

# **Mississippi School Nutrition Environment Evaluation Data System (MS NEEDS)**

## **Technical Report Year One (2008-2009) Outcomes**



**The University of Mississippi**

**UM Research Team:**

**Teresa Carithers, PhD, RD,  
LD  
Principal Investigator**

**Laurel Lambert, PhD, RD,  
LD  
Co-Principal Investigator**

**Emmy Parkes, RD, LD,  
CDE  
Investigator**

**Aimee Dickerson, MS  
Project Coordinator**

**Patricia Edwards  
Research Assistant**

**Collaborators:**

**Lei Zhang, PhD, MBA  
MSDH**

**Sue Potter, MS, ETR  
Associates**

**Karin Coyle, PhD, ETR  
Associates**

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**Mississippi School Nutrition Environment Evaluation Data System (MS NEEDS)**

A school's nutrition environment is known to play a critical role with consumption patterns of the children they serve. To gain an independent assessment of statewide progress in implementation of school nutrition policies, staff at the University of Mississippi conducted onsite assessments of the school nutrition environments in 133

schools which functioned as a statewide representative sample, to evaluate the stage of implementation and level of compliance with Mississippi's established policies.

*Study Design.* A statewide sample of schools (150 per year for the next four years) was obtained using selection probability proportional to school enrollment size to assure representation of schools with demographic mix and regional placement. The Mississippi School Nutrition Environment Evaluation Data System (MS NEEDS) instrument was designed to assess the level of nutrition policy implementation at each school, provide a comparison between schools with different demographics, and through repeated measures, show nutrition-related environmental changes over time. A statewide report, presenting cross-sectional analyses assessing statewide trends, is generated each year to provide updates for key stakeholders. The final report will include a comprehensive report of statewide progress by public health region.

The MS NEEDS instrument was used to collect data through (1) observation of school lunches (Observation Form), (2) interviewing the Child Nutrition Program (CNP) manager (Interview Form), and (3) reviewing school and district written documentation of food policies and procedures (Written Documentation Form). In addition, (4) detailed information was collected about the food and beverage items available at school stores, vending machines, a la carte (Competitive Food Venues Forms). Please note that although the Healthy Student Act addresses school breakfast meals as well as lunch, only the lunch meals were observed. Where possible, data was collected about breakfast meals through the interview and written documents.

## **METHODS**

### **Evaluation Design**

An evaluation protocol was developed to assess the adoption of the Mississippi Health Students Act (MHS Act) in the schools' nutrition environment. The MHS Act's criteria were divided into "Policy Points" that were used to measure schools' compliance with the MHS Act. The evaluation was conducted through interviews, observations, and the manual gathering of information for the food and beverage venues within each school's child nutrition program and school grounds.

The mission of MS NEEDS was to help organize and better understand through meaningful indicators:

- The implementation status of the MHS Act throughout schools in Mississippi

- Ways the MHS Act has impacted changes in the MS school nutrition environment. .
- Barriers/challenges and successes to implementation of the MHS Act.

**Study design:** The study utilizes a cross-sectional design aimed to collect an annual snapshot of what is happening regarding nutrition policy development and implementation across a random sample of Mississippi public schools annually. Data are collected via interviews with school Child Nutrition Program (CNP) managers, existing production records and menus, observations of school cafeterias during lunch periods, and recording food items for sale in vending and school store venues. Similar data will be collected annually for 3 more years to investigate how MS public school nutrition environments may change. This report is structured around the nutrition related sections of the MS Healthy Students Act. The MS NEEDS study evaluated pieces in the legislation, called “policy points” in this report. The policy point numbering system maps directly to that in the legislation. Multiple indicators within and across data sources were used to address several policy points, as appropriate. Results tables are organized around the data sources and school levels – elementary, middle/junior high, and high – to facilitate the comparison of findings across both dimensions.

**Sampling Frame.** The sampling frame was obtained from the MDE Students Enrollment Database in November 2008, which provided data for fall of 2007-08. Schools serving only special education students were excluded from the sampling frame, as were schools with a total enrollment of less than 50 students and those serving only Pre-Kindergarten (PK) or Pre-Kindergarten and Kindergarten (PK-K) students. The sampling frame was stratified by school level. Per MDE classification, schools were eligible for the elementary sample if they served any grade Kindergarten (K) through 5<sup>th</sup> grade, schools serving any grade 6 through 8 were eligible for the middle sample, and schools serving any grade 9 through 12 could be selected into the high school sample. Schools serving grades from more than one level were represented in more than one sampling frame as appropriate, e.g., a 7-12 school was eligible to be included in both the middle and high school samples. Based on the criteria above, the final sampling frame included 538 elementary schools, 387 middle schools, and 254 high schools. This final sampling frame represents 895 unique schools, 310 of which served more than one level, i.e., were “multilevel”.

**Subjects and Sampling Methods.** Schools were selected using Simple Random Sampling stratified by school level. Data will then be weighted to reflect the demographic composition (e.g., race, gender, etc) of all students from the schools eligible for this study. The final year 1 sample was drawn using the SAS 9.2 (Carry, NC, 2008) *Proc Select* procedure. Among the 895 eligible schools, 50 elementary, 50 middle, and 50 high schools were selected as the study sample, representing 150 school levels. The initial project outcomes are reported as non-weighted data for the total schools surveyed in Mississippi. Of the 150 schools randomly selected into the year 1 sample, 141 agreed to participate (94% participation rate). This resulted in 133 school cafeteria sites visited and included in the analyses (20 classified as elementary schools, 13 classified as middle schools, 31 classified as high schools, and 69 schools serving more than one level). Four multilevel schools were selected for the middle and high school sample levels; two multilevel schools were selected into all three school sample levels. This yielded a final sample of 46 elementary school levels, 47 middle school levels, and 48 high school levels.

Note: A clarification of the All Schools Column Total (add 4 for the 2 schools in all 3 samples (counted 2 times in the All Schools column, but 6 times in the sub-sample columns, 6-2=4. Add 4 for the 4 schools in both the middle school and high school samples (counted 4 times in the All Schools column, but 8 times in the sub-sample columns. 8-4=4). Therefore, 133 + 8 = 141.)

Demographics of the baseline sample are provided in Table 1. They were obtained from the MDE Superintendent’s Annual Report 2008-09 which was posted 12-22-08 on <http://orshome.mde.k12.ms.us/ors/CombIndex2010.html#pupil> (accessed July 7, 2009). The distribution of participating schools within Public Health Districts is presented in Table 2. These estimates were obtained from the U.S. Census Bureau and were aggregated to public health district level.

**Table 1. Demographics of sample**

Demographic Indicator	All Schools (n=133)		Elementary (n=46)		Middle (n=47)		High (n=48)	
	Mean	Range	Mean	Range	Mean	Range	Mean	Range
Sex: % females per school	48.7	42.3-55.4	47.8	42.3-54.2	48.4	43.4-53.0	49.8	45.8-55.4

Demographic Indicator	All Schools (n=133)		Elementary (n=46)		Middle (n=47)		High (n=48)	
	Mean	Range	Mean	Range	Mean	Range	Mean	Range
Race: % students per school								
Asian	0.6	0.0-9.9	0.5	0-3.9	0.4	0-3.5	1.9	0.0-9.9
Black	57.4	0.0-100.0	59.2	2.0-100.0	55.8	0.0-100.0	54.5	3.7-100.0
Latino(a)	1.6	0.0-9.8	2.4	0-9.0	1.2	0.0-9.8	1.3	0.0-7.3
Native American	0.2	0.0-3.8	0.2	0-3.8	1.8	0.0-3.88	0.3	0.0-3.8
White	40.1	0.0-98.6	37.7	0-91.1	42.4	0.0-98.6	43.1	0.0-93.9
SES: % students per school in poverty <sup>a</sup>	64.5	6.3-100.0	67.4	6.3-100.0	64.2	15.1-100.0	59.9	16.9-100.0

<sup>a</sup> Poverty is defined as being eligible for free lunch.

