

EFFECTIVENESS OF SIGNAGE PROMOTING HEALTHY CHOICES IN A  
MEDICAL CENTER CAFETERIA

By

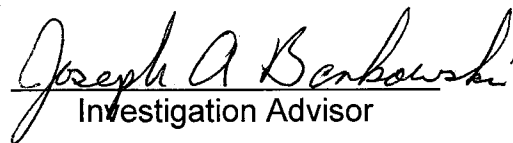
Kristi Wenzel

A Research Paper

Submitted in Partial Fulfillment of the  
Requirements for the  
Master of Science Degree  
With a Major in

Food and Nutritional Sciences

Approved: 2 Semester Credits

  
Investigation Advisor

The Graduate School  
University of Wisconsin-Stout  
October, 2004

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**ABSTRACT**

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Effectiveness of Signage Promoting Healthy Choices in a Medical Center Cafeteria.			
(Title)			
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Food and Nutritional Sciences	Dr. Joseph Benkowski	October, 2004	50
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American Psychological Association			
(Style Manual Used in this Study)			

The purpose of this study was to determine if a healthy eating program, known as Eat Smart, would increase health awareness among employees of the Marshfield Medical Complex. No previous studies have been conducted on medical facility cafeterias. Previous studies have indicated that worksite nutrition programs and supermarket nutrition programs increased health awareness, improved eating habits, and that subjects gained nutrition knowledge.

A survey was distributed in the cafeteria of the Marshfield Medical Complex in July, 2004. The survey measured several aspects of the Eat Smart program. The population for this study was 6,389 employees of the Marshfield Medical Complex. From the population of employees, 105 voluntarily participated in this study. Eighty-nine percent of participants were female and ninety-five percent were Caucasian.

The results indicate a generally positive view of the Eat Smart program. Almost half (44.8%) of all subjects participate in the Eat Smart by using the Eat Smart card in the

cafeteria. Almost two-thirds (72.4%) choose the Eat Smart meal-of-the-day at least once per week. Participants also indicate a positive response toward the display plate for the Eat Smart meal-of-the-day, the Eat Smart board, and signage listing nutritional information in the cafeteria.

The findings of this study are similar to other studies. Employees are willing to participate in the program and it is an effective way of distributing nutrition information. Recommendations for improvement include providing more vegetarian choices, increased advertising of the program, and increasing the amount of nutrition information available to customers.

## Acknowledgements

I would like to extend my appreciation and warmest thanks to everyone who has helped me in achieving the completion of this paper. I especially want to thank my advisor, Dr. Joe Benkowski, for his willingness to work with me on this project and for his dedicated time and hard work. Your friendliness and wisdom will always be remembered.

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# Chapter 1

## Research Problem and Objectives

### Introduction

Offering labeled healthy choices in a worksite cafeteria has been proven to increase awareness of health and improve eating habits (Biener et al. 1999). Several studies have been conducted to determine the effect of nutrition education in a supermarket. Olson et al. (1982), Hunt et al. (1990), and Rodgers et al. (1994) all conducted supermarket studies and found that participants gained nutrition knowledge. It is important to determine if a nutrition program in a medical complex cafeteria has a similar impact on the employees who dine there. No previous studies could be found related to nutrition programs in a medical complex cafeteria. This is an important area to research because many organizations are beginning employee wellness programs that include nutrition programs.

The Marshfield Medical Complex located in Marshfield, Wisconsin has been chosen as the site for conducting this study. Marshfield is a small town located in central Wisconsin. The most recent census data from January, 2001 estimates the population of Marshfield as 18,887. The medical facility consists of the Marshfield Clinic and Saint Joseph's Hospital. Saint Joseph's Hospital is the second largest hospital in Wisconsin. The hospital is a 504-bed tertiary care center and has been verified as a level two trauma center (Saint Joseph's Hospital 2004). The Marshfield Clinic employs over seven hundred physicians and is one of the largest private practice groups in the United States (Marshfield Clinic 2003).

## Problem Statement

The purpose of this study is to assess the perceptions of Marshfield Medical Complex employees regarding the effectiveness of the cafeteria's healthy eating program known as Eat Smart. Data will be collected through a survey distributed in the medical center cafeteria during June, 2004. The researcher will hand out the surveys at the entrance to the cafeteria. Participants will be allowed to complete the survey only once. The goal of this study is to determine if the Eat Smart program increases health awareness among the employees who participate. The signage used for this study lists the choices available in the cafeteria and compares nutrition information for the available items. An apple as a healthy symbol is located next to the most nutritious choice offered for that day. Nutrition information is also provided on a bulletin board known as the Eat Smart Board.

