

**Reshaping the
National Food Service Management Institute
Research Plan: 2003 Update**



**National Food Service Management Institute
The University of Mississippi**

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National Food Service Management Institute The University of Mississippi

Building the Future Through Child Nutrition

PURPOSE

The National Food Service Management Institute (NFSMI) was authorized by Congress in 1989 and established in 1990 at The University of Mississippi in Oxford. The Institute operates under a grant agreement with the United States Department of Agriculture, Food and Nutrition Service.

The purpose of NFSMI is to improve the operation of Child Nutrition Programs through research, education and training, and information dissemination. The Administrative Offices and Divisions of Technology Transfer and Education and Training are located in Oxford. The Division of Applied Research is located at The University of Southern Mississippi in Hattiesburg.

MISSION

The mission of the National Food Service Management Institute is to provide information and services that promote the continuous improvement of Child Nutrition Programs.

VISION

The vision of the National Food Service Management Institute is to be the leader in providing education, research, and resources to promote excellence in Child Nutrition Programs.

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We wish to thank the Research Agenda Conference participants for their enthusiasm, ideas, and expertise in Child Nutrition Programs. The contributions of each participant are reflected in both the quality and quantity of research ideas presented in this report. The research needs described in this report provide a valuable resource for the Applied Research Division of the National Food Service Management Institute as well as any individual or group that seeks to expand our collective knowledge within the Child Nutrition Program area.

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Reshaping the National Food Service Management Institute Research Plan: 2003 Update

Executive Summary

The initial National Food Service Management Institute (NFSMI) Research Conference held in 1995 was the result of a recommendation from the NFSMI National Advisory Council (NAC). Since the NAC's initial recommendation, two research conferences have been convened to generate research needs of the NFSMI customers. The first NFSMI research plan established in 1995 identified three research areas: financial integrity of Child Nutrition Programs (CNPs), nutrition integrity of CNPs, and customer service. In 1999 the second NFSMI Research Conference fully defined and expanded the research areas initially identified into ten broad research areas.

Most recently, NFSMI's Applied Research Division (ARD) updated the research plan through a facilitated group meeting held in June 2003 at the Institute on the campus of The University of Mississippi, University, Mississippi. The research conference was attended by 27 participants including state agency directors, district directors, educators teaching and conducting research in child nutrition, Child and Adult Care Food Program representatives, American School Food Service Association (ASFSA) representatives, a Centers for Disease Control and Prevention (CDC) representative, United States Department of Agriculture (USDA) representatives, and 10 NFSMI staff.

Conference attendees identified obesity and healthy weight of children, the relationship between financial stability and customer satisfaction, labor and workforce challenges, nutrition integrity, and style of service as the most important areas of research needing to be addressed.

Reshaping the National Food Service Management Institute Research Plan: 2003 Update

Introduction

The purpose of research is to answer questions about the world (Wright, 1997). One of the Congressional charges to the National Food Service Management Institute (NFSMI) is to conduct applied research leading to high quality, nutritious, cost-effective Child Nutrition Program (CNP) operations. Establishing an NFSMI Research Plan began as a recommendation from the NFSMI National Advisory Council (NAC). Research conferences composed of invited representatives from state agencies, large and small school districts, university and community colleges, child and adult care food programs, American School Food Service Association (ASFSA), Centers for Disease Control and Prevention (CDC), and United States Department of Agriculture (USDA) have been used to generate research needs of the NFSMI customers.

The initial NFSMI research plan established in 1995 identified three research areas: financial integrity of Child Nutrition Programs (CNPs), nutrition integrity of CNPs, and customer service. In 1999, the second NFSMI Research Conference fully defined and expanded the research areas into 10 categories.

Because of the effectiveness of planning research based on needs identified through customer groups, the NFSMI Applied Research Division continued to use a facilitated group format for generating research concepts. The third NFSMI Research Conference convened June 5-7, 2003, and was facilitated by Judy Burtner of Glen Allen, Virginia.

Objective

The objective of the third NFSMI Research Conference was to identify broad research needs and prioritize them to be used for future development of the NFSMI Strategic Plan and annual Statement of Work plans.

Method

Participants

Participants included: 4 college and community college educators who teach and conduct research in the child nutrition area, 3 child and adult care food program (CACFP) representatives, 10 district directors from both large and small districts, 3 state agency representatives, 5 United States Department of Agriculture (USDA) representatives, 1 Centers for Disease Control and Prevention (CDC) representative, 1 American School Food Service Association (ASFSA) representative, and 10 NFSMI staff. Two of the district directors also represented ASFSA as national officers in the organization. A complete participants list is found in Appendix A.

Online Chats

Four online chats were used to gather preliminary research needs to assist participants in focusing their thoughts on research needs for the 21st century. Participants were grouped according to the time zones in which they resided. Directions were provided for accessing the chat room as well as the two questions that would be discussed. The two questions were:

1. Thinking ahead 5-10 years, what will be the issues and challenges NFSMI will need to be prepared to address to support quality food service in Child Nutrition Programs (CNP) including the Child and Adult Care Food Program (CACFP)?

2. In thinking of institutional food service relative to children and adolescents, what are present needs for research?

Following each online chat discussion, participants were electronically provided a transcript of the chat session. Results were categorized according to the two operational goal areas of the NFSMI Strategic Plan 2003-2006. Following completion of all chats, participants were provided a summary of results, prior to arrival for the conference session. See Appendix B.

Conference Introductions

Participants introduced themselves and described a “piece of research” they needed recently but could not locate. Those research needs are found in Appendix C. These needs were used later in the facilitated process. Dr. Denise Brown and Dr. Jeanette Philips shared background on the Institute and the role that research plays in implementing the NFSMI mission and vision. They gave an overview of the Institute’s past and present research projects. In addition, a project fair was conducted. Participants were able to view the results of completed NFSMI research and received information on research efforts presently underway from Senior Research Scientist Dr. Mary Kay Meyer, Research Scientists Dr. Jerry Cater and Dr. Deborah Carr, and NFSMI Scholar Dr. Alice Jo Rainville.

