

Best Practices for Serving Students with Special Food and/or Nutrition Needs in School Nutrition Programs

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Please note that this study was published before the implementation of Healthy, Hunger-Free Kids Act of 2010, which went into effect during the 2012-13 school year, and its provision for Smart Snacks Nutrition Standards for Competitive Food in Schools, implemented during the 2014-15 school year. As such, certain research may not be relevant today.

ABSTRACT

Purpose/Objectives

The purpose of this research project was to identify goals and establish best practices for school nutrition (SN) programs that serve students with special food and/or nutrition needs based on the four practice categories identified in previous National Food Service Management Institute, Applied Research Division (NFSMI, ARD) research.

Methods

Researchers followed a best practices research model methodology to identify and establish best practices and goals. In Phase I, an expert panel of SN professionals and a school nurse identified goal themes and best practice statements, grouped similar statements within the four practice categories, and provided formatting suggestions for the best practice resource. In Phase II, a national review panel evaluated the best practice statements, goal statements, and draft resource. Panel members provided feedback on the content, scales, format, and usefulness of the resource as a self-assessment tool for SN professionals.

Results

Using recommendations from two expert panels, the practice categories, goal statements, and best practice statements were formatted into a Web-based self-assessment tool for SN professionals. The final resource consists of eight goals and 137 best practice statements within four practice categories.

Applications to Child Nutrition Professionals

The NFSMI Best Practices for Serving Students with Special Food and/or Nutrition Needs in School Nutrition Programs is a self-assessment tool for SN professionals to assess their operation based on the identified best practices. Upon assessing the current status and priority level of the best practices, a plan of action can be established for addressing and prioritizing those best practices identified as needing attention.

INTRODUCTION

School nutrition (SN) programs are experiencing a growth in the number of students with special food and/or nutrition needs. According to the Centers for Disease Control and Prevention (CDC; 2006), 17% of children under the age of 18 have a developmental disability, and consequently require a food substitution or modification to the regular school breakfast, school lunch, and/or after school snack. Section 504 of the Rehabilitation Act of 1973 requires SN programs to accommodate children with disabilities and/or conditions who have a diet prescription/order from a licensed physician (United States Department of Agriculture [USDA], 2001). Federal laws and regulations

protect children with disabilities from discrimination and ensure appropriate accommodations related to school activities and nutrition services are made available.

The prevalence and diversity of disabilities and chronic conditions can vary from school to school, but food allergies and intolerances appear to be the most common. Current estimations indicate more than 2.2 million school-aged children suffer with food allergies. From 1997 to 2002, peanut allergies doubled among children under the age of 18 (Sicherer, Munoz-Furlong, & Sampson, 2003). The prevalence of food allergies increased 18% over a 10 year period and continues to escalate among children (American Academy of Allergy, Asthma, and Immunology [AAAAI], 2008). Although food allergies and intolerances are the two most common, there are several conditions that SN programs need to accommodate. Research has shown an increase in the prevalence of overweight or obese children and adolescents over the last two decades, placing them at a higher risk for other chronic conditions such as type 2 diabetes, hypertension, and hyperlipidemia (Dietz, 1998; Freedman, Khan, Dietz, Srinivasan, & Berenson, 2001; Hedley et al., 2004). As disabilities and chronic conditions among children continue to rise, the responsibilities of SN programs are expanding. SN programs must be prepared to face the following challenges: providing foods and services necessary to accommodate students with special food and/or nutrition needs; providing SN personnel with the appropriate training on these issues; and planning, developing, and implementing policies and procedures in the event of urgent medical situations.

In a recent study conducted by the National Food Service Management Institute, Applied Research Division (NFSMI, ARD), researchers examined issues related to preparing and serving foods to children with special food and/or nutrition needs; described the role of the SN director and manager in providing these services; and identified resources and training needed for SN staff. To determine general practice categories that encompass the current issues related to serving students with special food and/or nutrition needs, researchers cognitively sorted the statements into groups and analyzed them for reliability. Four practice categories emerged: District/School Accountability, School Nutrition Responsibility, Information Resources, and Environmental Considerations. Research findings indicated that there were challenges in meeting special food and/or nutrition needs in the school setting and in providing staff with the appropriate training on these issues (Molaison & Nettles, 2008).