## Objectives

The objectives of this study are to:

1. To determine the perceived benefits of the Eat Smart program at the Marshfield Medical Complex by gathering the opinions of employees through a survey.
2. To determine the impact that providing nutrition information has on employee food choices.
3. To determine what techniques are working well and what can be improved within the Eat Smart program.

## Significance

There is a concern about the overall health and well being of all Americans, including healthcare workers. A survey conducted at a recent meeting of the American Medical

Association found that forty-seven percent of physicians present were overweight and nineteen percent of physicians were obese. Only thirty-three percent of delegates at the convention were of normal weight (Peck 2004). According to Flegal, Carroll, Ogden, Johnson (cited in National Institutes of Health, 2003), sixty-four and a half percent of all Americans are overweight and thirty and a half percent are obese. Overweight is defined as a Body Mass Index (BMI) greater than twenty-five and obesity is defined as a BMI greater than thirty.

Most health care workers must take a nutrition class as a part of their training. This implies that they possess the knowledge of knowing what foods are good for them and which are not. This study will determine healthcare worker's perceived impact of promoting healthy foods through the Eat Smart program.

The Marshfield Medical Complex will benefit from this study because it will be evaluating a portion of their wellness program. Evaluation of the Eat Smart program will provide information regarding the effectiveness of the program overall, as well as the effectiveness of specific components of the program. By determining what is effective and what is not effective, the medical center will be able to modify their program. The medical complex may also find that the program improves the perceived health status of their employees. This study will benefit both the employees and the medical complex.

If the Healthy Pick Program proves to be effective, similar programs can be implemented in other work place cafeterias, especially medical centers. All organizations with cafeterias can improve their organization by implementing a similar program. This data could also be applied to restaurants. Any restaurant could indicate healthy choices on their menu by using a symbol next to those items.

## Limitations

The limitations of this study are:

1. The results of this study are limited to the health care workers of the Marshfield Medical Complex.
2. The scope of this study is limited to the amount of medical complex employees who choose to eat in the cafeteria.

## Assumptions

The assumptions of this study are:

1. The Marshfield Medical Complex will not make significant changes to their menu through the duration of this study.
2. The Marshfield Medical Complex will significantly change its menu within the next 2 years due to employee demand for healthier foods.

## Definition of Terms

**Cafeteria-** A restaurant in which the customers are served at a counter and carry their meals on trays to tables (American Heritage Dictionary of the English Language (2000)).

**Eat Smart-** A wellness program which encourages healthy eating in the cafeterias of a medical complex by providing labeled healthy food choices and nutrition information (Saint Joseph's Hospital and Marshfield Clinic).

**Health-** Soundness, especially of body or mind; freedom from disease or abnormality (American Heritage Dictionary of the English Language).

**Medical Complex-** An institution that provides medical, surgical, or psychiatric

care and treatment for the sick or injured (American Heritage Dictionary of the English Language).

**Nutrition-** The science or study that deals with food and nourishment, especially in humans (American Heritage Dictionary of the English Language).

**Nutrition Education-** Providing sound science-based food and nutrition information to the general public (American Dietetic Association 1996).

## Chapter 2 Review of Literature

### Introduction

Adequate nutrition is important for all Americans. According to the National Center for Chronic Disease Prevention and Health Promotion (2002),

Physical activity and good nutrition play critical roles in promoting and maintaining health and in reducing the risk of chronic disease, and it is vitally important to get this message out to the American people. However, communicating the message alone is not enough. If individuals are to adopt and maintain healthy behaviors, such changes must be supported by programs, policies, and the environments in which they live.

The review of literature will begin with the discussion of studies that address nutrition education in the worksite. This research study defines worksite as the facility, office, or place where you work. Researchers are interested in the relationship between nutrition education at work and the impact it has on the nutritional status of their employees.

Studies have also been conducted on the effect of nutrition education in public places. A discussion of supermarket studies and a restaurant study will follow the worksite studies. A comprehensive review of the literature concluded that no studies have been done to determine the relationship of signs indicating healthy choices and the perceived health status of employees in a medical center.

### Workplace Nutrition Programs

Many studies were found relating health status to worksites other than in a medical complex. This portion of the literature review focuses on worksite nutrition education.