Building on Present Research Efforts

A brief overview was given of present research efforts under the NFSMI Strategic Plan operational goal areas of resource management and nutrition integrity. Participants were randomly divided into small groups and asked to identify the possible “next steps” for research under the two goal areas. The small group reports for the two areas are found in Appendix D.

New Research Opportunities

The next phase of the research conference involved identifying new research areas. Dr. Denise Brown shared the NFSMI strategic planning model and discussed how the work of the participants would fit into the Institute's planning process. Dr. Mary Kay Meyer reviewed the results of the online "chats" that were distributed to participants prior to the conference.

Participants were divided into five small groups by similar job responsibilities. The groups were:

- School district directors (two groups)
- Colleges and universities
- Child and Adult Care Food Program
- State agency

Participants were asked to identify new research possibilities using the following parameters:

- Food service operations
- Nutrition integrity

Participants were asked to take a comprehensive approach to both topics and to consider food service in a school setting as well as food service in child care and adult day care settings.

Components could include:

- Customer service
- Sanitation
- Food safety
- Employee safety
- Financial management and record keeping
- Food production
- Procurement

- Program accountability
- Nutrition and menu planning
- General management
- Personnel management
- Facility layout and design
- Equipment selection
- Environmental management
- Marketing
- Computer technology
- Nutrition education

In the nutrition integrity area, components could include:

- Overall quality of program
- Nutrition quality
- Customer satisfaction
- Cultural sensitivity
- Food safety

Each group was asked to identify no more than five potential research areas. In addition, they could choose three items from the list of ideas generated during introductions the previous day (Appendix C, Needed Research). Once the total group reviewed all small group reports, participants identified possible partners and posted them on the reports. The items and the partners are listed in Appendix F.

Priority Ranking

The five research areas identified by each group were sorted into topic areas. These topic areas and research ideas are shown in Appendix G. The final step in the process was to identify a priority ranking by time. Participants were given two each of three different colored dots and asked to use them to identify:

- What is most important to be addressed within 1 year?
- What is important to be addressed within 3 years?
- What is important to be addressed within 5 years?

Participants could use dots on items within a category or for a category as a whole. In some cases dots were placed on categories, and in other cases dots were placed on items within the category. Results in Appendix H are presented first by category and then by items receiving individual dots.

Results

Through the group consensus process, participants of the third NFSMI Research Conference identified obesity and healthy weight of children, the relationship between financial stability and customer satisfaction, labor and workforce challenges, and nutrition integrity and style of service as the top four (in rank order) important areas of new research to be addressed. The results of the ranking process and the group identifying a particular idea are shown in Table 1. Several participants felt it was important to acknowledge that follow-up research to the existing research was as important as or more important than proposed new possibilities for research, but none were specifically identified in the ranking process.

Conclusion

The results of the third NFSMI Research Conference serve as a working document for all researchers in the area of child nutrition. NFSMI will strive to incorporate into the strategic plan as many projects as possible within the constraints of the mission, vision, and budget. All professionals conducting research in the area of child nutrition are encouraged to use ideas generated from this conference to advance the body of knowledge for child nutrition.

Table 1

Research Needs by Priority

Category/Question	1st year	3rd year	5th year
Obesity and Healthy Weight (overall category score)**	9	5	4
<ul style="list-style-type: none"> ▪ Physical activity/healthy weight – impact of childcare setting and provider (CACFP group)* 			
<ul style="list-style-type: none"> ▪ Factors influencing childhood obesity and other health issues – how can CNPs be proactive? (school district directors group)* 	1	1	1
<ul style="list-style-type: none"> ▪ Finding a balance between nutrition, finance, customer satisfaction related to à la carte (to address obesity crisis) (colleges and universities group)* 	5	1	
Financial, Customer Service, Nutrition Balance (overall category score)**	8	3	2
<ul style="list-style-type: none"> ▪ What is the balance between nutrition, finance, and customer satisfaction in different size sites and production methods? (state agency group)* 			
<ul style="list-style-type: none"> ▪ Financial management and record keeping – At what size in School Food Authority (SFA) does automation (accounting, claims, and inventory) become essential? (colleges and universities group)* 			
<ul style="list-style-type: none"> ▪ Research meal cost by various unit sizes and service systems (school district directors group)* 			
<ul style="list-style-type: none"> ▪ A decision-making model for the best use of commodity dollars – “to process or not to process?” (school district directors group)* 			
<ul style="list-style-type: none"> ▪ Evaluate the effectiveness of nutrition education, including different types of interventions (school district directors group)* 			
<ul style="list-style-type: none"> ▪ Nutrition education/consumer satisfaction – children/parents/staff/community/administrators (CACFP group)* 			

Category/Question	1st year	3rd year	5th year
Labor and Workforce (overall category score)**	5	7	4
<ul style="list-style-type: none"> ▪ Staffing patterns for food service systems (colleges and universities group)* 			
<ul style="list-style-type: none"> ▪ Labor/workforce issues: image, training, diversity, dwindling size of workforce (school district directors group)* 			
Nutrition Integrity and Style of Service (overall category score)**	5	5	6
<ul style="list-style-type: none"> ▪ Is there a difference in nutritional intake by style of service and other factors? (school district directors group)* 			
<ul style="list-style-type: none"> ▪ Offer vs. Serve – effects of offer versus serve on students’ food selections and subsequent nutrient intake (state agency group)* 			
<ul style="list-style-type: none"> ▪ Effects of alternate service of breakfast on participation, and nutrient intake, and percentage of students eating breakfast versus no breakfast (state agency group)* 	1	1	2
<ul style="list-style-type: none"> ▪ For National School Meal Program – comparison of nutritional quality of meals served versus meals planned, what is the effect of substitutions, what is the effect of the use of fortified foods, and impact of fortified foods on total nutrients in meals (state agency group)* 	2	2	
<ul style="list-style-type: none"> ▪ Summer feeding – what is the nutrient intake of children who do not participate? (colleges and universities group)* 			1
Who Provides Nutrition Education (overall category score)**	1	3	5
<ul style="list-style-type: none"> ▪ Who (i.e., teachers, school nurse, nutritionist, etc.) delivers the nutrition education message and what is the effect/outcome? (school district directors group)* 	1	1	1
<ul style="list-style-type: none"> ▪ More broad-based implementation of coordinated school health, especially nutrition (school district directors group)* 		1	1