**Table 2. Distribution of Schools per Mississippi Health Districts**

Health District	All Schools (n=133)	Elementary (n=46)	Middle (n=47)	High (n=48)
Northwest MS	8.3	10.9	2.1	10.4
Northeast MS	9.0	8.7	10.6	6.2
Delta Counties	12.0	10.9	14.9	10.44
Tombigbee Area	11.3	10.9	19.1	12.5
West Central MS	15.0	23.9	6.4	12.5
East Central MS	9.8	6.5	14.9	8.3
Southwest MS	8.3	6.5	10.6	6.2
Southeast MS	15.0	10.9	14.9	18.8
Gulf Coast	11.3	10.9	6.4	14.6

## Instruments

*Interview Form.* Each school’s Child Nutrition Program (CNP) Manager provided information about nutrition-related policies adopted by the school and how those policies had been implemented to date. Verbal responses to both quantitative and open-ended qualitative questions, as well as data pulled from written documentation was recorded on the Interview Form. Written documentation provided by the CNP manager included the following: production records and lunch and breakfast menus from the first 4 full weeks after Labor Day, the school Wellness Policy, food safety policies, other school nutrition-related policy documents, and kitchen staff training records. Most policy points of the MHS Act were covered on the Interview Form.

*Observation Form.* Data about schools’ implementation of the MHS Act was collected on a single day through observation. Data recorded on the Observation Form primarily documented evidence of a school’s compliance within the kitchen and cafeteria settings as observed during the lunch periods. Example indicators include the following: the types of fruits, vegetables, and beverages served at lunches; whether whole grain and “0 trans fat” foods were sold; if and how competitive foods were sold; evidence of kitchen staff using written documentation for HACCP food safety plans; and ratings of the general atmosphere in terms of promoting healthier food options. Detailed information about specific food items sold were recorded on accompanying forms, the Reimbursable Meal, Vending, and A La Carte Foods forms, all of which were incorporated into the Observation protocol.

*Reimbursable Meal Form.* Data collectors documented the specific food and beverage items sold as part of the reimbursable lunch meal on the observation day. For each item they recorded a brief description, whether it was available only with the meal or if extra portions were for sale, whether the item was part of the original menu or was a substitution, and whether substitutions were reanalyzed for nutrients. In addition, if extra servings of the item were

available after purchasing the meal, data collectors noted the price of the extra serving and its size in comparison to the portion served with the meal.

*A La Carte Foods Form.* Data were also collected on foods and beverages sold a la carte during lunch periods. Data collectors recorded a description of each item, whether an item was available for sale without having purchased a meal, the item's price, and either the number of calories or enough information to determine caloric content at a later date.

*Vending/School Store Form.* A form was completed for each vending machine and/or school store in the school. First, data collectors documented general information about the machine or store itself including hours of operation, location, group responsible for the machine or store, and if a machine was in the faculty lounge, and whether or not students had access. Then item specific details were noted, such as manufacturer, product name, flavor, size, number of slots (vending machines only), and price.

## **Procedures for Data Collection**

The evaluation tool was pilot tested for clarity and validity in a local elementary and high school (who were omitted from the study) resulting in some revisions. Data collection began in February 2009. Ten consultants (data collectors) with nutrition and/or educational background were recruited to collect data in the schools using the evaluation tool. Each of the data collectors were trained by the same researcher in two schools before evaluating a school on their own.

The program coordinator was responsible for arranging school visits through communication with the CNP district director and the data collector assigned to the school. Once arrangements were made to visit the school, a document with all the requested written documentation was faxed or emailed to the CNP district director. The written documents were requested to be at the school when the data collector met with the CNP manager.

Upon arrival at the school, data collectors began the evaluation process by meeting with and interviewing the CNP manager. The interview took approximately 60-90 minutes. Once the interview was completed data collectors used their time to gather data on the competitive food venues such as vending machines and/or school stores. The observation evaluation was conducted during the lunch time to observe the reimbursable meal and a la carte item sales.

The evaluation took an estimated time of five to six hours. Upon completion of the evaluation, data collectors mailed or delivered the evaluation document to the program coordinator. Once the evaluation tool was received it was reviewed for quality assurance. Any missing data or data that was unclear was investigated by the program coordinator with assistance from the data collector who evaluated the school. Once data was reviewed and validated it was ready to be entered into the MS NEEDS database program.

Upon completion of data entry for all 133 participating schools, the data was forwarded to ETR for data analysis.

## **Analyses**

Data from year one of this study were used to establish baseline levels on a variety of school nutrition indicators. Therefore basic descriptive statistics are presented in this report. Means and frequencies are presented for all schools and by school level – elementary, middle, and high school. One-way analysis of variance (ANOVA) or Pearson Chi Square were used, as appropriate, to determine if any significant differences existed between school levels on the various outcomes.

## RESULTS

The results are presented by sections which correspond to the main policy points from the MS Health Students Act as described above. Data results for year one reflect non-weighted data, however future analyses will be using weighted data for annual analyses and analysis of trends.

### **Section A: Healthy Food and Beverage Choices**

#### **Policy Point A.1: A minimum of one fresh fruit or vegetable choice should be offered to students each day.**

Table 3. Percent of schools that served at least one fresh fruit or vegetable at lunch.

Source and Indicator	All Schools	Elementary Schools	Middle/Jr High Schools	High Schools
<b><i>Production Records</i></b>	<b><i>(n=127)</i></b>	<b><i>(n=45)</i></b>	<b><i>(n=44)</i></b>	<b><i>(n=46)</i></b>
Percent of schools that served at least one fresh fruit <i>or</i> vegetable all 5 days of the week for:				
0 weeks	12.6	15.6	11.4	10.9
1 week	10.2	11.1	1.4	8.7
2 weeks	11.8	11.1	18.2	4.3
3 weeks	14.2	15.6	11.4	15.2
4 weeks	51.2	46.7	47.7	60.9
<b><i>Observation</i></b>	<b><i>(n=129)</i></b>	<b><i>(n=45)</i></b>	<b><i>(n=46)</i></b>	<b><i>(n=45)</i></b>
Percent of schools that served at least one fresh fruit <i>or</i> vegetable at <i>all</i> observed lunches	79.8	80.0	71.7	86.7

NOTE: The data collector reviewed production records for four weeks with the CNP manager. All fresh fruits and vegetables identified by the CNP manager were highlighted by the data collector. The above table reflects that 51.2% of schools offered at least one fresh fruit or vegetable for four consecutive weeks. However, during the day of observation, approximately 80% of schools offered only one fresh fruit or vegetable.

Table 4. Percent of schools that served fresh fruit and fresh vegetables at lunch.

