



Keys to Calculating Meal Equivalents & Using KPIs to Enhance Program Operation

Michelle Michels, Maria Eunice, Katy Hoyng

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Speakers



**Michelle Michels,
MBA**

*Director of Strategic
Accounts*



**Maria Eunice,
MS, SNS**

*Director Food &
Nutrition Services*



**Katy Hoyng,
MS, RDN, LD, SNS**

*Nutrition Training
Manager*

Affiliation or Financial Disclosure

- **Michelle Michels**

NUTRITION STRATEGIC ACCOUNTS DIRECTOR AT LINQ

- **Maria Eunice**

NOTHING TO DISCLOSE

- **Katy Hoyng**

NUTRITION TRAINING MANAGER AT LINQ

Key Takeaways

- Why and how to calculate meal equivalents.
- Why and how to calculate meals per labor hour.
- How to use meal equivalents for other key performance indicators.
- Using the resulting metrics to make program operation decisions.

Meal Equivalents (MEQ)

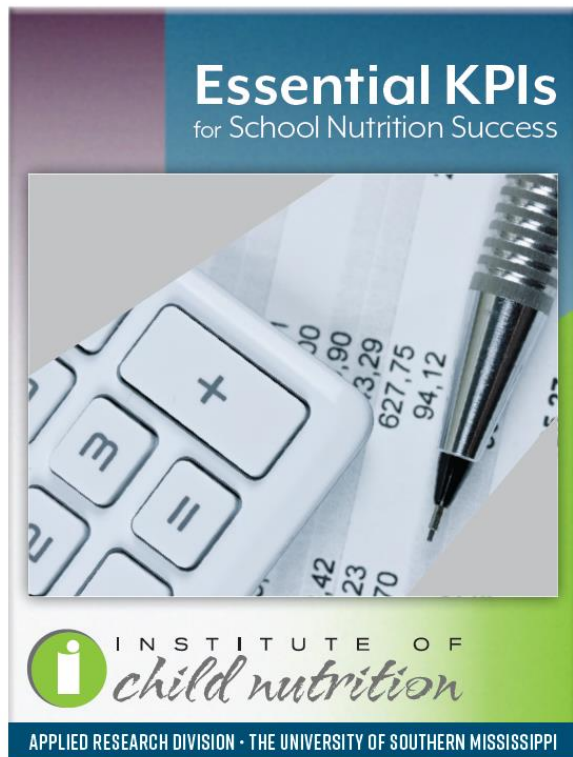


Michelle Michels, MBA

- Current Employer: LINQ
 - Nutrition Strategic Accounts Director
- Past Experience:
 - Project Manager (School Nutrition) at Cleveland Metropolitan School District



Reference



- Institute of Child Nutrition, Applied Research Division. (2018). *Essential KPIs for school nutrition success*. University of Southern Mississippi: Rushing, K.
- <https://theicn.org/icn-resources-a-z/kpi>
- Interactive spreadsheet available

Why Calculate Meal Equivalents (MEQ)?

- Equalizes a variety of meal types into a single unit of measure for analysis as a whole
- Helps to gauge efficiency and effectiveness of program operations
- Can calculate weekly, monthly, annually

How to Calculate Meal Equivalents (MEQ)

Meal	Equivalent (ICN Standard Conversion Factors)
Lunch, Supper	=1
Breakfast	=2/3
Snack	=1/3
A La Carte (non-program)	=Dollar Value / (Free Reimbursement + *USDA Foods Value) * https://www.fns.usda.gov/fdd/value-donated-foods-notice

Example MEQ Calculation

Meal	Meal Count	Equivalent	Meal Equivalents
Lunch	650	x1	650
Supper	150	x1	150
Breakfast	600	x2/3	400
Snack	300	x1/3	100
A La Carte (non-program)	\$480	/(Free Reimbursement + USDA Foods Value) / (4.5625 + 0.2375)	100
TOTAL			1,400

How to Use MEQs

- Used as a basis for other Key Performance Indicators, such as:
 - Meals per Labor Hour
 - Cost per Meal Equivalent
 - Revenue per Meal Equivalent

Meals per Labor Hour (MPLH)



Maria Eunice, MS, SNS



- Current Employer: Alachua County Public Schools
 - Director of Food & Nutrition Services
- Past Experience: Alachua and Broward County
 - Supervisor of Food & Nutrition Services

District Profile



Alachua County Food & Nutrition Services Gainesville, FL

- District Size: 29,000 students
- Number of Schools: 36 main sites; 62 feeding sites.
- Free and reduced Percentage: 51%
- Budget: \$24 M
- Team Size: 300 FNS staff
- Meals per year: 5 M TME

Why Calculate Meals per Labor Hour (MPLH)?