Nutrition education in the worksite can increase productivity and reduce the amount of sick days. Levin (1996) designed a study comparing two similar cafeterias for

government employees. A control cafeteria was compared to a cafeteria with signage indicating healthy choices. The study included three low-fat entrees including a bean burrito, potato and chili burrito, and a turkey, lettuce, and tomato sandwich. Levin measured the amount of these items sold in both cafeterias before implementing the program in just one. Before the program, both cafeterias sold similar amounts of the healthy entrees in a 2-week period, with 4.3% at the experimental site and 5.4% at the comparison site. The program was then implemented at the experimental site and a recording was taken after two weeks and after four weeks. Finally, a fourth two-week observation was recorded 7 months later to determine if long-term change was possible. While the amount of entrees sold remained constant at the comparison site, they grew impressively at the experimental site. At observation two, 9.5% of entrees sold were the low fat, by observation 3 it was 11.9%, and by observation 4 it had risen to 14.1%. According to Levin, there is significant data that something as simple as a symbol can encourage people to make healthy choices.

Similar results were found in the Working Well Trial (Biener, Glanz, McLerran, Sorensen, et al., 1999). The Working Well Trial determined that offering nutrition advice at work can improve the perception of a healthy work environment. The study was conducted by matching similar worksites into pairs with one being a control and the other being the experimental site. The control was given minimal intervention with only a few brochures and displays, while the experimental group was encouraged to offer healthy foods in their cafeterias. The results indicated that employees of the experimental site felt that they had better access to nutrition information and healthier foods at work.

Perlmutter, Canter, and Gregoire (1997) wanted to determine if providing healthy choices in a worksite cafeteria would affect sales and profitability. This study was conducted in the Kansas Farm Bureau and Affiliated Services cafeteria. This cafeteria is a modern cafeteria, which serves about two hundred people per day. The data collection for this study was divided into five phases. Phase one was to collect normal sales data. Phases two, three, and four asked cafeteria diners to complete a survey regarding the acceptability of the cafeteria food. Phase two assessed the cafeteria food prior to it being modified to be low-fat and low-sodium. This is especially important because diners were not aware of any modifications to the food in phase three. Phases four and five also asked the diners to complete a survey on the acceptability of the food, however this time healthy choices were marketed and labeled as such. The results of this study indicated that there was no significant difference in sales data during any of the phases (Perlmutter, Canter, and Gregoire). The researchers also found that modified foods were rated to be less acceptable when they were not labeled as healthy. However, in phases four and five, the same foods which were given a low acceptability score in phase three, were rated higher and more acceptable. Perlmutter, Canter, and Gregoire concluded that diners are more willing to accept modified foods when they are labeled as a healthy option.

Family is an important key to prolonged nutrition and health. The Treatwell 5-a-Day Study was implemented to measure the effectiveness of a worksite nutrition education program (Sorensen, Stoddard, Peterson, Cohen, Hunt, Stein, Palombo, and Lederman, 1999). The study set out to determine if involving the family made a difference in worksite intervention. Therefore, there were three groups being measured in this study.

The three groups were a control group, a worksite group, and a worksite-plus-family group. All three groups were given information and a one-hour presentation. The worksite and worksite-plus-family group were also given more education on modifying their behaviors. Finally the worksite-plus-family was also given education materials to take home, as well as receiving a newsletter. The findings of this study indicated a 7% increase in consumption for the worksite group, and a 19% increase in consumption for the worksite-plus-family group. Sorensen, Stoddard, Peterson, Cohen, Hunt, Stein, Palombo, and Lederman concluded that worksite intervention including family may be a promising new way to provide effective nutrition education.

Many organizations are developing Employee Wellness Programs. An employee Wellness Program can offer anything from worksite based nutrition education to fitness programs. Employee Wellness Programs have been around for a long time but they are beginning to gain in popularity again. Caprio, Shovic, and Harris (1991) implemented an Employee Wellness Program at Montana State University. The wellness program focused on nutrition services and also emphasized health screening and activity classes. A questionnaire to determine interest was mailed out and 952 responses were mailed back with 53.3% from men and 46.7% from women. However, once the program was implemented, only 281 out of 4,000 (7%) eligible employees participated. The result of the low participation rate may be due to the fact that participants had to pay fees to take the programs. From the three-day diet records, it was determined that participants ate more than the RDA of fat and less than the RDA of carbohydrates. They did not consume a balanced diet, which is something that can be corrected through nutrition counseling.

The TeachWell worksite wellness program was designed to increase health by promoting the Gimme-5 program (Resnicow, et. al. 1998). This study recruited teachers from a school district of eighty-two schools in Atlanta to implement the Gimme-5 program in their classrooms. The purpose of the Gimme-5 program was to encourage everyone to consume at least five servings of fruits and vegetables per day. A total of thirty-two schools participated in the program. The TeachWell wellness program was found to be largely ineffective. No significant data was found in favor of the TeachWell program. Resnicow, et. al. attribute the lack of success to inadequate implementation of the Gimme-5 curriculum and to inadequate teacher participation. The researchers also suggest that this study may have been more effective if the teachers were offered incentives for participating or could have incorporated the program into their traditional work day, however to participate teachers were required to stay late.