Source and Indicator	All Schools	Elementary Schools	Middle/Jr High Schools	High Schools
<b><i>Production Records</i></b>	<b><i>(n=130)</i></b>	<b><i>(n=45)</i></b>	<b><i>(n=46)</i></b>	<b><i>(n=47)</i></b>
Percent of schools that served fresh <i>fruit</i> every day for:				
0 weeks	34.6	40.0	34.8	29.8
1 week	13.1	8.9	17.4	12.8
2 weeks	16.2	15.6	17.4	17.0
3 weeks	12.3	15.6	8.7	10.6
all 4 weeks	23.8	20.0	21.7	29.8
Percent of schools that served fresh <i>vegetables</i> every day for:				
0 weeks	57.7	68.9	57.4	40.4
1 week	13.8	11.1	12.8	19.1
2 weeks	10.0	11.1	12.8	8.5
3 weeks	9.2	4.4	6.4	14.9
all 4 weeks	9.2	4.4	8.5	17.0
<b><i>Observation</i></b>	<b><i>(n=129)</i></b>	<b><i>(n=45)</i></b>	<b><i>(n=47)</i></b>	<b><i>(n=46)</i></b>
Percent of schools that served fresh <i>fruit</i> at all observed lunches	69.0	66.7	65.2	73.3
Percent of schools that served fresh <i>vegetables</i> at all observed lunches	47.0	47.8	42.6	54.3

NOTE: A higher percentage of schools were able to serve fresh fruits when compared to fresh vegetables. There may be several factors contributing to the higher percentage of fresh fruit offerings. Through discussions with CNP managers, it appears that fresh fruit was more often provided through commodities than fresh vegetables. It also appears that there are more fresh fruit options than fresh vegetables that students will eat.



**Policy Point A.2a: School menus shall offer a minimum of three different fruits weekly.**

Over 90% of all schools, regardless of level, was able to comply with the policy to offer at least 3 different types of fruit each week (see Table 3) as indicated in 4 full weeks of production records. In fact, on average, schools offered more than double the required number of fruit types at lunch. Few schools reported experiencing barriers to meeting this policy (Not shown).

Table 5. Variety of fruit types served weekly at lunch.

Source and Indicator	All Schools	Elementary Schools	Middle/Jr High Schools	High Schools
<b><i>Production Records</i></b>	<b><i>(n=130)</i></b>	<b><i>(n=40)</i></b>	<b><i>(n=47)</i></b>	<b><i>(n=45)</i></b>
Percent of schools that served a minimum of 3 different fruits per week for:				
0 weeks	0.0	0.0	0.0	0.0
1 week	0.8	0.0	2.2	0.0
2 weeks	1.5	0.0	2.2	2.1
3 weeks	3.1	5.0	2.2	2.1
all 4 weeks	94.6	95.0	93.5	95.7
Average number of fruit types served per week (over the 4 week period)	x = 7.3 std = 2.1	x = 6.7 std = 1.8	x = 7.3 std = 2.4	x = 7.5 std = 2.1

NOTE: Types of fruits included were canned, frozen, pre-prepared, and dried. CNP had no barriers and were able to fully comply.

**Policy Point A.2b: School menus shall offer a minimum of five different vegetables weekly.**

As indicated in Table 4 below, the four weeks of production records indicated that approximately 85% of all schools complied with the policy to serve a minimum 5 different vegetable types each week. On average, schools served approximately 8 types of vegetables weekly. Few schools reported experiencing barriers to meeting this policy (not shown).

Table 6. Variety of vegetable types served weekly at lunch.

Source and Indicator	All Schools	Elementary Schools	Middle/Jr High Schools	High Schools
<b><i>Production Records</i></b>	<b><i>(n=129)</i></b>	<b><i>(n=39)</i></b>	<b><i>(n=46)</i></b>	<b><i>(n=45)</i></b>
Percent of schools that met the policy each week for:				
0 weeks	2.3	2.3	2.2	2.1
1 week	0.8	0.0	0.0	2.1
2 weeks	3.9	9.1	2.2	0.0
3 weeks	7.0	2.3	6.7	12.5
4 weeks	86.0	86.4	88.9	83.3
Average number of vegetable types served per week	x = 7.9 std = 2.0	x = 7.7 std = 1.8	x = 7.4 std = 2.4	x = 8.0 std = 2.1

Note: Types of vegetable included were canned, frozen, and pre-prepared. CNP had no barriers and were able to fully comply. It would be interesting to investigate the contribution of potatoes to the number of vegetable offerings.

**Policy Point A2.3: Schools should try to serve dark green and/or orange vegetables or fruits three times per week.**

Lunch productions records indicated a greater variation in schools' compliance with the policy of serving dark green and/or orange vegetables or fruits at least 3 times a week. Approximately 15% of all schools met the criteria for all 4 weeks according to the production records submitted, ranging from 4.9% of elementary schools to 21.7% of high schools (Table 5). Of particular note is that approximately 40% of schools did not meet this policy for any week, suggesting that this policy poses more challenges for schools than the previous policy.

Table 7. Percent of schools that served three or more dark green and/or orange fruit and vegetable types.

Source and Indicator	All Schools	Elementary Schools	Middle/Jr High Schools	High Schools
<b><i>Production Records</i></b>	<b><i>(n=122)</i></b>	<b><i>(n=41)</i></b>	<b><i>(n=43)</i></b>	<b><i>(n=46)</i></b>
Percent of schools that met the policy each week for:				
0 weeks	41.0	48.4	44.2	41.3
1 week	17.2	24.4	9.3	15.2
2 weeks	15.6	4.9	27.9	10.9
3 weeks	11.5	17.1	4.7	10.9
4 weeks	14.8	4.9	14.0	21.7
Percent of schools serving the 5 most common types				
Carrots	93.1	91.1	97.8	91.7
Turnip Greens	70.2	68.9	63.0	70.8
Cantaloupe	64.1	65.2	65.2	62.5
Sweet Potatoes	43.5	45.7	45.7	35.4
Yams	24.4	21.7	21.7	25.0

NOTE: The MHS Act does not identify what comprises dark green and/or orange vegetables and fruits. This has led to some uncertainty as to how this policy point should be evaluated. CNPs following the MS Cycles II menus may find it difficult to incorporate the fruits and vegetables if they are not included three times per week.

**Policy Point A.3: Flavored nonfat, low-fat, or reduced-fat milk shall contain no more than 160 calories per 8-ounce serving.**

Table 8. Types of milk served at lunch.

Source and Indicator	All Schools	Elementary Schools	Middle/Jr High Schools	High Schools
<b>Observation</b>	<b>(n=122)</b>	<b>(n=43)</b>	<b>(n=42)</b>	<b>(n=44)</b>
Percent of schools that met the criteria for all milk items served at all lunches.	97.5	95.3	100.0	97.7
Percent of schools that served a type of <i>white</i> milk				
Non-fat	76.2	30.2	19.0	25.0
1% fat	9.0	4.7	14.3	9.1
2% fat	98.4	97.7	97.6	100.0
Percent of schools that served a type of <i>flavored</i> milk				
Non-fat	9.8	9.3	9.5	9.1
1% fat	96.7	95.3	97.6	97.7
2% fat	3.3	7.0	0.0	2.3

NOTE: No schools served whole milk. Only 3.3% were found to offer 2% flavored milk which exceeds the 160 calories per 8 ounce serving. It is suggested that evaluation of this policy point may not be needed.