- Labor is a large part of the FNS budget; 40% or greater.
- Create a benchmark for labor to ensure that there is a clear understanding of the labor standard per site.
 - Sites are staffed according to participation.
 - Adjustments must be made periodically once MPLH are assessed
 - Remain within budgeted labor hours.

How to Calculate Meals per Labor Hour (MPLH)

$$\text{MPLH} = \text{MEQ} / \text{Daily Labor Hours}$$

ICN Meals per Labor Hour Standards

NUMBER OF MEAL EQUIVALENTS	MEALS PER LABOR HOUR FOR LOW AND HIGH PRODUCTIVITY			
	CONVENTIONAL SYSTEM ¹ MPLH		CONVENIENCE SYSTEM ² MPLH	
	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

Per site staffing:

Last Name:	First Name:	Title:	Hours
Doe	Jane	Manager	8.00
Spatula	Harry	FS Assistant II	6.00
Shine	Sheila	FS Assistant II	5.50
Barrow	Will	FS Assistant I	5.50
Turkey	Thomas	FS Assistant I	5.00
Butterball	Bessy	FS Assistant I	4.00
Total:			34.00

Staffing Calculator

Labor Allocation Worksheet

Start Date: 10/1/2021 End Date: 10/31/2021 Refresh New Worksheet
School: Oak View Middle
Date Range: 10/1/2021 - 10/31/2021

Non-Contracted (Regular) Meal Counts

Meal	# Reimbursable	# Non-Reimbursable	MEQ Ratio	Meal Equivalents
Breakfast:	7106	0	2.0000	3553
Lunch:	14263	34	1	14297
Snacks:	0	0	3.0000	0
Suppers:	615	0	1.0000	615

Contract Meal Counts

Meal Program	Meal Description	Quantity	Item Price	Total
EDEP - Extended Day Progr	Summer Contracted Snack	0	\$0.96	\$0.00
	Supreme Snack	0	\$0.15	\$0.00
	Water	0	\$15.00	\$0.00
Greenfield Day Care	Breakfast	0	\$2.45	\$0.00
	Lunch	0	\$3.75	\$0.00

Revenue Type	Amount	MEQ Ratio	Meal Equivalents
A la Carte:	2579.50	4.5800	563.21
Contract Meals:	0.00	4.5800	0
FFVP:	0.00	4.5800	0
Miscellaneous:	0.00	4.5800	0
Vending:	686.55	4.5800	149.90
Total Equivalents:			19178.11
Avg. Daily Equivalents:			1009.37

Meals per Labor Hour	19.89
Labor Hour Allowed	59.37
Adjustment	8.62
Meals/Labor Hours Standard	17.00
Number of Serving Days:	19
Current Labor Hours Used:	964.25
Avg. Daily Labor Hours Used:	50.75

Labor Allocation Worksheet

Start Date: 8/10/2021 End Date: 12/17/2021 Refresh New Worksheet
School: Irby Elementary
Date Range: 8/10/2021 - 12/17/2021

Non-Contracted (Regular) Meal Counts

Meal	# Reimbursable	# Non-Reimbursable	MEQ Ratio	Meal Equivalents
Breakfast:	14837	30	2.0000	7433.5
Lunch:	23550	463	1	24013
Snacks:	10960	0	3.0000	3653.33
Suppers:	9993	0	1.0000	9993

Contract Meal Counts

Meal Program	Meal Description	Quantity	Item Price	Total
EDEP - Extended Day Progr	Summer Contracted Snack	0	\$0.96	\$0.00
	Supreme Snack	0	\$0.15	\$0.00
	Water	0	\$15.00	\$0.00