Category/Question	1st year	3rd year	5th year
Trends and Marketplace (overall category score)**			
<ul style="list-style-type: none"> • Identify trends/futures in the food marketplace and the impact on CNPs – include look at fortification, etc. (state agency group)* 			2
<ul style="list-style-type: none"> ▪ Attitudes and knowledge of managers, directors toward irradiation, other food safety issues (colleges and universities group)* 		2	
<ul style="list-style-type: none"> ▪ Seamless model to coordinate child care, Head Start and traditional school meal services (CACFP group)* 		2	2
Nutrition Education (overall category score)**		2	
Miscellaneous (not grouped by category)			
<ul style="list-style-type: none"> ▪ Quantify and evaluate healthy school nutrition environments effort (school district directors group)* 	2		
<ul style="list-style-type: none"> ▪ How can we impact/improve the public’s perception of school meals? (school district directors group)* 		2	1
<ul style="list-style-type: none"> ▪ Needs assessment and adult day care, family day care – practice-based nutrition standards (CACFP group)* 	3	1	1
<ul style="list-style-type: none"> ▪ Equipment/layout – child care centers, family day care (CACFP group)* 			1

* The group identifying a particular idea is indicated in the parentheses.

** Dots could be placed on a category or any specific item within a category; therefore, the total for the category will not match the ranking for the statements under each category.

References

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Appendix A
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Appendix B
Chat Discussion Summary

Chat Discussion Summary

Goal 1: Resource Management

Increase child nutrition professionals' capability to continuously improve the resource management of Child Nutrition Programs.

Labor

- Filling positions.
- Training diverse workforce.
- Hiring issues, doing more with less.
- Skills of the labor market... is it a problem?
- Need for qualified directors and supervisors who have relevant knowledge and skills and practical experience.
- Mentoring programs.
- What is the impact of the growth of charter schools and off-site meal programs?
- How can we help child nutrition professionals model the behavior we want the children to exhibit?
- Is there a relationship between nutrition knowledge and purchasing practices?

Financial

- Research the cost of preparing meals by various unit sizes.
- Who is getting the profit for food sold in school vending and stores?
- Less federal funding; how do we obtain funding for the programs?
- Cost comparison of "healthy choices" (vending and school stores).

Facilities

- Aging facilities.
- What are service methods to promote healthful choices?
- Is there a difference in nutritional intake by style of service?
- What is the impact of disposables on consumption?
- What happens to the nutritional integrity of school meals as districts move from scratch cooking to convenience foods?

Technology

- Evaluate school foodservice software programs.
- Does technology in the classroom (smart schools) have an impact on the school foodservice department?

Customer Satisfaction

- Find a balance between nutrition, finance, and customer satisfaction.

Other

- With an aging population, are there opportunities for CNP & CACFP?
- Working with Head Start, Women, Infants, and Children (WIC), and other agencies.
- Effectiveness of school meals programs... degree of substitutions and fortified foods.
- Values and beliefs of administrative and child nutrition personnel; how does this impact programs?

Goal 2: Nutrition Integrity

Increase child nutrition professionals' capability to continuously improve the nutritional integrity of Child Nutrition Programs.

Childhood Obesity

- Consolidate childhood obesity research.
- What factors are influencing obesity?
- What is the relationship between plate waste and obesity?
- "Slow food" and the relationship with prevalence of overweight and plate waste.

Special Dietary Needs

- Vegetarian
- Fiber
- Diabetes

Food Quality

- Manufacturing more nutritious food.

Nutrition Education

- What are effective methods to teach nutrition?
- Bibliography of materials for teaching nutrition.
- Nutrition education of parents and community.

Healthy School Environment

- What are children's current eating patterns?
- What influences children's eating behavior?
- What influences choices students make from vending machines?
- Balancing healthy school environment with operational issues.

- How do we get the public to view school meals as healthy?
- What percent of the diet is from school lunch?
- What are the most effective marketing methods?
- What is the effect of nutrition knowledge on school administrators' attitudes toward vending?
- Supersizing...is this a problem?
- Identify practical methods to increase consumption of fruits and vegetables.
- What is the effect of manipulating nutrient composition on student achievement?
(For example: Does the intake of protein influence academic achievement?)
- What are the effects of removing competitive foods on student behaviors and academic outcomes?
- What is the acceptability of healthy à la carte and vending options?
- How do exclusive bottling contracts affect foodservice operations?

Food Quality

- Food quality will be a long term issue.

Cultural Diversity

- Will the diversity of the student population require us to provide food differently?
At different times? Different types?

Other

- Parental/family responsibility... what are families eating and what type of exercise?
- Assessment of best practices for: à la carte, merchandising, promoting school meals, team building, handling diverse staff, biosecurity, strategies for working with school administrators.
- Are we ready for the new 2005 Dietary Guidelines? What stage of change are we in?
- How does privatization of foodservice operations affect a program's nutritional integrity?
- Infant feeding in SFS-supported programs.

Appendix C
Needed Research

Needed Research

- How much does it cost to produce an after-school snack?
- What are the characteristics or profile of a day care center? (staffing, programs, meal service, etc.)
- For commodities – how to get the best value for the dollars?
- What are the differences between various meal planning options? We know about the nutrients, but what about the food groups?
- What are all the funding streams from the federal government for nutrition education? (A note was later added to this: New Federal Grants Web site in development will identify all sources of nutrition education funding.)
- What recipes are being used? Who is using what?
- What effect does à la carte have on nutrition and revenue generation?
- We need standards/policies on food (particularly ethnic) being brought from home for use with large groups relative to food safety and impact on economic viability.
- Breakfasts following the meal pattern are not meeting the nutritional standards, particularly for the middle school and high school student.
- There is a need for nutrition standards to be set for “vended” foods for use (guidelines) for purchasing.
- What “vended”/healthy items are not acceptable to students?
- We need a consistent definition for “matching state funds.” How is each state handling this?
- We need research that shows people that we can provide healthy foods and still make a profit.