In an effort to determine quality indicators that address the roles and responsibilities of SN programs serving students with special food and/or nutrition needs, a best practices research project ensued. The best practice research approach has been described as a systematic process used to identify, describe, and disseminate effective strategies used by practicing professionals in their respective field (Mold & Gregory, 2003). Professionals can use best practices as a guide to achieve desired outcomes and to reduce the risk of barriers in operations. Mold and Gregory proposed a best practices research model (BPRM) that consists of five steps for developing best practices and management approaches in real practice settings. The steps include: (1) develop a best practices conceptual model that captures current process and practices in the industry; (2) define a method for measuring quality indicators or best practices, such as use of an expert panel or Delphi method; (3) identify and evaluate the draft best practices; (4) revise best practice guide components based on step 3 results; and (5) evaluate or test the final guide. The BPRM can be used for developing best practices for SN programs faced with the challenges of meeting the diverse needs of students today. Therefore, the purpose of this research project was to utilize the four practice categories identified in previous NFSMI, ARD research (Molaison & Nettles, 2008) to determine the best practices for serving students with special food and/or nutrition needs in SN programs; to compile a best practice resource that can be used as a Web-based tool for SN professionals; and to validate and evaluate the usefulness of the best practice resource.

METHODOLOGY

Researchers used the best practice research model illustrated by Mold and Gregory (2003) to guide the research process. During Phase I, an expert panel work group session was conducted with SN directors, a school nurse, and representatives from state agencies and USDA Food and Nutrition Services (FNS) to assist with the development of best practice statements and goals. The

information received from Phase I was used to revise and format the draft best practice resource prior to sending it to the review panel in Phase II. A national review panel consisting of SN directors and representatives from state agencies, the American Dietetic Association (ADA) School Nutrition Services (SNS) practice group, and NFSMI evaluated the resource for content clarity, accuracy, and usability, and provided comments and suggestions that were incorporated into the final best practice resource. The research protocol for this study was approved by the Human Subjects Protection Review Committee at the University of Southern Mississippi.

Phase I: Expert Panel

Four practice categories for serving students with special food and/or nutrition needs (Molaison & Nettles, 2008) provided the structure in developing the best practice statements. Researchers drafted best practice statements from previous research and published regulations and standards for children with special food and/or nutrition needs (CDC, 2006; Food Allergy and Anaphylaxis Network, 2008; Molaison & Nettles, 2008; NFSMI, 2006; NFSMI, 2007; USDA, 2001; United States Department of Justice, 2008). State agencies from the seven USDA regions were contacted to recommend SN directors and state agency representatives with exemplary experience in meeting the special food and/or nutrition needs of students to serve on the expert panel.

Eight SN professionals and a school nurse participated in the day and a half expert panel work group session. Panel members were purposefully divided into two work groups based on their professional roles and experiences with serving students with special food and/or nutrition needs. Both work groups actively participated in group discussions and consensus building activities to come to agreement on the wording of the best practice statements, the placement of the statements under one of the four practice categories, the sub-grouping of similar statements within each category, and the development of goal themes for each sub-grouping. The expert panel was also asked to review samples of different Web-based formats that could be used to format the best practice resource. Panel members suggested a checklist which included two 3-point scales (current status and priority level) to assess each best practice statement and a plan of action section.

After the expert panel work group session, researchers reviewed the work group results and captured all of the agreed upon best practice statements and goal themes. Researchers drafted a work group summary, which included the practice categories, goal themes, and sub-grouped best practice statements. The post-session expert panel work group summary was e-mailed to panel members for a final review. Panel members' responses and suggestions were utilized to develop the goal statements, the draft best practice resource, and the evaluation questionnaire for the next phase of the project. Researchers prepared a draft best practice categories. The format of the resource was a checklist which included two 3-point scales: current status (fully addressed, partially addressed, and not addressed) and priority level (high priority, medium priority, and low priority). The resource also included a plan of action section and a glossary to be incorporated into the resource with definitions of key special food and/or nutrition need terms.