Nutrition Education is also important for small worksites and worksites in rural areas. These areas are often neglected because access to health information is limited in rural areas. Two similar studies have recently been conducted in this area. Boeckner and Tando (1996) determined that "positive behavior changes by employees in a worksite nutrition education program are possible." This was achieved by recruiting three small businesses in a community with a population less than 25,000. The study had three phases, an initial education phase, a booster and reinforcement phase, and a concluding activity to celebrate success. There were 34 participants from a wide variety of ages, but 22% were males and 78% females. The purpose of the program was to reduce fat intake to no more than 30% of the diet. Participants showed improvements in behaviors related to nutrition habits, behaviors related to reducing fat through food

selection, behaviors related to reducing fat through food selection, and in behaviors related to other health habits. Many of the behaviors that did not show improvement were in areas that the participants already were doing well in. Similar findings were found by Schafer and Anderson (1998). Nutrition education was provided in a rural setting with a goal of reducing risks for cardiovascular disease. Two worksites were selected for this study and they included a small factory and a small public school system. The factory employed 300 people while the school employed 158. At each site, the Extension Nutrition and Health Specialist held five classes. Each class was an hour long, once a week. The participants in the study were also mailed eight self-study lessons to do at home. Eighty-eight people chose to participate in this study, with 53 being from the factory and 35 from the school. The study measured body weight, plasma total cholesterol, plasma LDL-cholesterol, plasma HDL-cholesterol, and plasma triglycerides. After the nutrition education program was completed, 48 out of 88 participants had lost an average of 7.4 pounds. The total cholesterol also dropped with 72% having values above desired levels before intervention and 53% after. Thirty-six percent had high cholesterol before the program and this dropped to 17% after the study. A follow up was conducted one year after the original study with 35 of the participants from the factory. These participants had all at least maintained their weight and cholesterol levels. Schafer and Anderson proved that nutrition education in rural settings is effective and that participants gained knowledge and continued to use it because they maintained their weight loss and lipid levels.

Nutrition education programs in the worksite can be effective if employees are willing to participate in the program and the program is run properly. To be successful, the

program must offer a benefit to the employee. This benefit could be weight loss, reduced lipid levels, or even a free meal in the cafeteria. This study will determine if there is a perceived benefit of the Eat Smart program among the employees of the Marshfield Medical Complex.

### Nutrition Intervention in Public Places

The definition of a public place is given by the American Heritage Dictionary of the English Language as, “maintained for or used by people or community.” In general terms, any place where the public is welcome. This portion of the literature review focuses on supermarkets and restaurants.

Attempts at nutrition education in supermarkets date back as far as twenty-five years. Olson, Bisogni and Thonney (1982) conducted a study in 1979 to determine effectiveness of nutrition education at the point-of-purchase. The study was known as “Food for Health: The Carbohydrate Connection”. The program was implemented in only three grocery stores. Signage promoting increased consumption of complex carbohydrate foods was placed around the supermarkets. Recipe cards and fact sheets were also distributed to shoppers. For the market of one store, mass media efforts involving newspaper and radio were also implemented. Minimal changes in knowledge retention occurred in all three supermarkets. Participants who remembered seeing the promotional signs scored significantly higher when asked a series of nutritional questions (Olson, Bisogni and Thonney). These same participants who were aware of the program also reported an increased use of high carbohydrate foods during the program. However, once the program ended, consumption was back to normal.

The "Food for Health: The Carbohydrate Connection" Program proved that point-of-purchase nutrition education is effective in educating the public. Even though buying and eating habits did not significantly change, a gain in knowledge was shown. The study also proved that mass media involvement can increase interest in the program.

The Pawtucket Heart Health Program conducted a study known as the Four Heart Program. According to the authors (Hunt, Lefebvre, Hixson, Banspach, Assaf, and Carleton 1990) "The name, Four Heart, represents foods that are tasty and contain less fat, cholesterol, and sodium." This study was meant to test signage indicating low fat, low cholesterol, and low sodium foods. The researchers conducted personal random interviews of shoppers as they were leaving the supermarket. Participants were interviewed to determine their awareness of the signs and to see if they were influenced to buy those products. Hunt, Lefebvre, Hixson, Banspach, Assaf, and Carleton found a fifteen percent increase in the number of customers who were aware of the signs at the end of the four year study, compared to the beginning. More females than males were aware of the signs, with 32% of females and 24% of males knowing of them. Females were able to identify the correct sign 23% of the time and males only 12% of the time (Hunt, Lefebvre, Hixson, Banspach, Assaf, and Carleton).