- How do types of service impact on intake in elementary schools?
- Is there a role for the dietetic technician in school foodservice? If so, what competencies and skills does the technician need?
- There is a need for an unifying consistent strategy for dealing with the issue of preparedness in schools.
- How early (what age) does osteoporosis set in? There is an issue of calcium intake/milk consumption in young children.
- Is there a format for written materials that would be most useful for NFSMI's audiences?
- Need to research the cost of Styrofoam versus paper versus hardware in foodservice.
- What impact does an eating program have on a child?
- What impact does a child care provider or Head Start teacher have on a healthier weight of a child?
- What is the most efficient way to transmit information created at NFSMI and the training relative to that information to constituents?
- Is there a way to document the fallout of a management company providing foodservice once it has left the system?
- What percentage of school divisions requires food service certification? Do they provide incentives for certification?
- What effect does self-service versus traditional service have on food costs and acceptability by students?
- What state agencies are addressing alternative calendars and what effect do alternative calendars have on ADP?
- Does distance education work for target audiences?

- How can we prove what effect the provision or lack of provision has on preschool children before they reach school on their ability to make good selections in a school environment?
- There is a need to evaluate nutrition education.
- What are the differences between rural/suburban/urban food service relative to production?
- How do we enlist the “successful” to spread success?
- In an offer versus serve, how do we get children to choose milk, particularly among black populations?
- How to get help to pass the fruit and vegetable grant.
- How can food service managers/staff get school principals/staff to recognize them as authorities?
- In child care settings, what’s on the written menu versus what gets served – issues of preparation and substitutions.
- How to fund research.

Another question was added at a later point in the conference:

- How to get directors to use the research results being generated by the Institute. How can it be shared and/or accessed by food service staff?

Appendix D
Building on Present Research Efforts

Building on Present Research Efforts

Goal 1: Resource Management

Increase child nutrition professionals' capability to continuously improve the resource management of Child Nutrition Programs. Current efforts include: labor, financial, facilities, technology, and customer satisfaction.

Group 1

- Explore tying in the customer satisfaction, Healthy School Nutrition Environment (HSNE), financial, etc. into the National Balanced Scorecard approach and awards (Baldrige).
- Apply gap analysis following the recent school health environment survey and develop strategies for bridging the gaps.
- Investigate ASFSA's credentialing exam to ensure it reflects NFSMI's identified competencies.
- Explore effective methods of dissemination and evaluate usage of NFSMI research and materials development, i.e., mailings, conference, regional, state presentations, newsletters, etc.
- Use case studies that demonstrate CN programs can remain financially viable while maintaining a focus on nutrition integrity.

Group 2

- Labor
 - Quality of training from technical schools (2-year, 4-year, time, amount of content).

- Staffing for limited serving time/needed staff per number of meals served by production system.
- Financial
 - Cost study of afterschool snack program.
 - Prices students willing to pay for à la carte “healthy” versus other foods.
 - Effect of á la carte sales on revenues.
 - Best value of USDA commodities – value-added versus scratch cooking.
 - Time parameters–scheduling meal periods.
 - FUNDmentals for CACFP.
 - Equipment costs/depreciation rates/life expectancy.
 - Equipment needs for nonconventional meal service.
- Customer satisfaction
 - Impact of various service systems (self-service versus others) on student participation and satisfaction.
 - Customer satisfaction of CACFP/Head Start parents – particular emphasis on infants/older babies/toddlers.
- Other
 - Resource directory for training.
 - Replication of study results in other settings.

Group 3

- Competency documents/self-assessment tools.
- Cost of after-school snacks.
- Financial information re: vended and à la carte foods and beverage contracts.

- Use of technologies to collect data quickly.
- Benchmarking information from FUNDmentals.
- Funding for nutrition education for foodservice personnel.
- Cultural diversity.
- Increase use of NFSMI resources.
- Evaluation instruments for training materials.

Group 4

- Sponsor monitors – extend to summer feeding service.
- Summer food service – need for training for private nonprofit sponsors (no experience with federal regulations, food service, managing food service programs). Note attached to the flipchart: Summer food service training for private nonprofits, contact: FLA Department of Education Summer Feeding, Charles Mulvaney (850) 245-9262 .
- Snack program: cost-effective, safe snacks.
- Terminology – “cook-chill,” etc.
- How to run financially sound program.
- Take checks/job description/performance standards.
- Better understanding of needs – small, medium.
- Plate waste – self-serve training line focus.
- Plate waste – elementary – effect of offer versus serve.

Group 5

- Expand FMIS model for CACFP to child care centers, family day care homes, adult day care.

- What is the most effective method of transmission of training and information to specific levels and to specific programs (examples – school foodservice, child care, state agency).
- Identify financial management training needs for managers.
- Expand study of financially successful operations.
- Modify FUNDmentals to include data on snacks.
- How to price à la carte items.
- How to determine most cost-effective way to use commodities.
- How to set national standards for financial accounting (not allowing regional, state or local interpretation), for example – how to allocate dollar commodities per school district.
- Is there a payback for certification/credentialing?

Group 6

- Self-assessment and evaluation tool based on job competencies.
- What is the best “delivery mechanism” to get research/materials to users (education, FSD, managers)?
- Determine use of current research and materials.
- Competencies/knowledge/skills for entry-level/“other” foodservice employees (CACFP, child care).
- FUNDmentals – need to continually maintain, enhance and upgrade – DON'T DROP!
- Foodservice systems survey re: food safety as relates to foodservice system and recipe development.
- Need to collect and share “best practices” in all areas/resources.

