

Exploring the Utilization of Key Performance Indicators by School Nutrition Directors

Purpose

The purpose of this study was to explore school nutrition (SN) directors' usage and perceptions of key performance indicators (KPIs). The relationship between these variables and characteristics of SN programs and SN professionals' were also investigated.

Method

The methodology included a literature review, an expert panel, and a national survey.

- A day and a half expert panel meeting with 10 SN professionals was convened to gather information to support the development of a national survey to meet the study objectives.
- The draft survey was validated with the assistance of review panel of 21 SN professionals.
- The validated survey was mailed to a random sample of 700 SN directors representing the seven USDA regions. Survey data were analyzed using SPSS Version 21.0 for Windows.

Standard School Nutrition KPIs

- | | |
|------------------------------|--------------------------------|
| 1. Meals Per Labor Hour | 7. Average Daily Participation |
| 2. Cost as a % of Revenue | 8. Percent Over-Production |
| 3. Cost Per Meal | 9. Break Even Point |
| 4. Revenue Per Meal | 10. Staff Turnover Rate |
| 5. Inventory Turnover Rate | 11. Absentee Rate |
| 6. Days of Inventory On-Hand | |

Results

Survey Response Rate/ Demographics

- Survey response rate was 29.3% (N=205)
- USDA Regions:
 - Southeast = 23%
 - Southwest = 18%
 - Mountain Plains = 16%
 - Mid-Atlantic = 14%
 - Midwest = 13%
 - West = 9%
 - Northeast = 7%
- District Student Enrollment:
 - ≤ 1,999 = 28%
 - 2,000 – 29,999 = 65%
 - ≥ 30,000 = 7%

Access, Understanding and Usage of KPIs

- SN directors have access to data for calculating:
 - Average daily participation (ADP) = 98.0%
 - Cost per meal (CPM) = 94.0%
 - Meals per labor hour (MPLH) = 93.6%
- KPIs that directors have an adequate understanding of:
 - ADP = 96.0%
 - MPLH = 88.0%
 - CPM = 85.0%
- KPIs used for decision making:
 - ADP = 91.2%
 - CPM = 88.7%
 - MPLH = 82.0%
- KPIs not calculated:
 - Percent over-production = 58.6%
 - Staff turnover rate = 53.4%
 - Inventory turnover rate = 50.2%

Agreement with KPI Perception Statements

- When calculated correctly, SN KPIs provide essential information about SN programs (96%)
- KPIs are useful for decision making (95%)
- KPIs are valuable tools for evaluating a SN program (92%)
- Decisions based on incorrectly interpreted KPIs can have negative consequences for a SN program (89%)
- KPIs are undervalued by SN professionals (73%)
- KPIs are time consuming to calculate (72%)
- KPIs are easy to calculate (67%)
- Data for calculating KPIs is easy to obtain (59%)
- KPIs are difficult to interpret (34%)
- There is no uniform process for calculating KPIs (33%)
- SN directors receive adequate training on KPIs (13%)

Enrollment & Agreement with KPI Perception Statements

SN directors from districts with student enrollment of ≥ 2,000 were significantly more likely to agree with the following statements compared to directors from smaller districts (p < .05):

- KPIs are easy to calculate
- KPIs are useful for decision making
- KPIs are a valuable tool for evaluating a SN program

Conclusions

- ADP, MPLH and CPM are the KPIs SN directors have the greatest access for calculating and greatest understanding for use in decision making.
- Percent over-production, staff turnover rate and inventory turnover rate are the KPIs least often utilized by SN directors.
- Most SN directors believe that KPIs are valuable tools for decision making and program evaluation.
- SN directors from the smallest school districts (< 2,000 in student enrollment) are the least likely to perceive that KPIs are easy to calculate, useful for decision making, and program evaluation.

Applications

Based on the findings of this study, the following recommendations are advised:

- Conduct further research to identify the best mode of training and resources to support SN professionals' utilization of KPIs for operational decision making and program evaluation.
- Develop training and resources to support SN professionals (state agency child nutrition directors, SN directors, district-level supervisors, and unit level managers) on the appropriate utilization of SN KPIs.