Phase II: Review Panel

Researchers contacted state agency directors for names of SN professionals with exemplary experience in serving students with special food and/or nutrition needs to participate in a national review panel. Additionally, researchers selected SN professionals from the ADA SNS practice group directory and two representatives from NFSMI. Sixty-three potential review panel participants were e-mailed an invitation. Thirty SN professionals agreed to participate and were e-mailed review packets that included instructions, the evaluation questionnaire, and the draft best practice resource. Reviewers were instructed to review the best practice statements and goal statements prior to completing the evaluation questionnaire. The evaluation questionnaire was divided into five sections, four representing the practice categories and goal statements and one representing other considerations. For each practice category, reviewers assessed the best practice and goal statements by indicating whether they agreed or disagreed with three evaluation questions. The other considerations section was related to the evaluation of the scale, format, and usefulness of the resource. Reviewers indicated whether they agreed or disagreed with three evaluation questions.

Following each question, there was a comments section available for reviewers to make suggestions.

Data Analysis

Researchers used qualitative research methods to identify and confirm goals and best practices for the practice categories. Descriptive statistics were calculated and consisted of frequencies and percentages of the total responses from the review panel's evaluation questionnaire.

RESULTS AND DISCUSSION

Phase I: Expert Panel

An expert panel work group session convened to review and reach consensus on the draft best practice statements for the four practice categories as outlined in the best practice research model illustrated by Mold and Gregory (2003). Of the nine SN professionals invited to participate in the expert panel work group session, seven (77.8%) completed a pre-meeting assignment form and all nine attended the session (100% participation rate). The expert panel represented each of the seven USDA regions. Five of the expert panel members were SN directors (55.6%), one was a school nurse (11.1%), one was a USDA FNS representative (11.1%), and two were state agency representatives (22.2%). All were recommended because of their contributions and experience with special food and/or nutrition needs of students in SN programs.

During the work group session, expert panel members were asked to review and evaluate the wording of the draft best practice statements and then take an action either to keep, modify, combine, or delete the statements. Once the expert panel had agreed upon the draft best practice statements, they were asked to place the statements under the appropriate practice category. The expert panel reached consensus on the wording of the best practice statements, placement of the best practice statements under the appropriate practice category, formatting of the best practice resource, sub-grouping of similar best practice statements under a practice category, and developing a goal theme for each sub-group. Work group session results were summarized and emailed to expert panel members for a final review.

All nine panel members (100%) completed the post-session expert panel work group summary form and provided additional comments and suggestions. The draft list of practice categories, goal themes, and best practices derived from the expert panel (N = 9) post-session review are described in Table 1. The expert panel post-session review resulted in 17 goal themes and 137 best practice statements within the four practice categories.

Pract Stater	ice Categories, Goal Themes, and Sample Best Practice nents	Best Practice Statements
Distrie	ct/School Accountability	
1 0	Goal Theme: Training/Implementation	20
fc n	Sample: Teachers observe students in classroom with special bod and/or nutrition needs to ensure inappropriate food items are not onsumed.	
2 0	Goal Theme: Development	15

Table 1.	Expert Panel	Post-Session	Review Results
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	<i>Sample</i> : Emergency response plans are developed and evaluated annually to effectively address crisis situations.	
3	Goal Theme: Information	15
	<i>Sample</i> : District staff is encouraged to provide feedback to school nutrition staff on the student's acceptance of menu items.	
Scł	nool Nutrition Responsibility	
1	Goal Theme: Communication (Internal/External)	10
	Sample: The district school nutrition office communicates to the parents and staff information regarding service available for students with special needs.	
2	Goal Theme: School Nutrition Office/System Development	31
	<i>Sample</i> : School nutrition program collaborates with district administrators to develop policies that accommodate students with special needs.	
3	Goal Theme: Site Operations/Standards	15
	Sample: School nutrition director or designate participates on a district-level team to initiate a needs assessment of the district's capability to accommodate students with special needs.	
4	Goal Theme: Total Quality Management	3
	Sample: A monitoring and review system is in place to ensure appropriate meal accommodations occur by the school nutrition staff to meet the special food and/or nutrition needs of students.	
5	Goal Theme: Purchasing	4
	Sample: The district school nutrition office communicates with food suppliers regarding products needed for students with special food and/or nutrition needs.	
6	Goal Theme: Serving Line Management	2
	<i>Sample</i> : A system is in place to aid school nutrition staff in identifying the students with special needs at the point of service.	