Goal 2: Nutrition Integrity

Increase child nutrition professionals' capability to continuously improve the nutritional integrity of Child Nutrition Programs. Current efforts include: childhood obesity, special dietary needs, food quality, nutrition education, healthy school environment, and cultural diversity.

Group 1

- Healthy School Nutrition Environment (HSNE) – facilitate the use of resources that bring a cross-section of stakeholder groups together.
- Tools for foodservice staff to use to promote HSNE.
- Strategies to increase involvement of foodservice staff in HSNE.
- Identify and share best practices to increase consumption of fruits and vegetables, farm to school initiatives, school gardens, coordinated school health, children with special needs.
- Identify effective nutrition programs and their characteristics.
- Extend HSNE to other settings.
- Wider dissemination of research findings.
- Compile NFSMI obesity-related research.

Group 2

- Role of child nutrition program in accommodating children with special needs – development of district policy for nutrition integrity.
- Nutrition standards for vending and à la carte.
- Clear definition/terminology of competitive foods, i.e., “vending,” “à la carte” items.
- Extend study on plate waste (environmental factors) to participation.
- Impact of no à la carte /vending items on financial bottom line and participation.

- Study on usage of USDA/toolkit recipes? Possibly regionalize.

Group 3

- Obesity
 - What is being done in schools/CACFP to see if schools will be held accountable?
 - What is NFSMI doing?
 - Examination of use of various portion sizes – “super sizes.”
- Special needs
 - Survey of schools/CACFP of what special needs are being addressed – expand/update previous research.
- Food quality
 - Comparison of meal quality by menu plan options by food preparation techniques.
 - Implications on student acceptance.
 - Connection of labor skills with food quality.
- Nutrition education
 - Nutrition knowledge of all school staff (food service, teachers, administrators).
 - Continuous training of staff.
- Healthy school environment
 - Perceived barriers to HSE from all staff – what are potential methods of overcoming barriers.
 - Food safety issues (hand washing).
 - Implications on à la carte/vended foods.

- Cultural diversity
 - Availability of culturally diverse menus/recipes.
 - Compilation of student acceptable menus for various multicultural populations.
 - Availability of materials in languages other than English.

Group 4

- Need to “tie” childhood obesity issue to healthy school environment.
- What is “food quality” (a “checklist?”)?
- Nutrient standards for à la carte and vended foods (tied to overall schools and environment).
- What USDA recipes are actually being used?
- Identify effective strategies for working with school boards (in promoting healthy environments).
- Best age and best methods for nutrition education.

Group 5

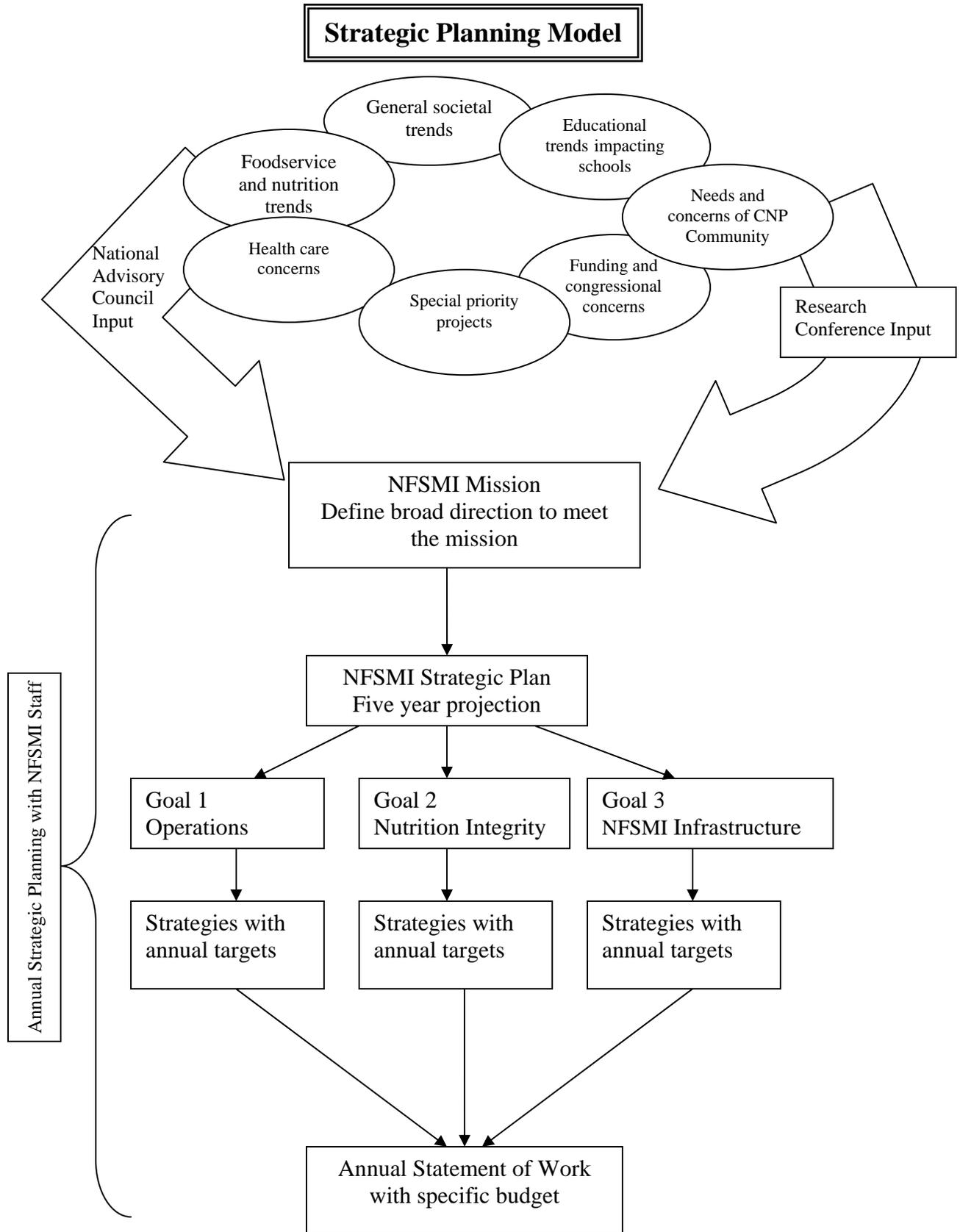
- How does nutritional content (as well as variety of food groups) vary by different menu options? Note attached to item: Manuscript under review: Effect of menu planning system on nutrient content of school lunches – pconnors@unt.edu.
- Standards for vended snack items and á la carte.
- Effect of lack of nutrition education among preschool children.
- What are the factors that create success when establishing a healthy school environment?

