Sch Health*. 2018; **88**(5): 396- 404.
[Wiley Online Library](#) | [PubMed](#) | [Web of Science®](#) | [Google Scholar](#)

- 18 Kourosh A, Nsobundu CK, Khosla R, et al. The effects of school staff food allergy education in a large urban school district. *Health Behav Policy Rev*. 2020; **7**(3): 238- 247.
[Google Scholar](#)

- 19 Raptis G, Perez-Botella M, Totterdell R, Gerasimidis K, Mchaelis LJ. A survey of school's preparedness for managing anaphylaxis in pupils with food allergy. *Eur J Pediatr*. 2020; **2020**(179): 1537- 1545.
[Crossref](#) | [Google Scholar](#)

- 20 Wahl A, Stephens H, Ruffo M, Jones AL. The evaluation of a food allergy and epinephrine autoinjector training program for personnel who care for children in schools and community settings. *J Sch Nurs*. 2015; **31**(2): 91- 98.
[Crossref](#) | [PubMed](#) | [Web of Science®](#) | [Google Scholar](#)

- 21 Fenton NE, Elliott SJ, Clarke A. Tag, you're different: the interrupted spaces of children at risk

of anaphylaxis. *Child Geogr.* 2013; **11**(3): 281- 297.

[Crossref](#) | [Web of Science®](#) | [Google Scholar](#)

22 Mustafa SS, Russell AF, Kagan O, et al. Parent perspectives on school food allergy policy. *BMC Pediatr.* 2018; **18**(1): 1- 11.

[Crossref](#) | [CAS](#) | [PubMed](#) | [Google Scholar](#)

23 Stjerna ML. Food, risk and place: agency and negotiations of young people with food allergy. *Sociol Health Illn.* 2015; **37**(2): 284- 297.

[Wiley Online Library](#) | [PubMed](#) | [Web of Science®](#) | [Google Scholar](#)

24 Sicherer SH, Mahr T. Management of food allergy in the school setting. *Pediatrics.* 2010; **126**(6): 1232- 1239.

[Crossref](#) | [PubMed](#) | [Web of Science®](#) | [Google Scholar](#)

25 Olsta J. Bringing breakfast to our students: a program to increase school breakfast participation. *J Sch Nursing.* 2013; **29**(4): 263- 270.

[Crossref](#) | [PubMed](#) | [Web of Science®](#) | [Google Scholar](#)

26 Rocheleau GC, Rocheleau BN. The mark of a food allergy label: school accommodation policy and bullying. *J Sch Violence.* 2020; **19**(2): 167- 176.

[Crossref](#) | [Google Scholar](#)

27 Ercan H, Ozen A, Karatepe H, Berber M, Cengizlier R. Primary school teachers' knowledge about and attitudes toward anaphylaxis. *Pediatr Allergy Immunol.* 2012; **23**(5): 428- 432.

[Wiley Online Library](#) | [CAS](#) | [PubMed](#) | [Web of Science®](#) | [Google Scholar](#)

28 Kastner M, Harada L, Wasserman S. Gaps in anaphylaxis management at the level of physicians, patients, and the community: a systematic review of the literature. *Allergy.* 2010; **65**(4): 435- 444.

[Wiley Online Library](#) | [CAS](#) | [PubMed](#) | [Web of Science®](#) | [Google Scholar](#)

29 Tsuang A, Demain H, Patrick K, Pistiner M, Wang J. Epinephrine use and training in schools for food-induced anaphylaxis among non-nursing staff. *J Allergy Clin Immunol Pract.* 2017; **5**(5): 1418- 1420.

[Crossref](#) | [PubMed](#) | [Web of Science®](#) | [Google Scholar](#)

30 Moneret-Vautrin DA, Kanny G, Morisset M, et al. Food anaphylaxis in schools: evaluation of the management plan and the efficiency of the emergency kit. *Allergy.* 2001; **56**: 1071- 1076.

[Wiley Online Library](#) | [CAS](#) | [PubMed](#) | [Web of Science®](#) | [Google Scholar](#)

31 Dumeier HK, Richter LA, Neining MP, et al. Knowledge of allergies and performance in epinephrine auto-injector use: a controlled intervention in preschool teachers. *Eur J Pediatr.* 2018; **177**(4): 575- 581.

[Crossref](#) | [PubMed](#) | [Web of Science®](#) | [Google Scholar](#)

32 Turner PJ, Regent L, Jones C, Fox AT. Keeping food-allergic children safe in our schools—time for urgent action. *Clin Exp Allergy*. 2020; **50**: 133- 134.

[Wiley Online Library](#) | [PubMed](#) | [Web of Science®](#) | [Google Scholar](#)

33 Shu DM, Millsap A. When food is a weapon: parental liability for food allergy bullying. *Marquette Law Rev*. 2019; **103**: 1465- 1507.

[Google Scholar](#)

34 Lawlis T, Bakonyi S, Williams LT. Food allergy in schools: the importance of government involvement. *Nutr Diet*. 2017; **74**: 82- 87.

[Wiley Online Library](#) | [PubMed](#) | [Google Scholar](#)

35 Harvey SP, Markenson D, Gibson CA. Assessing school wellness policies and identifying priorities for action: results of a bi-state evaluation. *J Sch Health*. 2018; **88**: 359- 369.

[Wiley Online Library](#) | [PubMed](#) | [Web of Science®](#) | [Google Scholar](#)

[Download PDF](#)

About Wiley Online Library

Privacy Policy

Terms of Use

Cookies

Accessibility

Publishing Policies

Help & Support

Contact Us

Training and Support

DMCA & Reporting Piracy

Opportunities

Subscription Agents

Advertisers & Corporate Partners

Connect with Wiley

The Wiley Network

Wiley Press Room

Copyright © 1999-2021 John Wiley & Sons, Inc. All rights reserved