**Policy Point A.4: Schools shall only offer 100% fruit and vegetable juice with no added sugar.**

Table 9. Types of juice served at lunch.

Source and Indicator	All Schools	Elementary Schools	Middle/Jr High Schools	High Schools
<b>Observation</b>	<b>(n=85)<sup>a</sup></b>	<b>(n=30)</b>	<b>(n=29)</b>	<b>(n=29)</b>
Percent of schools that met the criteria for all juice items served at all lunches	98.8	100.0	96.6	100.0

<sup>a</sup> Only 85 of 133 schools (64%) served juice; 30 of 46 elementary schools (65%), 29 of 47 middle schools (62%), 29 of 48 high schools (60%) served juice.

NOTE: This policy point appears to be in compliant. It is suggested that evaluation of this policy point may not be needed.

**Section B: Healthy Food Preparation**

**Policy Point B.1: Schools shall comply with the existing NSLP/SBP meal pattern requirements.**

Table 10. Use of meal patterns complying with NSLP.

Source and Indicator	All Schools	Elementary Schools	Middle/Jr High Schools	High Schools
<b><i>Interview</i></b>	<b><i>(n=133)</i></b>	<b><i>(n=46)</i></b>	<b><i>(n=47)</i></b>	<b><i>(n=48)</i></b>
Percent of schools that reported using a valid meal pattern	96.2	97.8	97.9	93.8
Percent of schools using listed meal pattern <sup>a</sup>				
MS Cycles II	81.2	80.4	83.0	91.3
Traditional	3.8	2.2	4.3	4.2
Nutrient Standard	2.3	0.0	2.1	4.2
NutriKids	41.4	30.4	44.7	45.8
Other Meal Pattern <sup>b</sup>	6.0	4.3	6.4	6.3

<sup>a</sup> Note that all the listed meal patterns, except “Other,” are valid in that they comply with NSLP/SBP meal patterns.

<sup>b</sup> Other included: Chartwells and 6 week Cycle menu

NOTE: Percent of schools that combined two or more meal patterns is as follows:

All = 30.8%

Elementary = 15.2%

Middle = 38.3%

High = 65.4

Table 11. Percent of schools confirming that food substitutions met NSLP meal patterns.

Source and Indicator	All Schools	Elementary Schools	Middle/Jr High Schools	High Schools
<b><i>Observation – Reimbursable Meal Form</i></b>	<b><i>(n=16)<sup>a</sup></i></b>	<b><i>(n=6)</i></b>	<b><i>(n=5)</i></b>	<b><i>(n=7)</i></b>
Percent of schools serving meal item substitutions that re-analyzed <i>all</i> substitutions for nutrient content	12.5%	16.7%	0.0%	14.3%

<sup>a</sup> Data collectors observed that only 30 of 132 schools (22.7%) made any substitutions for food items on the Reimbursable Meal. Elementary: 11/46 (23.9%); Middle: 12/46 (26.1%); High 10/47 (21.3%). Information about the analysis of substituted meal items was available at only 16 of the 30 schools.

NOTE: CNP managers used the “Red book” or the reference guide used to substitute food items to maintain nutrient integrity. Data collectors observed that substitutions tended to be foods leftover from a previous lunch meal. It is uncertain if the leftover item had been verified as meeting the nutrient requirement.

**Policy Point B.2a: Schools develop and implement a food safety program by July 1, 2005.**

Table 12. Percent of schools that developed and implemented a food safety program.

Source and Indicator	All Schools	Elementary Schools	Middle/Jr High Schools	High Schools
<b>Interview</b>	<b>(n=131)</b>	<b>(n=46)</b>	<b>(n=45)</b>	<b>(n=48)</b>
Percent of schools that developed a program by date of interview <sup>a</sup>	88.5	82.6	91.1	93.8
Percent of schools that implemented a program by date of interview <sup>a</sup>	74.0	73.9	75.6	68.8

<sup>a</sup> MS NEEDS interviews were conducted between February and May of 2009.

NOTE: There was some confusion as to the difference between developed and implemented. There appears to be some uncertainty as to the components that define food safety program and components that define a HACCP program and are they different.

**Policy Point B.2b. Every school shall develop a Hazard Analysis and Critical Control Point (HACCP) system plan as required by the Child Nutrition and WIC Reauthorization Act of 2004.**

Table 13. Development and implementation of HACCP plan and compliance with individual appliance types.

Source and Indicator	All Schools		Elementary Schools		Middle/Jr High Schools		High Schools	
<b>Interview</b>	<b>(n=128)</b>		<b>(n=46)</b>		<b>(n=44)</b>		<b>(n=46)</b>	
Percent of schools that developed a HACCP plan	94.5		91.3		97.7		95.7	
Indicator	All Schools		Elementary Schools		Middle/Jr High Schools		High Schools	
<b>Observation</b>	n <sup>a</sup>	%	n <sup>a</sup>	%	n <sup>a</sup>	%	n <sup>a</sup>	%
Percent of schools that documented the temperature in the preceding 24 hours for all "back of house":								
Kitchen refrigerators	129	89.9	43	93.0	46	91.3	47	87.2
Kitchen freezers	128	93.0	43	95.3	46	93.5	46	91.3
Food warmers	100	69.0	33	66.7	37	67.6	37	67.6
Kitchen storerooms	129	86.8	40	90.9	46	84.8	46	87.0
Kitchen dishwashing	128	77.8	30	70.0	33	72.7	32	87.5
Percent of schools that documented the temperature in the preceding 24 hours for all "front of house":								
Service tray lines	128	83.6	44	84.1	46	82.6	45	86.7
Service refrigerators	128	80.5	44	79.5	45	88.9	46	71.7
Service freezers	69	69.6	23	69.6	21	71.4	27	63.0
Food warmers	59	74.6	17	70.6	22	72.7	21	81.0

Sample n's vary across individual appliances because not all schools had each type of appliance. Data are presented only for those schools who had such an appliance in their kitchens.

**Policy Point B.2c: Schools shall include in their School Wellness Policy (SWP) a food safety assurance program for all food offered to students through sale or service.**

Table 14. Percent of schools that included a food safety assurance program in their SWP.

Source and Indicator	All Schools	Elementary Schools	Middle/Jr High Schools	High Schools
<b>Interview</b>	<b>(n=128)</b>	<b>(n=45)</b>	<b>(n=46)</b>	<b>(n=45)</b>
Percent yes	86.7	86.7	82.6	91.1
Percent no/unclear	12.5	11.1	17.4	8.9
Percent of schools with no wellness policy document	0.8	2.2	0.0	0.0

NOTE: CNP managers not always aware of the inclusion of food safety in the SWP. Percents were arrived at through interview and confirmation through SWP documents.

**Policy Point B.3: Schools shall secure a Food Service Operational Permit through the Mississippi State Department of Health for approval to operate under NSLP/SBP.**

Table 15. Percent of schools that had a valid operational permit on display in kitchen.

Source and Indicator	All Schools	Elementary Schools	Middle/Jr High Schools	High Schools
<b>Observation</b>	<b>(n=132)</b>	<b>(n=46)</b>	<b>(n=46)</b>	<b>(n=47)</b>
Percent Yes	99.2	100.0	97.8	100.0
Schools with A permit	77.2	76.1	78.3	78.7
Schools with B permit	22.0	23.9	19.6	21.3

**Policy Point B.4: Mississippi Department of Health conducts two School Food Facility Inspections per site each school year.**

Table 16. Percent of schools that had two or more facility inspections in past year.