Group 6

- Consider the relationship between à la carte sales and Average Daily Participation (ADP) and the School Nutrition Dietary Assessment Study II (SNDA II) data.

- What standards could/should be established for à la carte?
- What efforts are being conducted to provide services to children with special needs?
- How do we help schools with culturally diverse population address childhood obesity?
- Conduct outcome evaluations for nutrition education best practices in schools.
- Collaborate with CDC and others on childhood obesity issues.
- Validate the CDC School Health Index for school foodservice module.
- Establish national standards for competitive foods, à la carte, and vending.
- Conduct nutrition assessment studies on the nutrition contribution of foods served versus foods planned.
- Conduct studies to ascertain how to increase fruit/vegetable consumption and evaluate costs.

Appendix E
Strategic Planning Model



Appendix F
New Research Opportunities

New Research Opportunities

School District Directors

- Five potential research areas:

1. A decision-making model for the best use of commodity dollars. “To process or not to process, that is the question.”

Potential partners:

Marlene Gunn

American Commodity Distribution Association (ACDA)

Rick Gresser

2. Factors influencing childhood obesity and other health issues. How can CN be proactive?

Potential partners:

CDC

Colleges and Universities

Janice Fletcher, University of Idaho (208-885-7321)

Susan Johnson, Colorado Medical Center Health Sciences (obesity/weight research)

Institute of Management Task Force on Childhood Obesity (meeting June 16) –

Shirley Watkins is on the steering committee

American Dietetic Association (ADA)

Obesity issues and grants (Mary Beth Whalen, General Mills Grants)

Position paper – “Prevention of childhood overweight and what should be done” 2001.

Center for Weight and Health, UC Berkeley, available on Web site

National Association for Sports and Physical Education, Web site:

www.aahperd.org/naspe

3. How can we impact/improve the public's perception(s) of school meals? (identify "public.")

Potential partner: ASFSA, Erik Peterson, Director of Public Awareness

4. Research meal costs by various unit sizes and service systems. (information by school site?).

Potential partner: state agencies

5. Who (i.e., teacher, school nurse, nutritionist, etc.) delivers the nutrition education message and what is the effect/outcome?

Potential partners:

CDC collaboration efforts

Health departments

ERS –

Joanne Guthrie; Team Nutrition

Clare Miller

Sarasota County, Florida Internship

- Other possibilities from the "Introductions" list:

1. Accountability measures (Baldrige, Balanced Scorecard) and best practices.

Potential partners:

USDA/AHS/DOE – Memorandum of understanding – Lori French

Baldrige expert – Julie Horine Edmistor, School of Education, University Of
Mississippi faculty

Association of School Business Officials (ASBO)

Association of School Principals

Other school administrator associations interested in total school excellence

2. Balance between finance and nutrition, including à la carte/vended foods.

Potential partners:

Katie Bark – MT DOE

California SFSA – some districts have “established” standards

Mary Story, University of Minnesota

3. Self-assessment for job competencies.

Potential partners:

Wisconsin DPI

ASFSA

Mary Hornig, Director of member services

Karen Kettlewell

Carolyn Keeney – 205-877-4572, ckeeney@homewood.k12.al.us

Colleges and Universities

- Five potential research areas:

1. Finding a balance between nutrition, finance, and customer satisfaction related to à la carte (to address obesity crisis).
2. Staffing patterns for food service systems.

Potential partner: Dot Pannell

3. Summer feeding – What is the nutrient intake of children who don't participate?
Potential partner: Office of Analysis Nutrition and Education /Food and Nutrition Service (OANE/FNS).

4. Financial management and record keeping – At what size school foodservice does automation (accounting, claims, and inventory) become essential?
Potential partner: Sandy Sadler (retired state agency), Texas

5. Attitudes and knowledge of managers and directors toward irradiation, other food safety issues.

Potential partners:

National Restaurant Association Educational Institute (NRA)

USDA-Food Safety Inspection Service (USDA/FSIS)

Mary Begalle – Minnesota Child Nutrition Director, contract with university

▪ Other possibilities from the “Introductions” list:

1. Financial Management Information System (FMIS) and FUNDmentals – benchmarking and case studies of financially successful operations.

2. Food quality.

Potential partners:

Food Service Management Educational Council (FSMEC) –Deb Canter

NFSMI–culinary skills scorecard.

3. Special diets – standards and effectiveness.

Potential partners:

American Dietetic Association,

American Diabetes Association

Ensley Howell – NFSMI

International Diabetes Center

Child and Adult Care Food Programs

- Five potential research areas:

1. Needs assessment – adult day care, family day care providers, and practice-based nutrition standards.

Potential partners:

State family day care associations (in all states)

Associations for the Education of Young Children (in all states)

Head Start associations and collaboration grants (in all states)

Hunger advocacy groups

The CACFP California Roundtable

California Food Policy Advocates

Data source – Children’s Defense Fund

FRAC

National Family Day Care Association

Kids Count (all states)– data source for child welfare background

The Sponsors Association,

CACFP-FDCH sponsors

State CACFP groups

2. Equipment/layout – child care centers, FDC homes.

Potential partners:

NAFEM

FSC Food Service Consultants Association (design facilities)

3. Physical activity/healthy weight – Impact of child care setting and provider.

Potential partners:

ADA – General Mills Grants

Action for Healthy Kids

Healthy Child Care America Awareness (American Academy of Pediatricians)

4. Nutrition education/consumer satisfaction – provider, children/parents, staff/community/administrators – most effective way to provide to students/children.