Info	ormation Resource	
1	Goal Theme: State and Federal Agencies	3
	Sample: Additional information regarding special food and/or nutrition needs is sought from reliable sources, such as the Food Allergy and Anaphylaxis Network, the American Dietetic Association, and the	
	United States Department of Agriculture.	
2	Goal Theme: Local/Community	3
	Sample: A Registered Dietitian is available to provide information on specific special food and/or nutrition needs.	
3	Goal Theme: Other	1
	Sample: Food companies are contacted to provide specific ingredient information for products used to serve students with special needs.	
Env	vironmental Considerations	
1	Goal Theme: Space	6
	<i>Sample</i> : Adequate space issues in the cafeteria are addressed for students with special needs.	
2	Goal Theme: Equipment	2
	<i>Sample</i> : Specialized equipment is purchased for production and service of meals for special diets, as needed.	
3	Goal Theme: Social	3
	Sample: Accommodations are made for students with special food and/or nutrition needs who require additional time during dining.	
4	Goal Theme: Sanitation	3
	<i>Sample</i> : Hand washing stations for students and school staff are located near the cafeteria.	
5	Goal Theme: Communication	1

Sample: School administration advocates for all school buses to have communication devices in case of an emergency.

Revisions were made to include the following: the three goal themes under District/School Accountability practice category were combined into two goal statements; the six goal themes under School Nutrition Responsibility practice category were combined into four goal statements; the three goal themes under Information Resource practice category were combined into one goal statement; and the five goal themes under Environmental Considerations practice category were combined into one goal statement. Researchers drafted the best practice resource to include eight goal statements and 137 best practice statements within the four practice categories for the next phase of the project.

Phase II: Review Panel

Of the 30 SN professionals who agreed to participate on the review panel evaluation, 21 (70%) completed the evaluation questionnaire and provided additional comments and suggestions for the resource. Sixteen states from the seven USDA regions were represented on the review panel. Of those who completed the evaluation, six were SN directors (28.6%), 10 were members of the ADA SNS practice group (47.6%), three were state agency representatives (14.3%), and two were NFSMI representatives (9.5%). Review panel members used the evaluation questionnaire to assess the best practice statements, goal statements, and the draft best practice resource. Additionally, panel members evaluated the content, scales, format, and usefulness of the resource as a self-assessment tool for SN professionals.

For the practice categories, goal statements, and best practice statements, reviewers indicated whether they agreed or disagreed with three evaluation questions. The review panel's evaluation of goal statements and best practice statements is displayed in Table 2. The agreement percentages and frequencies indicated a high level of agreement that these statements were best practices for serving students with special food and/or nutrition needs; that the goals appropriately reflected each best practice statement sub-grouped under that goal; and that there were an adequate number of best practice statements to appropriately address the goal(s) under the practice category.

Evaluation Questions Per Goal		greement Percentages and s per Practice Category and Goal
	District/Scl	hool Accountability
	Goals	
	1	2
These statements are best practices for serving students with special food and/or nutrition needs.	90% (19)	86% (18)
Goal reflects appropriately each of the best practice statements grouped under this goal.	86% (18)	86% (18)
There are an adequate number of best practice statements to	86% (18)	81% (17)

Table 2. Review Panel's Evaluation of Goal Statements and Best Practice Statements (N = 21)

appropriately address the goal(s) under this practice category.				
	School Nut	rition Respons	sibility	
	Goals			
	1	2	3	4
These statements are best practices for serving students with special food and/or nutrition needs.	86% (18)	90% (19)	86% (18)	90% (19)
Goal reflects appropriately each of the best practice statements grouped under this goal.	81% (17)	81% (17)	81% (17)	86% (18)
There are an adequate number of best practice statements to appropriately address the goal(s) under this practice category.	76% (16)	76% (16)	81% (17)	86% (18)
	Informatior	n Resources		
	Goal 1			
	1			
These statements are best practices for serving students with special food and/or nutrition needs.	90% (19)			
Goal reflects appropriately each of the best practice statements grouped under this goal.	86% (18)			
There are an adequate number of best practice statements to appropriately address the goal(s) under this practice category.	90% (19)			
	Environme	ntal Considera	ations	
	Goal			
	1			
These statements are best practices for serving students with special food and/or nutrition needs.	90% (19)			