Revenue Type	Amount	MEQ Ratio	Meal Equivalents
A la Carte:	1766.05	4.5800	385.60
Contract Meals:	0.00	4.5800	0
FFVP:	14110.00	4.5800	3080.79
Miscellaneous:	0.00	4.5800	0
Vending:	0.00	4.5800	0
Total Equivalents:			48559.22
Avg. Daily Equivalents:			571.28

Meals per Labor Hour	16.80
Labor Hour Allowed	30.07
Adjustment	-3.93
Meals/Labor Hours Standard	19.00
Number of Serving Days:	85
Current Labor Hours Used:	2890.00
Avg. Daily Labor Hours Used:	34.00

Meals per Labor Hour	19.89
Labor Hour Allowed	→ 59.37
Adjustment	8.62
Meals/Labor Hours Standard	17.00
Number of Serving Days:	19
Current Labor Hours Used:	<input type="text" value="964.25"/>
Avg. Daily Labor Hours Used:	→ 50.75

Under staffed

Meals per Labor Hour	16.80
Labor Hour Allowed	→ 30.07
Adjustment	-3.93
Meals/Labor Hours Standard	19.00
Number of Serving Days:	85
Current Labor Hours Used:	<input type="text" value="2890.00"/>
Avg. Daily Labor Hours Used:	→ 34.00

Over staffed

Staffing Allocations

Site	Previous Enrollment (20-21)	Current Enrollment (21-22)	Previous TME: (20-21)	Current TME: (21-22)	Allowable Hours: (21-22)	Adjustment to be made: (21-22)	Comments:
A	885	961	1052	1009	59.37	8.62	Understaffed ; move 4 hour employee from site B and advertise 4 hours
B	348	372	612	571	30.07	-3.93	Over staffed; move 4 hour employee to site A
C	513	740	504	800	44.48	-1.02	Over staffed – hold and monitor

Additional KPIs: Average Daily Participation (ADP) Revenue & Cost per MEQ



Katy Hoyng, MS, RDN, LD, SNS

- Current employer: LINQ
 - Nutrition Training Manager
- Past experience:
 - Director of School Nutrition at Ector County Independent School District



Why to Calculate Average Daily Participation (ADP)

- Forecasting
- Decision Making for labor and procurements
- Participation goals
- Menu popularity
- Customer Satisfaction

How to Calculate ADP

Meal	ADP Formula
Breakfast	$= \# \text{ Breakfasts Served in Month} / \# \text{ Operating Days}$
Lunch	$= \# \text{ Lunches Served in Month} / \# \text{ Operating Days}$
Any Meal	$= \# \text{ Meals Served in Month} / \# \text{ Operating Days}$
MEQ	$= \# \text{ MEQ in Time Period} / \# \text{ Operating Days}$

Example ADP Calculation

Lunches per Month	Operating Days	ADP
15,000	/ 20 =	750

Popularity Comparison

- ADP = 750
- Chicken Nugget Day = 782
- Meatloaf Day = 724

- Increase frequency of more popular items?
- Decrease frequency of less popular items?

Why to Calculate Cost and Revenue per Meal Equivalent

- Analyze trends in cost and revenue
- Simplify analysis of cost and revenue by source
- Compare cost and revenue

How to Calculate Revenue & Cost per MEQ

Type	Formula
Revenue	$\text{= Total Revenue} / \text{MEQ}$
Cost	$\text{= Total Cost} / \text{MEQ}$

- Revenue: Student Sales, Adult Sales, Non-program Food Sales, Contract Sales, Reimbursement, USDA Foods, etc.
- Cost: Salaries & Wages, Benefits, Purchased Food, USDA Foods, Supplies, etc.

Example Revenue & Cost per MEQ

Type	Amount	MEQ	Result
Revenue	= \$16,000,000	/ 5,250,000	\$3.0476
Cost	= \$16,500,000	/5,250,000	\$3.1429
Difference	-\$500,000		-\$0.0953

Ideas to Cut Meal Cost

- Less expensive trays
- Less expensive utensils (spork instead of fork + spoon)
- Less expensive fruits/vegetables/entrees
- Are your meals per labor hour in line at each school?

Key Takeaways

- Why and how to calculate meal equivalents.
- Why and how to calculate meals per labor hour.
- How to use meal equivalents for other key performance indicators.
- Using the resulting metrics to make program operation decisions.

Any Questions?



Thank You



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