Potential partner: USDA Cooperative State Research, Education, and Extension Service (USDA/CSREES) grants to Extension

5. Seamless model to coordinate childcare, Head Start and traditional schools meals.

Potential partner: National Head Start Association

▪ Other possibilities from the “Introductions” list:

1. Characteristics of the Adult Day Care Program.

Potential partners:

National associations

Adult Day Care Association

2. Competences, knowledge, and skills needed for entry level SFSP, CACFP personnel.

3. What are the best format, content, dissemination and training of materials for a diverse audience?

Potential partners:

Food Stamp Nutrition Education Network (state level)

National Association for the Education of Young Children (Maria Robertson, Vice-President – Communications)

Erik Peterson, Director, Public Awareness at ASFSA

State Agency

Five potential research areas:

1. For national school meals programs, comparison of national quality of meals served versus meals planned (effect of substitutions) and use of fortified foods and their impact on total nutrients in meal.

Potential partners:

USDA: Food and Nutrition Service (FNS/USDA) and/or Economic Research Service (ERS/USDA) should be very interested in this.

2. Effects of offer versus serve on students' food selection and subsequent nutrient intake.

Potential partners:

Office of Analysis Nutrition and Education (OANE/FNS)

South Carolina Department of Education (Vivian Pilant – 803-734-8195)

3. Identify trends/futures in food marketplace and the impact on CNPs.

Potential partner: International Food Information Council (IFIC) – Sue Borra

4. What is the balance between nutrition, finance, and customer satisfaction in different size school foodservice sites and different production methods?

5. Effects of alternate methods of service of breakfast on nutrient intake and percentage of students eating breakfast versus no breakfast.

Potential partners:

Contract with universities

School Food Service Foundation

Susan Combs – Commissioner, Texas Department of Agriculture

National Dairy Association

Dairy Max

Southeast United Dairy Industry Association (SUDIA)

Vivian Pilant (803-734-8195)

Food Research Advisory Center (FRAC)

Child Nutrition Foundation (CNF).

Other possibilities from the “Introductions” list:

1. Identify barriers to and methods of increasing consumption of milk, fruits, and vegetables in child nutrition programs.

Potential partners:

Laurel Lambert, University of Idaho (208-885-6546)

Idaho Child Care Food Program (Seanne Safai, Idaho State Department of Education)

Recent National Dairy Council (NDC) pilot on increasing milk consumption (Camellia Patey)

National Dairy Association

Regional dairy associations

Produce manufacturers

American Cancer Society

Vivian Pilant (803-734-8195)

Dairy Max

Dairy councils

American Dairy Association

Dole Food Service – 5 A Day

American Commodity Distribution Association (ACDA)

2. Extension of competencies/knowledge, skills to summer food service program, especially training guidance for private, nonprofit programs.
3. Identify the most effective format and method of dissemination of research and educational materials.

Potential partners:

American Society for Training and Development (ASTD)

Marvin Williams, The University of Mississippi – Distance learning

Extension Division of Society for Nutrition Education.

School District Directors (group 2)

- Five potential research areas:

1. More broad-based implementation of coordinated school health (especially nutrition).

Potential partners:

CDC Division Adolescent and School Health (CDC/DASH) – contact Mary

McKenna, mmckenna@cdc.gov, 770-488-5187 plus funded partner states

for coordinated school health programs

American School Food Service Association – Clerkin.

2. Quantify and evaluate healthy school environment efforts.

Potential partners

USDA Team Nutrition – Julie Stauss

CDC Division Adolescent and School Health (CDC/DASH) – contact Mary

McKenna, mmckenna@cdc.gov, 770-488-5187 plus funded partner states

for coordinated school health and Division of Nutrition and Physical

Activity (DNPA);

CNF of ASFSA.

3. Effectiveness and cost of nutrition education.

Potential partners:

Contact with university

ERS/USDA.

4. Is there a difference in nutrient intake by style of service (and other factors)?

Potential partner: FSMEC (Jeannie Sneed)

5. Labor/workforce issues: image, training, diversity, dwindling.

Potential partner: ASFSA

Other possibilities from the “Introductions” list:

1. Vending/à la carte standards, acceptability, costs, quality, purchasing guidelines.

Potential partners:

Institute of Medicine Committee on Obesity (Shirley Watkins)

Alex Molnar, Arizona

Vivian Pilant, South Carolina

Kids First (nonprofit)

Rhode Island, Dorothy Hebert

California, Harold Goldstein (organization of public health)

San Antonio, Texas – Fit city vending guidelines

American School Business Officials (ASBO)

USDA

Vending – Dairy councils

Campbell Soup (Pepperidge Farms)

Kellogg (Krebler).

2. Afterschool snacks (costs).

Potential partners:

Dairy Council

USDA

University of Arkansas for Medical Sciences, Central Arkansas Veterans

Healthcare System (UAMS/VA) Dietetic Internship (Little Rock, AR) (Polly

Carroll and Ruth Johnston, Directors)

3. Evaluating relationships of professional standards and program successes.

Potential partners:

ASFSA, Mary Hornig (Director of Member Services)

NEHA

National Restaurant Association

5 A Day

3-a-day (calcium) programs.

After a large group review of the small group reports, several participants wanted to add additional items to the list of possibilities outside “five” that each group could propose. They were given the option of writing additional items on an index card and handing the index card to the facilitator. The items from the index cards follow:

- What are the nutritional standards for purchasing à la carte/vending snacks for sale to students?
- Identification of state “best practices” as defined by state’s student Average Daily

Participation (ADP) (NSLP and SBP). Factors:

- Certification/credentialing of SFS personnel
- Training
- Financial assistance from state
- Competitive foods policy
- Number of food management companies in state
- Establishing nutrition practices for CACFP (and SFSP) to meet Dietary Guidelines.

