ABSTRACT

Purpose: To survey Marshfield area businesses to determine the types of foods currently available to employees at the workplace and the potential need for nutrition information to facilitate the ordering of healthy food options at workplaces.

Methods: A 2-page self-administered questionnaire was mailed to all businesses registered with the Marshfield Area of Chamber of Commerce. Questionnaires were mailed a second time to non-responders to improve the response rate. The questionnaire included items about foods available to employees at the workplace, cooking and eating facilities available to employees, and reasons for food choices made. Data were entered into an Excel spreadsheet, verified against the hard copies and transferred to SPSS for analysis.

Results: Completed questionnaires were returned by 249 businesses (41.1% participation). The reported number of minutes that most employees take for their lunch ranged from 0 to 60 (median=30). Eighty-one percent of businesses (n=184) reported that most employees take 30 or more minutes for their lunch. Respondents were asked to list the most common menu items purchased for consumption on-site. One hundred fifteen respondents listed sandwiches (46.2%), 101 listed pizza (40.6%), 30 listed salad (12.0%), and 17 listed various sweets (6.8%). Employees were thought to be less likely than managers to select foods lower in calories if the foods are more expensive.

Discussion: There is great potential to improve the health of employees through the provision of nutrition information to businesses. The survey employed in the current study can be used again in the future to track changes after implementation of worksite initiatives through the Business and Industry Committee of the Healthy Lifestyles - Marshfield Area Coalition.

INTRODUCTION

Obesity is recognized as a major health problem in the United States, contributing to premature death, type II diabetes, heart disease, stroke, hypertension, asthma, cancer, depression, and many other conditions.1 Recent data suggest that the prevalence of overweight or obesity is 66% in US adults, obesity is 30.6%, and extreme obesity is 5.1%.2 Nutrition and overweight are 1 of 28 Healthy People 2010 objectives for the United States, with a target obesity rate of no more than 15% for adults by the year 2010.3 Both the US Surgeon General’s “Call to Action on Obesity”1 and the Healthy People 2010 documents acknowledge the potential of worksites to provide opportunities to support healthy lifestyles.3 One of the action items for worksites that was identified in the Surgeon General’s report was “provide protected time for lunch, and ensure that healthy food options are available.”1

The Healthy Lifestyles - Marshfield Area Coalition (www.marshfieldhealthylifestyles.org) was formed in 2001 to promote the health of people living in the Marshfield area, specifically through encouraging people to make healthy food choices and balance energy intake with energy output. The Coalition is organized into 6 different committees: (1) business and industry, (2) community, (3) education, (4) finance, (5) medical, and (6) public relations. The Business and Industry Committee concentrates on promoting responsible employee health and benefit programs and community
change. In collaboration with the Business and Industry Committee of the Coalition and the Marshfield Area Chamber of Commerce and Industry, the purpose of this project was to ascertain the availability of healthy food options and contributors to food choices made available to employees at worksites. This was envisioned as the first step in determining businesses’ information needs in relation to healthy food options for employees and fits well with the action step for worksites outlined in the Surgeon General’s call to action to ensure that healthy food options are available.1

METHODS
A 2-page self-administered questionnaire was developed and mailed to the 606 businesses registered with the Marshfield Area of Chamber of Commerce in spring 2004 (survey instrument available from corresponding author on request). Questionnaires were mailed a second time to non-responders to improve the response rate. The questionnaire included items about the nature and size of the business, foods available to employees at the workplace, cooking and eating facilities available to employees, the most common menu items purchased for consumption on-site, reasons for the food choices made, and the likelihood that foods lower in calories would be chosen by employees or management if those foods were more expensive or the same price. The Institutional Review Board of the Marshfield Clinic reviewed the research protocol and questionnaire using expedited review and determined that the project was exempt.

Data were entered into an Excel spreadsheet, verified against the hard copies and transferred to SPSS for analysis. In addition to descriptive analyses, chi-squared statistics were employed to test the association between responses and membership in the Healthy Lifestyles - Marshfield Area Coalition. A P-value <0.05 was considered statistically significant.

RESULTS
Completed questionnaires were returned by 249 businesses (41.1% participation). However, the denominator for questions varies because not all questions were answered by all respondents. The percentages presented reflect the number of people responding to each question. Nearly half of the questionnaires (n=122, 49.0%) were completed by business owners or company presidents and another 28.5% (n=71) were completed by managers.

Sixteen (6.6%) of the businesses were at least partially unionized. One third of businesses (n=75) reported that 10% or more of their employees work off-site. Seventy-one percent (n=167) of the businesses have employees who generally work shifts. Sixty percent of businesses reported that 50% or more of their employees are female. Work site wellness programs were available at 9.7% of businesses (n=23) and 12.4% of businesses (n=29) belonged to the Healthy Lifestyles - Marshfield Area Coalition.

