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# **Critical Food Service Basics Metrics**

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# Your Presenters

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Affiliations: Nothing to disclose

# Financial Management of Child Nutrition Program

## Food Service Fund vs. General Fund

- Separate accounts
- Food Service is a non-profit entity/break even program
- Food Service shortfalls made up from General Fund

A quality program is financially sustainable and nutritionally sound

# Critical Food Service Basics Metrics

## Overview: Identify and define metrics

- Average Daily Participation (ADP)
- Food Cost – Usage and Raw Cost
- Meal Equivalents
- Labor Productivity: Meals Per Labor Hour (MPLH)
- Break Even Analysis

# Building Blocks: Average Daily Participation (ADP)

## Importance and Usage of ADP Data

- Prevent over and under production of food
- Refine scheduling
- Track trends
- Identify areas for growth
- Measure growth over time
- Gauge customer satisfaction
- Evaluate new items

## Building Blocks: Average Daily Participation (ADP)

$$\text{ADP} = \frac{\text{\# of Meals served}}{\text{\# of Operating Days}}$$

$$\text{ADP Rate} = \frac{\text{Lunch (or Breakfast) ADP}}{\text{Average Daily Attendance}}$$

# Building Blocks: Average Daily Participation (ADP)

## Factors Affecting ADP

- Student age/grade level
- Percent Paid, Free, and Reduced-Price meals
- Location/Campus
- Outside competition
- Type of production (onsite vs. satellite)
- Price

# Building Blocks: Average Daily Participation (ADP)

## Example: ADP and ADP Rate Calculation

Building Name	Enrollment	ADA 93.80%	# of Bfast Meals Served	# of Lunch Meals Served	# of Operating Days	Bfast ADP	ADP Rate BFAST	Lunch ADP	ADP Rate LUNCH
Apple Elementary	534	501	1956	5638	18	109	21.7%	313	62.5%
Oak Middle School	1256	1178	3776	7405	18	210	17.8%	411	34.9%
Hightown High	2356	2210	4123	11332	18	229	10.4%	630	28.5%



# Building Blocks: Food Cost

## Why calculate the cost of food?

- To determine if costs are within budget guidelines
- To ascertain if there are sufficient funds to pay expenditures
- To establish the cost for each meal equivalent served
- To prevent waste and food theft through monitoring food usage

Raw Food Cost: the actual cost of each menu item or combination of items

Food Cost Percentage: Cost of Food Used or Purchased as a percentage of revenue

# Building Blocks: Food Cost

- Vitally important to determine what your Raw Food Cost is, by costing out each individual menu item; this is ongoing
- For budgeting, calculating total cost of food as a Percentage will allow for changing participation levels
- USDA's 2019 School Nutrition and Meal Cost Study revealed a national average food cost of 44.7%
- Industry Standard: 42-46% Food Cost

# Building Blocks: Food Cost Usage

	Beginning Food Inventory		\$10,000
+	Total Food Purchases	+	\$20,000
<hr/>			
=	Total Food Available	=	\$30,000
-	Ending Food Inventory	-	\$7,000
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=	Cost of Food Used	=	\$23,000

# Building Blocks: Meal Equivalents (MEQ's)

## Meal Equivalents

- Statistical tool to standardize unique mix of services into one unit
- Standard unit can be used to determine meal costs, labor ratios, and revenue
- Evaluate productivity and efficiency of program
- Help establish performance benchmarks

# Building Blocks: Meal Equivalents (MEQ's)

By converting food sales to meal equivalents, the school nutrition director can determine

- Meal Cost
- Labor Productivity Ratios (MPLH)
- Average revenue earned per meal/meal equivalent

# Building Blocks: Meal Equivalents (MEQ's)

Institute for Child Nutrition Meal Equivalent Ratios:

- **One** school lunch and/or supper equals **one** meal equivalent (1:1)
- **Three** school breakfasts count as **two** meal equivalents (3:2)
- **Three** snacks equal **one** meal equivalent (3:1)
- Non-program food sale revenue (a la carte, catering, vending, adult meals) is divided by the Meal Equivalency Factor (MEF).
- The MEF is established by MDE annually & is based on the current federal reimbursement rate plus USDA Foods value per meal.
- Current MEF: 2022-2023: \$3.99

*Note: Meal equivalent ratios may vary from state to state*



# Building Blocks: Meal Equivalents (MEQ's)

Meal Categories	Total Meal Units or Sales	Conversion Factor	Total Meal Equivalents	# of Serving Days	Average Daily Meal Equivalents
Student Lunch	1,000	1	1,000	5	200
Adult Lunch	100	1	100	5	20
Student Breakfast	3,500	0.67	2,345	5	469
Snacks	500	0.33	165	5	33
Supper	500	1	500	5	100
Non-Program Food Sales	\$1,000.00	\$3.99	251	5	50
<b>Totals</b>			<b>4,361</b>		<b>872</b>

# Building Blocks: Meals Per Labor Hour (MPLH)

The importance of knowing MPLH standards

- Meal Equivalent calculation needed to determine MPLH
- Together they give an understanding of labor and food cost
- Monitor efficiency
- Manage staffing by reducing or increasing work hours
- Manage menu to control labor
- Creates incentive to increase participation