Checklist:

- Menu planning – nutrient analysis
- Recipes
- Procurement
- What are the ramifications of 100% verification?

- Could an effective Child Care Food Program setting impact the beliefs of children toward participation in a school setting?
- Resource/material needed very simple “need to know,” “how to address” food safety. (HACCP) materials appropriate for use by school staff, CACFP providers, etc.
- What are the current and planned personnel preparation efforts from higher education institutions to address infant-toddler food service child care (CACFP) issues?

Appendix G
New Research

New Research

Financial, customer service, nutrition balance

- What is the balance between nutrition, finance, and customer satisfaction in different size sites and production methods? (state agency)
- Financial management and record keeping – At what size in School Food Authority does automation (accounting, claims, and inventory) become essential? (colleges and universities)
- Research meal cost by various unit sizes and service systems. (school district directors)
- Define a decision-making model for the best use of commodity dollars – “to process or not to process.” (school district directors)
- Evaluate the effectiveness of nutrition education, including different types of interventions. (school district directors)
- How are nutrition education needs and consumer satisfaction measured in the CACFP setting for children, parents, staff, community, and administrators? (CACFP)

Nutrition integrity – style of service

- Is there a difference in nutritional intake by style of service and other factors? (school district directors)
- What are the effects of offer versus serve (OVS) on students’ food selections and subsequent nutrient intake? (state agency)
- Effects of alternate service of breakfast on participation and nutrient intake, and percentage of students eating breakfast versus no breakfast. (state agency)

- For NSMP – comparison of nutritional quality of meals served versus meals planned – (effect of substitutions) – use of fortified foods and their impact on total nutrients in meals. (state agency)
- Summer feeding – what is the nutrient intake of children who do not participate? (colleges and universities)

Obesity/healthy weight

- How do physical activity and a healthy weight impact child care settings and providers? (CACFP)
- Factors influencing childhood obesity and other health issues – How can CNPs be proactive? (school district directors)
- Finding a balance between nutrition, finance, and customer satisfaction related to à la carte. (to address obesity crisis) (colleges and universities)

Who – nutrition education

- Who (i.e., teachers, school nurse, nutritionist, etc.) delivers the nutrition education message and what is the effect/outcome? (school district directors)
- More broad-based implementation of coordinated school health, especially nutrition. (school district directors)

Trends and marketplace

- Identify trends/futures in the food marketplace and the impact on CNPs – include look at fortification, etc. (state agency)
- Attitudes and knowledge of managers and directors toward irradiation, other food safety issues. (colleges and universities)

- Seamless model to coordinate child care, Head Start, and traditional school meal services.
(CACFP)

Labor/workforce

- Staffing patterns for food service systems. (colleges and universities)
- Labor/workforce issues: image, training, diversity, dwindling size of workforce. (school district directors)

Miscellaneous (not grouped)

- Quantify and evaluate healthy school nutrition environments effort. (school district directors)
- How can we impact/improve the public's perception of school meals? (school district directors)
- Needs assessment and adult day care, family day care – practice-based nutrition standards. (CACFP)
- Equipment/layout – child care centers, family day care. (CACFP)

Appendix H
Time Line for Action

Time Line for Action

(These data are presented in Table 1)

Category

- Obesity and healthy weight – 9 dots within the first year, 5 dots within 3 years, 4 dots within 5 years.
- Financial and customer satisfaction – 8 dots within the first year, 3 dots within 3 years, 2 dots within 5 years.
- Labor/workforce – 5 dots within the first year, 7 dots within 3 years, 4 dots within 5 years.
- Nutrition integrity/style of service – 5 dots within the first year, 5 dots within 3 years, 6 dots within 5 years.
- Who should be doing nutrition education – 1 dot within the first year, 3 dots within 3 years, 5 dots within 5 years.
- Trends/marketplace – 5 dots within 3 years, 8 dots within 5 years.
- Nutrition education – 2 dots within 3 years.

Items receiving individual dots

- Finding a balance between nutrition, finance, customer satisfaction related to á la carte (to address obesity crisis) – 5 dots within the first year, 1 dot within 3 years.
- Needs assessment and adult day care, family day care – practice-based nutrition standards – 3 dots within the first year, 1 dot within 3 years, 1 dot within 5 years.
- For NSMP – comparison of nutritional quality of meals served versus meals planned – (effect of substitutions) – use of fortified foods and their impact on total nutrients in meals – 2 dots within a year, 2 dots within 3 years.

- Quantify and evaluate healthy school nutrition environments effort - 2 dots within the first year.
- Who (i.e., teachers, school nurse, nutritionist, etc.) delivers the nutrition education message and what is the effect/outcome? - 1 dot within first year, 1 dot within 3 years, 1 dot within 5 years.
- Effects of alternate service of breakfast on participation and nutrient intake, and percentage of students eating breakfast versus no breakfast – 1 dot within a year, 1 dot within 3 years, 2 dots within 5 years.
- Factors influencing childhood obesity and other health issues – how can CNPs be proactive? – 1 dot within the first year, 1 dot within 3 years, 1 dot within 5 years.
- Seamless model to coordinate child care, Head Start and traditional school meal services – 2 dots within 3 years, 2 dots within 5 years.
- How can we impact/improve the public’s perception of school meals? - 2 dots within 3 years, 1 dot within 5 years.
- More broad-based implementation of coordinated school health, especially nutrition – 1 dot within 3 years, 1 dot within 5 years.
- Attitudes and knowledge of managers, directors toward irradiation, other food safety issues – 2 dots within 3 years.
- Identify trends/futures in the food marketplace and the impact on CNPs – include look at fortification, etc. – 2 dots within 5 years.
- Summer feeding – what is the nutrient intake of children who do not participate? – 1 dot within 5 years.
- Equipment/layout – child care centers, family day care – 1 dot within 5 years.