Goal reflects appropriately each of the best practice statements grouped under this goal.	86% (18)
There are an adequate number of best practice statements to appropriately address the goal(s) under this practice category.	90% (19)

For other considerations, including content, scales, format, and usefulness of the resource, reviewers indicated whether they agreed or disagreed with three evaluation questions. The review panel's evaluation of other considerations is displayed in Table 3. The agreement percentages and frequencies indicated a high level of agreement that the formatting of the best practice resource was appropriate for SN professionals, and that the current status and priority level scales were appropriate for SN professionals using the resource. Additional space was provided on the evaluation questionnaire for review panel members to make comments and suggestions. Researchers reviewed comments made by panel members and incorporated their suggestions into the best practice resource. Eight goals and 137 best practice statements were identified as essential for serving students with special food and/or nutrition needs in SN programs.

Table 3. Review Panel's Evaluation of Other Considerations (N = 21)

Evaluation Questions	Level of Agreement Percentages and Frequencies
	Other Considerations
	71% (15)
The Current Status and Priority Level scales are appropriate for school nutrition professionals using the resource.	71% (15)
	43% (9)

CONCLUSIONS AND APPLICATIONS

The purpose of this research study was to identify goals and establish best practices for serving students with special food and/or nutrition needs in SN programs, utilizing the four practice categories identified in previous NFSMI, ARD research. Two panels of experts comprised of SN directors, a school nurse, and representatives from state agencies, USDA FNS, ADA SNS practice group, and NFSMI were actively involved in the development, evaluation, and confirmation of the best practice resource.

Accommodating students with special food and/or nutrition needs is becoming more prevalent in SN programs. Previous NFSMI, ARD research suggested that SN professionals are faced with the challenge of meeting special food and/or nutrition needs in SN programs and with providing staff the appropriate training on these issues (Molaison & Nettles, 2008). This project was intended to build on these findings by developing best practices and goals to assist SN professionals who serve students with special food and/or nutrition needs.

Using recommendations from the two panels of experts, the practice categories, goal statements, and best practice statements were formatted into a Web-based self-assessment tool for SN professionals and is available

at: http://www.nfsmi.org/documentlibraryfiles/PDF/20090717040947.pdf (Castillo, Carr, & Nettles,

2009). The NFSMI Best Practices for Serving Students with Special Food and/or Nutrition Needs in School Nutrition Programs consists of eight goals and 137 best practice statements within the four practice categories. Two 3-point scales, current status (fully addressed, partially addressed, and not addressed) and priority level (high priority, medium priority, and low priority), are used to assess each best practice statement as it pertains to the user's SN program. The resource also includes a plan of action section and a glossary with definitions of key special food and/or nutrition need terms. Upon assessing the current status and priority level of the best practices, SN professionals can establish a plan of action to address and prioritize those practices identified as needing attention. An excerpt of the best practice resource is displayed in Figure 1.

Figure 1. Excerpt from NFSMI Best Practices for Serving Students with Special Food and/or Nutrition Needs in School Nutrition Program

Best Practices	Current Status			Priority Level		
	Fully Addressed	Partially Addressed	Not Addressed	High	Med	Low
nterdisciplinary teams are established and individual roles defined for responding to students with special food and/or nutrition needs.						
The school nutrition staff is included on the interdisciplinary team to address issues for accommodating students with special food and/or nutrition needs.						
The school nurse is involved in the development of a proactive care olan for students with special food and/or nutrition needs.						
The interdisciplinary team prioritizes ssues identified as necessary to accommodate students with special ood and/or nutrition needs.	0					
The interdisciplinary team develops and communicates district protocols o address issues related to the pecial food and/or nutrition needs of students.						
The interdisciplinary team coordinates the development of emergency response protocols,						

NFSMI best practice resource can be used as a self-assessment tool for SN professionals to develop and maintain a strong quality improvement process for services provided to students with

special food and/or nutrition needs. The following are suggestions and implications for using the NFSMI best practice resource:

- The best practice resource can be used to identify essential practices for implementing special food and/or nutrition services in SN programs.
- SN professionals can use the resource to identify the roles of stakeholders and the resources necessary for planning, developing, and implementing policies and procedures related to serving students with special food and/or nutrition needs.
- The best practice resource can be used to identify training needs for SN personnel specific to serving students with special food and/or nutrition needs.
- The best practice resource can be used to determine effective communication strategies between district SN director/designee, SN personnel, teachers, parents/guardians, other school personnel, and district/school administrators.
- SN professionals can use this resource to establish a plan of action based on their assessment of the best practices needing attention.
- Additional resources in the reference list at the end of the best practice resource can also be used to assist with the implementation of special food and/or nutrition services in SN programs.
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The information provided in this manuscript is the result of independent research produced by NFSMI and is not necessarily in accordance with U.S. Department of Agriculture Food and Nutrition Service (FNS) policy. FNS is the federal agency responsible for all federal domestic child nutrition programs including the National School Lunch Program, the Child and Adult Care Food Program, and the Summer Food Service Program. Individuals are encouraged to contact their local child nutrition program sponsor and/or their Child Nutrition State Agency should there appear to be a conflict with the information contained herein, and any state or federal policy that governs the associated Child Nutrition Program. For more information on the federal Child Nutrition Programs please visit www.fns.usda.gov/cnd.

REFERENCES

American Academy of Allergy, Asthma, & Immunology. (2008). *Allergy statistics*. Retrieved May 6, 2008, from <u>http://www.aaaai.org/media/statistics/allergy-statistics.asp</u> Castillo, A., Carr, D. H., Nettles, M. F. (2009). *NFSMI best practices for serving students with special food and/or nutrition needs in school nutrition programs*. Retrieved December 7, 2009, from <u>http://www.nfsmi.org/documentlibraryfiles/PDF/20090717040947.pdf</u>

Centers for Disease Control and Prevention. (2006). Developmental disabilities. Retrieved January 2, 2007, from http://www.cdc.gov/ncbdd/dd/ddsurv.htm

Dietz, W. H. (1998). Health consequences of obesity in youth: Childhood predictors of adult disease. *Pediatrics*, *101*, 518S-525S.

Food Allergy and Anaphylaxis Network. (2008). *Facts about: Food allergy*. Retrieved September 1, 2008, from <u>http://www.foodallergy.org/downloads/factsheet.pdf</u>

Freedman, D. S., Khan, L. K., Dietz, W. H., Srinivasan, S. R., & Berenson, G. S. (2001). Relationship of childhood obesity to coronary heart disease risk factors in adulthood: The Bogalusa heart study. *Pediatrics*, *108*,712-718.

Hedley, A. A., Ogden, C. L., Johnson, C. L., Carroll, M. D., Curtin, L. R., & Flegal, K. M. (2004). Prevalence of overweight and obesity among US children, adolescents, and adults, 1999-2002. *Journal of the American Medical Association, 291* (23), 2847-2850.

Molaison, E. F., & Nettles, M. F. (2008). *Special food and nutrition needs of children: Current issues and training needed by school nutrition professionals* (Technical Report No. R-134-08). University, MS: National Food Service Management Institute.

Mold, J. W., & Gregory, M. E. (2003). Best practices research. *Family Medicine*, *35*, 131-134. National Food Service Management Institute. (2006). *Handbook for children with special food and nutrition needs*. University, MS: Author.

National Food Service Management Institute. (2007). *Meeting children's special food and nutrition needs in child nutrition programs*. University, MS: Author.

Sicherer, S. H., Munoz-Furlong, A., & Sampson, H. A. (2003). Prevalence of peanut and tree nut allergy in the United States determined by means of a random digit dial telephone survey: A 5-year follow-up study. *Journal of Allergy and Clinical Immunology*, *112*, 1203-1207.

United States Department of Agriculture. (2001). Accommodating children with special dietary needs in the school nutrition programs: Guidance for school foodservice staff. Washington, DC: U.S. Government Printing Office.

United States Department of Justice. (2008). *Americans with Disabilities Act Amendments Act of 2008*. Retrieved May 13, 2008, from <u>http://www.ada.gov/pubs/adastatute08.htm</u>

BIOGRAPHY

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