Source and Indicator	All Schools	Elementary Schools	Middle/Jr High Schools	High Schools
<b>Interview</b>	<b>(n=133)</b>	<b>(n=46)</b>	<b>(n=47)</b>	<b>(n=48)</b>
Percent of schools with inspections in the past year:				
0 inspections	0.8	0.0	0.0	2.1
1 inspection	2.3	0.0	2.1	4.2
2 or more inspections	97.0	100.0	97.9	93.8

**Policy Point B.5a: Schools shall implement healthy school food preparation techniques using training materials developed through sources such as USDA, National Food Service Management Institute or Mississippi Department of Education.**

Table 17. Materials schools used for healthy food preparation training.

Source and Indicator	All Schools	Elementary Schools	Middle/Jr High Schools	High Schools
<b>Interview</b>	<b>(n=118)</b>	<b>(n=43)</b>	<b>(n=38)</b>	<b>(n=44)</b>
Percent of schools that used valid <sup>a</sup> training materials	83.9	81.4	86.8	86.4
Percent of schools using the following training materials:				
USDA	40.7	34.9	47.4	36.4
NFSMI	41.5	44.2	36.8	40.9
MDE	55.9	58.1	50.0	63.6
Serve Safe	17.8	20.9	21.1	15.9
Other <sup>b</sup>	57.6	67.4	50.0	54.5
No sources used	10.6	6.5	19.1	6.4

<sup>a</sup> Valid training materials include USDA, NFSMI, MDE, and Serve Safe materials.

<sup>b</sup> Other included: Dairy Council (10.3%), House Materials (36.8%), not specified (29.4%)

NOTE: A wide variety of training materials have been used. Schools appear to use materials that are provided to them free and are not budgeting for these activities.

**Policy Point B.5b: Training documentation and assessment records shall be retained for review by Mississippi Department of Education.**

Table 18. Retention of healthy food preparation training documentation and assessment records.

Source and Indicator	All Schools	Elementary Schools	Middle/Jr High Schools	High Schools
<b>Interview</b>	<b>(n=131)</b>	<b>(n=46)</b>	<b>(n=45)</b>	<b>(n=47)</b>
Percent of schools that:				
Held a training and kept records	73.3	80.4	71.1	70.2
Held a training but did not keep records	22.9	17.4	22.2	27.7
Did not hold a training	3.8	2.2	6.7	2.1

NOTE: Policy states that records shall be retained but does not indicate where. Since data collectors visited the individual school, it can only be confirmed that the school did not have the records. It cannot be confirmed that the school district did not have the records.



**Policy Point B.6a: Schools should limit fried foods whenever possible and practical.**

Table 19. Number of fried food items per week served with reimbursable lunch.

Source and Indicator	All Schools	Elementary Schools	Middle/Jr High Schools	High Schools
<b>Interview</b>	<b>(n=133)</b>	<b>(n=46)</b>	<b>(n=47)</b>	<b>(n=48)</b>
Percent of schools serving, on average, this number of fried items per week with the reimbursable lunch meal				
3 or more items/week	8.3	4.3	17.0	10.4
2 items/week	18.0	13.0	21.3	20.8
1 item/week	27.1	28.3	21.3	31.3
Less than 1 item/week	19.5	21.7	17.0	16.7
No fried food items	27.1	32.6	23.4	20.8
Percent of schools where fried items with reimbursable meal:				
Decreased in the last year	58.8	63.0	50.0	59.6
Stayed the same	40.5	37.0	47.8	40.4
Increased in the last year	0.8	0.0	2.2	0.0

Of the schools whose number of fried food items served with reimbursable meals stayed the same during the past year, 39.6% reported already serving no fried foods with the meal.

Table 20. Number of fried food items per day served on a la carte lines.

Source and Indicator	All Schools	Elementary Schools	Middle/Jr High Schools	High Schools
<b>Interview</b>	<b>(n=133)</b>	<b>(n=46)</b>	<b>(n=47)</b>	<b>(n=48)</b>
Percent of schools serving, on average, this number of fried items per day on a la carte				
1 item	8.1	4.4	14.0	4.5
No fried food items	91.9	95.6	86.0	95.5
Percent of schools where fried items on a la carte:				
Decreased in the last year	24.8	23.8	20.0	26.2
Stayed the same	61.2	61.9	68.9	57.1
Increased in the last year	0.8	0.0	2.2	0.0
Don't know	13.2	14.3	8.9	16.7

Of the schools whose number of fried food items on a la carte stayed the same during the past year, 94.5% reported already serving no fried foods on a la carte.

**Policy Point B.6b: Schools shall develop a long range plan for reducing and/or eliminating fried products in their lunch and breakfast menus.**

Table 21. Percent of schools that have developed a long range plan to reduce fried foods.

Source and Indicator	All Schools	Elementary Schools	Middle/Jr High Schools	High Schools
<b>Interview</b>	<b>(n=131)</b>	<b>(n=45)</b>	<b>(n=47)</b>	<b>(n=47)</b>
Percent of schools with: plan	63.4	57.8	61.7	68.1

NOTE: The term “Long range plan” was not defined for the CNP managers. Long range plans varied from a non-verbal understanding that the school CNP plans to reduce fried foods, a sentence or two on reducing to fried foods, and inclusion of plans to reduce fried foods in school board meeting minutes.

**Policy Point B.6c: The long range plan should include preparation methods using existing equipment and/or goals to replace fryers with combi-oven/steamers as budgets allow.**

Table 22. Schools with plans to replace fryers.

Source and Indicator	All Schools	Elementary Schools	Middle/Jr High Schools	High Schools
<b>Interview</b>	<b>(n=130)</b>	<b>(n=45)</b>	<b>(n=47)</b>	<b>(n=46)</b>
Percent of schools whose long range plan replaces fryers with steamers and/or combi-ovens	58.4	68.9	46.7	54.4
Percent of schools whose long range plan replaces fryers with:				
Combi-ovens only	50.0	57.8	34.0	52.2
Steamers only	1.5	2.2	2.1	0.0
Combi-ovens and steamers	6.9	8.9	10.6	2.2
Neither	13.8	6.7	19.1	17.4
Unclear	8.5	4.4	10.6	8.7
Not applicable	19.2	20.0	23.4	19.6
<b>Observation</b>	<b>(n=128)</b>	<b>(n=44)</b>	<b>(n=46)</b>	<b>(n=45)</b>
Percent of schools with a minimum of one working:				
Fryer	81.1	80.4	83.0	82.6
Combi-oven	30.2	23.3	30.4	31.8
Steamer	66.1	70.5	66.7	55.6

NOTE: Not applicable may refer to fryers have already been replaced. It appears that efforts are being made to decrease the use of fryers and replace fryers with combi-ovens and steamers.

**Section C: Marketing of Healthy Food Choices to Students and Staff**

**Policy Point C.1: Train School Foodservice Administrators, Kitchen Managers, and Cooks in Marketing, New Cooking Techniques, and Garnishing using available or newly developed training tools, such as Marketing Sense – Mississippi Department of Education, Office of Child Nutrition.**

Table 23. Percent of schools whose food service staff attended trainings in last 12 months.