The reported number of minutes that most employees take for their lunch ranged from 0 to 60 (median=30). Eighty-one percent (n=184) reported that most employees take 30 or more minutes for their lunch. Six percent of businesses (n=13) reported that their employees do not take any time for their lunch. Items available at worksites for employee use included the following: refrigerator (94.1%), microwave (91.1%), sink (87.3%), freezer (59.7%), beverage vending (47.0%), non-refrigerated foods (30.9%), vending machines (30.1%), refrigerated foods (24.6%), and full kitchen (21.6%).

Food is prepared on-site for employees and/or visitors at 15.1% of businesses (n=36), and one third of these businesses (n=12) provide nutritional information about the food prepared. Nearly all businesses (89.0%) reported that food is brought from home by employees and nearly half (46.8%) of companies provide food for

| Table 1. Factors that Influence Foods Consumed in Marshfield Area Businesses During Business Hours |
|-----------------------------------------------|-------------------------------|-----------------|-----------------|-----------------|
| Factor                              | No. Completing Question | None (%) | Little (%) | A Lot (%) | Greatly (%) |
| Management                          | 227                  | 48.9     | 34.8       | 5.7           | 10.6          |
| Individual Employees                | 231                  | 18.6     | 24.2       | 19.9          | 37.2          |
| Outside Organizations               | 213                  | 63.4     | 29.6       | 4.2           | 2.8           |
| Cost                                | 213                  | 29.6     | 40.8       | 23.5          | 6.1           |
| Nutrition                           | 210                  | 26.7     | 39.0       | 26.7          | 7.6           |
| Convenience (Food Type)             | 212                  | 16.5     | 25.9       | 40.1          | 17.5          |
| Food Vendor                         | 208                  | 57.2     | 24.0       | 12.5          | 6.3           |
| Acceptability Habit/Taste           | 210                  | 21.4     | 23.3       | 40.0          | 15.2          |
| Convenience of Ordering             | 211                  | 28.0     | 23.7       | 37.4          | 10.9          |
| Delivery Available                  | 213                  | 38.5     | 30.0       | 21.6          | 9.9           |
| Time for Delivery                   | 211                  | 43.1     | 28.4       | 20.4          | 8.1           |
meetings. Smaller percentages of businesses indicated that food is purchased by individual employees on-site (32.2%) or that food is provided for customers (23.4%). Individual employees were listed by 37.2% of businesses as greatly influencing the foods consumed during business hours (Table 1). The next greatly influencing factors were convenience (17.5%) and acceptability/habit/taste (15.2%). Respondents were asked to list the most common menu items purchased for consumption on-site. One hundred fifteen respondents listed sandwiches (46.2%), 101 listed pizza (40.6%), 30 listed salad (12.0%), and 17 listed various sweets (6.8%). Employees were thought to be less likely than managers to select foods lower in calories if the foods are more expensive (Figure 1).

There were some significant differences in foods offered and facilities available to employees between businesses that were and were not members of the Healthy Lifestyles - Marshfield Area Coalition (Table 2). Businesses that were members of the Healthy Lifestyles - Marshfield Area Coalition were significantly more likely to indicate that salads are one of their most common menu items purchased for consumption on-site. A larger percentage of these businesses also indicated that fruit and pizza are common menu items. Business members of the Healthy Lifestyles - Marshfield Area Coalition were significantly more likely to have vending machines, beverage vending, and non-refrigerated foods available for employees. They were also more likely to have full kitchen facilities for employees, but this finding did not reach statistical significance.

Thirty-six percent of respondents (n=84) indicated that they would use a menu that identified healthy menu choices at various restaurants/caterers if the Healthy Lifestyles - Marshfield Area Coalition developed such a menu.

**DISCUSSION**

This survey was developed and implemented as a first step by the Business and Industry Committee of the Healthy Lifestyles - Marshfield Area Coalition to determine the needs of local businesses for resources to ensure that healthy food options are available at worksites, as recommended by the Surgeon General. The survey results indicate that the majority of employees and managers would select foods lower in calories if the foods were the same price and they are convenient. This information will be useful to the Business and Industry Committee as it moves forward to develop a resource guide to identify healthier food options at local restaurants and caterers. The information may also be useful for local restaurants and caterers as they develop menus that respond to the health concerns of their customers. These data should be applicable to other communities looking to adopt healthy lifestyles initiatives for working adults. Other committees within the Coalition are developing strategies to positively influence food and activity choices made outside the work setting.

We know of no other similar data or survey for comparison with the present results. Prior research has indicated that marketing of healthful entrees at a worksite cafeteria can increase the acceptability and sales of these food items and that eating lunch in a worksite cafeteria is associated with improved dietary quality. Taken together with the Surgeon General’s action step for worksites to have an impact on the obesity epidemic.
through ensuring that healthy food options are available and the willingness of managers and employees to make changes if healthy foods are available at the same price, there is great potential to improve the health of employees through the provision of nutrition information to businesses. All businesses should also be encouraged to act on the other recommendation from the Surgeon General’s call to action to provide protected time for lunch. The survey employed in the current study can be used again in the future to track changes after implementation of worksite initiatives through the Business and Industry Committee of the Healthy Lifestyles - Marshfield Area Coalition.

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REFERENCES
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