# Building Blocks: Meals Per Labor Hour (MPLH)

How to Calculate MPLH:

MPLH = Total meal equivalents ÷ Total number of labor hours

Factors Affecting Meals Per Labor Hour

- Number of serving lines/cashiers
- Service times and duration
- Employee skill/tenure
- Menu complexity
- Production and preparation time
- Equipment
- Kitchen layout

# Building Blocks: Meals Per Labor Hour (MPLH)

Calculating MPLH: Calculate current total hours of labor paid daily by building

Name of Building:	Number of Staff	Daily Hours	Total Number of Labor Hours	Total Average Daily Meal	Meals Per Labor Hour (by building)
Apple Elementary School	1	5	5		
	2	3.5	7		
Labor Hours from other buildings	1	2.5	2.5		
<b>Totals</b>			<b>14.5</b>	<b>331</b>	<b>22.8</b>
Oak Middle School	2	8	16		
	4	5	20		
	3	3.5	10.5		
<b>Totals</b>			<b>46.5</b>	<b>877</b>	<b>18.9</b>

## Meals Per Labor Hour (MPLH) - the most common measure of productivity in School Nutrition Programs

Calculation:

$$\frac{\text{number of meals/meal equivalents}}{\text{number of paid labor hours}}$$

### Staffing Guidelines for On-Site Production

Number of Meals/Meal Equivalents <sup>1</sup>	MEALS PER LABOR HOUR FOR LOW AND HIGH PRODUCTIVITY			
	Conventional System MPLH <sup>2</sup>		Convenience System MPLH <sup>3</sup>	
	Low	High	Low	High
Up to 100	8	10	10	12
101-150	9	11	11	13
151-200	10-11	12	12	14
201-250	12	14	14	15
251-300	13	15	15	16
301-400	14	16	16	18
401-500	14	17	18	19
501-600	15	17	18	19
601-700	16	18	19	20
701-800	17	19	20	22
801 and up	18	20	21	23

<sup>1</sup> Meal equivalents (MEQ) include breakfast, snacks and a la carte sales. Lunch 1:1, Breakfast 3:2, Snack 3:1, A la carte MEQ = sales revenue divided by the amount of free lunch reimbursement plus the USDA food entitlement.

<sup>2</sup> Conventional system is preparation of some foods from raw ingredients on premises (using some bakery breads and prepared pizza and washing dishes)

<sup>3</sup> Convenience system is using maximum amount of processed foods (e.g. using all bakery breads, precooked chicken, ready to serve raw fruits and vegetables, pre-portioned condiments and washing only trays and using disposable dinnerware)

Source: Pannell-Martin 1999

### Determining Meal Equivalency

Student breakfast meals served (3:2)	x	0.67	=	Breakfast meal equivalents
Student lunch meals served (1:1)	x	1.0	=	Lunch meal equivalents
Student snack meals served (3:1)	x	0.33	=	Snack meal equivalents
Non-program \$\$ (Free Reimb. Rate + USDA Foods value)*	÷	(\$x.xx + \$.xx) (\$3.37 + \$.235)*	=	Non-program meal equivalents

\*This number is subject to change annually with reimbursement rate increases



# Building Blocks: Break-Even Analysis

## What?

*Break-Even Analysis is the amount of sales needed to cover both fixed and variable costs/expenses.*

## Why?

*Use Break-Even Analysis for decision making and/or program expansion*

## When?

*Anytime – but particularly heading into Budget Season*

## How?

# Building Blocks: Break-Even Analysis

## Break-Even Analysis

*Break-Even Point (BEP) is the amount of sales needed to cover Fixed & Variable costs.  
The BEP is the point where total Revenues & Total expenses are equal.*

### Fixed Cost Analysis:

Driver (\$20.5 x .5 hrs) Transportation of Food	\$10.25
On-Site Staff Hours (\$16.57/hr wage x 6.5 labor hours)	\$107.70
Subtotal	\$117.95
33% Fringe on Driver & Prep worker hours	\$41.28
<b>Total Fixed Costs</b>	<b>\$159.23</b>

Fixed Costs (Labor & Fringe) \$159.23  
Variable Costs (Food, Disposables, Other) 48%

Fixed Costs ÷ Variable Costs = Break Even Point  
(\$159.23 ÷ 48% = \$331.73)

**\$331.73**

**Break Even Point**

Reimbursement Rate \$3.82

\$331.73 (BEP) / \$3.82 (Reimb. Rate) = 87 meals per day  
87 meals per day x \$3.82 = \$331.73

**87**

**\$331.73**

**Required Avg Daily Participation**  
**Required Avg Daily Revenue**



# Using Data to Drive Decisions

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**So what now??**

Using them already? Great! Refine, Drill Down

Not using them? Start now!

We are here to help!



# We Remember...

20% of what we hear.

30% of what we see.

50% of what we see and hear.

70% of what we see, hear, and say.

90% of what we see, hear, say, and do.

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# Thank You!

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