Source and Indicator	All Schools	Elementary Schools	Middle/Jr High Schools	High Schools
<b><i>Interview</i></b>	<b><i>(n=130)</i></b>	<b><i>(n=45)</i></b>	<b><i>(n=46)</i></b>	<b><i>(n=47)</i></b>
Percent of schools that reported having the CNP manager attend at least one training in the last 12 months	51.2	43.2	47.8	63.0
Percent of schools that reported having at least one kitchen staff member attend at least one training in the last 12 months	83.1	82.2	78.3	87.2

Table 24. Types of trainings attended by school food service staff.

Source and Indicator	All Schools	Elementary Schools	Middle/Jr High Schools	High Schools
<b><i>Interview</i></b>	<b><i>(n=132)</i></b>	<b><i>(n=46)</i></b>	<b><i>(n=47)</i></b>	<b><i>(n=47)</i></b>
Percent of schools whose CNP Manager attended a training on:				
Marketing	39.4	23.9	40.4	53.2
New cooking techniques	17.4	13.0	17.0	21.3
Garnishing	23.5	26.1	19.1	25.5
Other <sup>a</sup>	56.8	47.8	57.4	61.7
Percent of schools whose kitchen staff attended a training on:				
Marketing	8.6	13.3	6.7	6.5
New cooking techniques	15.6	15.6	8.9	19.6
Garnishing	11.7	15.6	8.9	8.7
Other <sup>b</sup>	50.0	42.2	55.6	52.2

<sup>a</sup> Other included: ServSafe & other food safety trainings, manager recertification training, other MDE trainings, school orientation at start of year, school nutrition conference, wellness, etc.

<sup>b</sup> Other included: ServSafe & other food safety trainings, in-service trainings by food service director, MDE nutrition, stress management, Chef Cindie, promoting fruits and vegetables, etc.

**Policy Point C.2: Use the Whole School Approach in Marketing the Local Wellness Policy. Administration, faculty, staff, students, and parents need to be solicited to be a part of the implementation of the Local Wellness Policy.**

Table 25. Members of school district wellness committees.

Source and Indicator	All Schools	Elementary Schools	Middle/Jr High Schools	High Schools
<b><i>Interview</i></b>	<b><i>(n=126)</i></b>	<b><i>(n=43)</i></b>	<b><i>(n=44)</i></b>	<b><i>(n=47)</i></b>
Percent of schools <i>without</i> a wellness committee	5.6	4.7	4.5	6.4
Percent of schools whose wellness committees include administration, faculty, staff, students, <i>and</i> parents.	28.6	34.9	20.5	31.9
Percent of schools with the following types wellness committee members:				
School board members	14.4	21.4	11.4	10.6
Superintendent	25.6	23.8	29.5	23.4
School principals	77.6	76.2	77.3	72.3
Teachers	73.6	76.2	70.5	78.7
School nurses	47.2	52.4	47.7	38.3
Other school staff	50.4	50.0	59.1	40.4
Child Nutrition director	52.8	45.2	59.1	57.4
School foodservice staff	27.2	33.3	20.5	27.7
Parents	60.8	66.7	63.6	55.3
Other community members	41.6	40.5	40.9	38.3
Health professionals	36.8	31.0	40.9	34.0
Students	36.8	40.5	31.8	38.3

NOTE: CNP district directors were identified as members in 53% of schools that had school wellness committees. School foodservice staff were identified as members in 27% of schools that had school wellness committees. Since a significant part of school wellness policies revolve around the school nutrition environment and the CNP programs it is important that CNP representatives have a voice regarding school wellness directives.

**Section D: Food Preparation Ingredients and Products**

**Policy Point D.1: School districts shall adopt the Dietary Guideline recommendation that trans fatty acids will be kept “as low as possible”.**

Table 26. School Emphasis on reduction of trans fatty acids.

Source and Indicator	All Schools	Elementary Schools	Middle/Jr High Schools	High Schools
<b>Interview</b>	<b>(n=124)</b>	<b>(n=44)</b>	<b>(n=43)</b>	<b>(n=45)</b>
Percent of schools reporting that nutrient analyses address trans-fat in:				
Lunch and breakfast menus	29.0	29.5	25.6	26.7
Lunch menus only	23.4	22.7	16.3	33.3
Breakfast menus only <sup>a</sup>	0.0	0.0	0.0	0.0
Neither menu	40.3	31.8	53.5	33.3
Respondent unsure	7.3	15.9	4.7	6.7

a. Only 3% of schools surveyed do not participate in the breakfast program

NOTE: It was identified that the nutrient analysis included with the MS Cycles II menus does not include trans fat. An alternative means of nutrient analyses would need to be conducted to identify the trans fat in the school lunch menu.

**Policy Point D.2: Wherever possible and practical, school lunch and breakfast programs shall include products that are labeled “0” grams trans fat.**

Table 27. Percent of schools incorporating “0 trans fat” products into meal program foods.

Source and Indicator	All Schools	Elementary Schools	Middle/Jr High Schools	High Schools
<b>Interview</b>	<b>(n=127)</b>	<b>(n=44)</b>	<b>(n=44)</b>	<b>(n=47)</b>
Percent of schools that incorporated at least one “0 trans fat” product into:				
Lunch and breakfast menus	26.8	34.1	13.6	31.9
Lunch menus only	18.1	9.1	20.5	23.4
Breakfast menus only <sup>a</sup>	3.1	4.5	4.5	4.3
Neither menu	52.0	52.3	61.4	39.6
<b>Observation</b>	<b>(n=129)</b>	<b>(n=44)</b>	<b>(n=46)</b>	<b>(n=46)</b>
Percent of schools at which a product labeled “0 trans fat” was observed in at least one lunch	31.8	31.8	23.9	41.3

Percent of schools that learned which state bid products are “0 trans fat” from the State Child Nutrition Program office.

- All =36.0%
- Elem =23.3%
- Middle =35.6%
- High =46.7%

NOTE: CNP managers are not fully aware of the nutritional significance of incorporating foods with “0 trans fat” into the school lunch menus. Increases in training regarding the nutritional benefits of decreasing the amount of trans fats in the diet and increased awareness of 0 trans fat foods offered through the state bid may support an increase in 0 trans fat foods offered in the CNP.

**Policy Point D.3: Schools shall incorporate whole grain products into daily and weekly lunch and breakfast menus based on product availability and student acceptability.**

Table 28. Percent of schools incorporating whole grain products into meal program foods.

Source and Indicator	All Schools	Elementary Schools	Middle/Jr High Schools	High Schools
<b>Interview</b>	<b>(n=133)</b>	<b>(n=46)</b>	<b>(n=47)</b>	<b>(n=48)</b>
Percent of schools that incorporated at least one whole grain product into:				
Lunch and breakfast menus	69.2	73.9	57.4	72.9
Lunch menus only	15.0	10.9	23.4	14.6
Breakfast menus only	3.8	4.3	4.3	2.1
Neither menu	12.0	10.9	14.9	10.4
<b>Observation</b>	<b>(n=113)</b>	<b>(n=38)</b>	<b>(n=41)</b>	<b>(n=42)</b>
Percent of schools that served a minimum of one whole grain product in <i>at least one</i> lunch	36.6	36.1	31.7	38.1
Percent of schools that served a minimum of one whole grain product at <i>all</i> lunches	35.4	34.2	31.7	36.6
Percent of schools at which a product labeled whole grain was observed in at least 1 lunch	22.1	21.1	22.0	19.5

**Interview:** Percent of schools that learned which state bid products are whole from the State Child Nutrition Program office.

- All =68.8%
- Elem =60.5%
- Middle =71.7%
- High =75.0%

**Section E: Minimum and Maximum Time Allotment for Students and Staff at Breakfast and Lunch Periods**

**Policy Point E.1: Schools shall schedule at least a minimum of 24 minutes to ensure an adequate eating time for school lunch.**

Table 29. Percent of schools at which students have enough time to eat lunch.

Source and Indicator	All Schools	Elementary Schools	Middle/Jr High Schools	High Schools
<b>Interview</b>	<b>(n=132)</b>	<b>(n=45)</b>	<b>(n=47)</b>	<b>(n=48)</b>
Frequency with which students have adequate time to eat their school lunch meal (% schools):				
None of the time	0.0	0.0	0.0	0.0
Some of the time	3.8	2.2	6.4	6.3
Most of the time	18.9	26.7	14.9	14.6
Always	77.3	71.1	78.7	79.2
<b>Observation</b>	<b>(n=110)<sup>a</sup></b>	<b>(n=34)<sup>a</sup></b>	<b>(n=40)<sup>b</sup></b>	<b>(n=42)<sup>a</sup></b>
Percent of schools providing at least 24 minutes for all lunches	59.1	64.7	45.0	64.3
Percent of schools at which all students finished eating during all observed lunches	11.1	17.1	7.9	11.9

<sup>a</sup> Several cases were excluded due to inconsistent responses for which an accurate answer could not be determined.

NOTE: Some uncertainty as to the required number of minutes required for lunch times. Some schools identified 18 minutes as the minimum time allowed. **Policy Point E.2: Schools should take into consideration the recommend time of 10 minutes for a child to eat school breakfast after they have received the meal.**

Table 30. Percent of schools at which students have enough time to eat breakfast.

Source and Indicator	All Schools	Elementary Schools	Middle/Jr High Schools	High Schools
<b>Interview</b>	<b>(n=133)</b>	<b>(n=46)</b>	<b>(n=47)</b>	<b>(n=48)</b>
Frequency with which students have adequate time to eat their breakfast meal (% schools):				
None of the time	0.8	0.0	2.1	0.0
Some of the time	2.3	0.0	4.3	2.1
Most of the time	11.3	15.2	14.9	2.1
Always	82.7	80.4	78.7	91.7
No breakfast program	3.0	4.3	0.0	4.2

**Section F: The Availability of Food Items during the Lunch and Breakfast Periods of the Child Nutrition Breakfast and Lunch Programs**

**Policy Point F.1: Schools districts shall comply with the Mississippi Board of Education Policy of Competitive Food Sales as outlined in Mississippi Board of Education Policies.**

The four MDE competitive food sales policies are the following:

1. No food items will be sold on the school campus for one (1) hour before the start of any meal services period.
2. The school food service staff shall serve only those foods which are components of the approved federal meal patterns being service (or milk products) and such additional foods as necessary to meet the caloric requirement of the age group being served.
3. With the exception of milk products, a student may purchase individual components of the meal only if the full meal unit also is being purchased.

4. Students who bring their lunch from home may purchase water and milk products.

This preliminary baseline report will address policies #1 and #4. Policies #2 and #3 will be addressed in future years once the reimbursable meal data can be analyzed in more detail. Data will be presented, however, which describe Child Nutrition Managers' experiences with barriers to complying with all four competitive food sales policies, and whether these policies are incorporated into any school or district level policy documents.

Table 31. Percent of schools complying with Competitive Food Sales Policy #1.

Source and Indicator	All Schools	Elementary Schools	Middle/Jr High Schools	High Schools
<b>Interview</b>	<b>(n=132)</b>	<b>(n=46)</b>	<b>(n=46)</b>	<b>(n=37)</b>
Percent of schools reporting that no competitive food sales are made within 1 hour of any meal	81.1	89.1	76.1	77.1
Percent of schools at which competitive food sales were observed within the hour prior to lunch via vending machines and/or school stores (includes all schools in sample).	12.8	13.0	10.6	17.0

<sup>a</sup> 65 of 133 schools (48.1%) do not have any vending machines or school stores that sold to students anywhere on campus; they had an off-limits faculty lounge vending machine. This includes 30 elementary schools, 20 middle schools, and 16 high schools.

**Interview** Percent of schools that have this policy written up in a document

- All: 82.5
- Elem: 78.3
- Middle: 90.5
- High: 80.4

NOTE: CNP managers are aware of competitive food policies.

Table 32. Venues for food sales at schools in violation of Competitive Food Sales Policy #1.



Source and Indicator	All Schools	Elementary Schools	Middle/Jr High Schools	High Schools
<b>Interview</b>	<b>(n=7)<sup>a</sup></b>	<b>(n=2)</b>	<b>(n=2)</b>	<b>(n=3)</b>
<i>Number of schools selling foods in the hour before breakfast via:</i>				
Vending machines	5	1	2	2
School stores	3	1	1	1
Fundraisers	1	0	1	0
Teacher sales	1	0	0	1
Other	1	0	1 <sup>b</sup>	0
<b>Interview</b>	<b>(n=13)<sup>c</sup></b>	<b>(n=4)</b>	<b>(n=4)</b>	<b>(n=7)</b>
<i>Number of schools selling foods in the hour before lunch via:</i>				
Vending machines	5	2	0	3
School stores	4	2	3	1
Fundraisers	2	0	0	2
Teacher sales	1	0	0	1
Other	3	1 <sup>d</sup>	1 <sup>e</sup>	1 <sup>f</sup>
<b>Observation – Vending Form</b>	<b>(n=17)</b>	<b>(n=6)</b>	<b>(n=5)</b>	<b>(n=8)</b>
<i>Number of schools observed selling competitive foods the hour before lunch in these locations:</i>				
School store	2	1	1	2
Cafeteria vending	2	0	1	1
Gym/locker room vending	2	0	1	2
Vending outside on campus	8	3	2	4
Hallway vending	7	3	2	2
Other	2	0	0	2
<b>Observation – Vending Form</b>	<b>(n=17)</b>	<b>(n=6)</b>	<b>(n=5)</b>	<b>(n=8)</b>
<i>Number of schools with the following groups in charge of venue violating the policy:</i>				
Food services	1	0	0	0
School administrator	16	5	5	9
School club	0	0	0	0
Other	1	0	1	1

<sup>a</sup> CNP managers at 5 schools were unsure if foods were sold 1 hour prior to the school day; these schools are not included this table.

<sup>b</sup> Food carts were used to sell foods prior to the school day.

<sup>c</sup> CNP managers at 5 schools were unsure if foods were sold in the hour prior to lunch; these schools are not included this table.

<sup>d</sup> Food was sold one hour prior to lunch at an unspecified location.

<sup>e</sup> Concession stands were used to sell foods one hour prior to lunch.

<sup>f</sup> A vocational program sold foods one hour prior to lunch.

Table 33. Percent of schools complying with Competitive Food Sales Policy #4.

Source and Indicator	All Schools	Elementary Schools	Middle/Jr High Schools	High Schools
<b>Observation</b>	<b>(n=130)</b>	<b>(n=46)</b>	<b>(n=46)</b>	<b>(n=46)</b>
Percent of schools observed at which a student was denied purchasing a milk or water product without a meal	6.1	4.3	6.7	6.7
Percent of schools observed where a student purchased a milk or water product without a meal	47.7	44.4	41.3	56.5

NOTE: These percentages only reflect direct observation by the data collector

**Policy Point F.2: School districts shall update the wellness policy to address limiting the number of extra sale items that may be purchased with a reimbursable meal. This policy will exclude extra beverage purchases of milk, juice and/or water.**

Table 34. Percent of schools incorporating this policy into the School Wellness Policy.

Source and Indicator	All Schools	Elementary Schools	Middle/Jr High Schools	High Schools
<b>Interview</b>	<b>(n=122)</b>	<b>(n=44)</b>	<b>(n=42)</b>	<b>(n=44)</b>
Percent of schools that incorporated this policy into their School Wellness Policy	48.4	34.1	59.5	52.3

NOTE: While this policy was identified as being included in the school wellness policy there was no endeavor to investigate implementation of the policy.

**Policy Point F.3: Schools may sell extra items in individual packages not to exceed 200 calories.**

Table 35. Percent of schools meeting calorie limit on a la carte food items.

Source and Indicator	All Schools	Elementary Schools	Middle/Jr High Schools	High Schools
<b>Observation – A La Carte Form</b>	<b>(n=111)<sup>a,b</sup></b>	<b>(n=33)<sup>a,b</sup></b>	<b>(n=41)<sup>a,b</sup></b>	<b>(n=44)<sup>a,b</sup></b>
Percent of schools that were fully compliant – 100% of a la carte items sold were 200 calories or less	80.2%	69.7%	90.2%	80.0%
Average percent of a la carte items (per school) which were 200 calories or less	94.6% (range 0-100)	92.4% (range 57-100)	98.7% (range 86-100)	93.0% (range 0-100)

<sup>a</sup> 17 of 133 schools (12.8%) did not sell any a la carte food items on the day of the observation and are not included in the estimates above – 12 Elementary; 3 Middle, 2 High schools.

<sup>b</sup> Caloric content could not be determined for a la carte items at 5 schools, yielding a final school sample of 111 – 33 Elementary; 41 Middle, 44 High schools .

**NOTE;** While most schools are trying to comply with meeting the calorie limit, several schools still offer 1 or 2 items that do not meet the 200 calorie requirement. Non-compliant items included items such as:

- Juice in a can, usually grape 11.5 oz
- Chef salad
- Moon pies
- Sun chips (though it looks like some Sun Chips did meet the calorie limit; I'm guessing due to serving size)
- Munchies
- Rice Krispie Treats
- 

**Policy Point F.4: Schools may sell extra (menu) items in portions not to exceed the menu portion serving size.**

NOTE: On the data that could be validated, it appears that there is very good compliance with this policy, however the data on this policy point was documented using more than one method and has not been validated. This will occur and be reported in a future report.

**Policy Point F.5: Schools will use marketing, pricing, and nutrition education strategies to encourage healthy extra sale selections.**

Table 36. Percent of schools using various strategies to encourage healthy food item sales.

Source and Indicator	All Schools	Elementary Schools	Middle/Jr High Schools	High Schools
<b><i>Interview</i></b>	<b><i>(n=133)</i></b>	<b><i>(n=46)</i></b>	<b><i>(n=47)</i></b>	<b><i>(n=47)</i></b>
Percent of schools that reported using the following strategies to promote healthy food sales:				
Marketing	77.5	82.6	68.9	80.4
Pricing	20.5	20.5	22.7	21.3
Education	60.3	65.2	54.3	61.7
Percent of schools that reported using all 3 strategies to promote healthy food sales	15.1	15.9	18.2	13.0
<b><i>Observation</i></b>	<b><i>(n=133)</i></b>	<b><i>(n=46)</i></b>	<b><i>(n=47)</i></b>	<b><i>(n=47)</i></b>
Percent of schools observed using the following strategies:				
Daily healthy specials are advertised	19.5	28.3	12.8	21.3
Healthy marketing in cafeteria	60.6	62.2	59.6	66.0
Nutrition information available for foods items without packaging	15.0	15.2	12.8	14.9
USDA meal food looks appealing	78.2	80.4	66.0	91.5
Average number of health promotion posters (per school) in the cafeteria	7.4 (range 0-35)	7.6 (range 0-25)	7.0 (range 0-30)	8.1 (range 0-35)

Source and Indicator	All Schools	Elementary Schools	Middle/Jr High Schools	High Schools
Percent of schools with posters in the cafeteria promoting:				
Fruits and vegetables	11.3	15.2	12.8	8.5
Milk and calcium-rich foods	35.3	37.0	36.2	34.0
Food pyramid	8.3	13.0	6.4	8.5
Physical activity	11.3	15.2	10.6	8.5

NOTE: There is no definition for “Marketing” identified in the policy. Marketing could be viewed as a poster on the wall. In documenting number and types of posters in the cafeteria it was identified that the most frequently seen posters (i.e. milk) were free and mailed to the CNP manager.

**Section G: Methods to Increase Participation in the Child Nutrition School Breakfast and Lunch Programs**

This section addresses the following policies as outlined in the MS Healthy Students Act:

*Policy Point G.1:* Since school food service operates like a business with income and expenses, adequate marketing ensures a successful program operation. When devising a plan, remember the following: 1) Define your business, 2) Define your customer, evaluate your plan and budget, define your objectives.

*Policy Point G.2:* Family education will be the key to building a healthy future for all Mississippians. Mississippi public schools offer the best resources, facilities and structure to promote family nutrition education.

*Policy Point G.3a:* Schools are strongly encouraged to develop academic partnerships with appropriate governmental agencies to offer family nutrition education programs.

*Policy Point G.3b:* Family education should be incorporated into each school’s Wellness Policy.

*Policy Point G.6:* Schools will promote healthful eating and healthy lifestyles to students, parents, teachers, administrators and the community at school events.

Table 37. Percent of schools promoting healthy eating via meal programs, family nutrition, etc.

Source and Indicator	All Schools	Elementary Schools	Middle/Jr High Schools	High Schools
<b><i>Interview</i></b>	<b><i>(n=127)</i></b>	<b><i>(n=46)</i></b>	<b><i>(n=47)</i></b>	<b><i>(n=47)</i></b>
Policy Point G.1 Percent of schools with a plan to promote these programs:				
Lunch & breakfast meals	36.2	33.3	30.4	40.9
Lunch meal only	7.1	2.2	10.9	9.1
Breakfast meal only	0.0	0.0	0.0	0.0
No plans for either meal	56.7	64.4	58.7	50.0
Policy G.2 Percent of schools that offered resources to promote family nutrition education in last year	58.8	54.3	58.7	59.6
Policy G.3a Percent of schools with partnerships to promote family nutrition	30.2	28.9	30.4	28.3
Policy G.3b Percent of schools whose Wellness Policy incorporate family education	79.5	81.4	79.1	79.5
Policy G.6 Percent of schools that had activities in last 12 month specifically promoting healthy eating and/or healthy lifestyles	42.9	50.0	40.0	43.8