The most significant data from this study comes in the form of nutrition education. The Four Heart Program found that half of all males and females said they were persuaded to buy the healthy labeled foods. According to Hunt, Lefebvre, Hixson, Banspach, Assaf, and Carleton, males are normally less willing to participate in nutrition education programs. This study found equal amounts of males and females willing to participate.

Rodgers, et al (1994) conducted a study titled Eat for Health. The Eat for Health study was conducted in supermarkets in the northeast. The study used twenty stores in Washington as the intervention group and twenty stores in Baltimore as the comparison group. The goal of Eat for Health was to increase consumer awareness of the link between diet and cancer risk. The study set out to increase purchases of foods with at least two grams of fiber that also provided less than 30% of calories from fat. Eat for Health tried to accomplish increased consumption of these foods by providing extra labeling on shelves of the high fiber foods. A monthly bulletin providing nutrition information was given out free of charge at the checkouts.

The Eat for Health Study proved to be minimally effective. There was no statistically significant increase in purchases of high fiber foods. However, there was a large increase in the number of people who were aware of the link between diet and cancer (Rodgers et al).

The majority of Americans eat out in restaurants several times per week. With an increasing number of citizens becoming more aware of nutrition, it is important for restaurants to offer healthy choices. Foods many are choosing to limit when eating out include caffeine, sugar, fat, and cholesterol (Regan 1987). It is important for restaurant owners to be aware of this trend and offer healthy options on the menu. According to Regan, this is especially important in family restaurants and not as important for fast-food chains. In a restaurant setting, it is more important to indicate which foods are lower in sodium, fat, or cholesterol, rather than listing calories and other detailed information. Regan states, "Spare them the nitty-gritty details and emphasize general health, wellness, and good nutrition." However, she also acknowledges that the fine

details may be more important in a healthcare setting. The overall message is that people are becoming more health-conscious and are looking for healthy options when dining out.

The research indicates that programs promoting health awareness are often very effective at providing nutrition education. Signage promoting healthy choices makes people more aware of what they are eating, even if they do not change their eating habits. This study will determine if there is increased health awareness among the Marshfield Medical Complex employees.

## Chapter 3 Research Methods

### Introduction

The goal of this study is to measure awareness of nutrition by evaluating the Eat Smart Program in a medical complex cafeteria. This chapter discusses the methods and procedures used in this study. It also includes information about the population and how the sample was chosen. The instrumentation and statistical analysis are also explained.

### Research Design

This study utilizes an experimental design. Experimental design is necessary for this study to prove that a behavioral change will occur after the Eat Smart Program is implemented. The data collected will be from a survey that will then be analyzed to determine if change has occurred. The experiment will either show that the healthy pick program caused behavior change or that no behavior change was observed.

The design of this study includes many steps. After realizing the need for this study, it was necessary to get the approval of the director of food and nutrition services at Saint Joseph's Hospital. The food service director then gained approval through hospital administration. Employees of the Marshfield Clinic were also included in the study because they often dine in the hospital cafeteria. Approval of the protection of human subjects was obtained from the University of Wisconsin-Stout's Institutional Review Board (Appendix A).

This facility already had been using the Eat Smart Program, but no measurements recording its effectiveness had previously been taken. The researcher developed a survey including subjective and objective data (Appendix B). Demographic data was collected at the end of the survey. The questions of the survey focused on the

awareness of nutrition in the cafeteria. The surveys were distributed by the researcher in the hospital cafeteria. Participants were instructed to complete the questionnaire only once. The participants were able to take the questionnaire with them, but were instructed not to discuss their answers with other employees and to return it to the cafeteria within two days. An incentive of a free granola bar was given upon completion of the survey.

### Population and Sample

The population for this study consisted of Saint Joseph's Hospital and Marshfield Clinic employees, including all employees from maintenance workers to nurses and doctors. This population was chosen because the medical center is located in a rural area where access to health information may be limited. All subjects in the population are employed by Saint Joseph's Hospital or the Marshfield Clinic. The size of the population is 6,389, distributed between 2,555 employees of Saint Joseph's Hospital, 3,493 employees of the Marshfield Clinic, and 341 physicians. Employees are an ideal population for this study because the majority of people dining in the cafeteria are employees.

The sample consisted of any employee who was willing to participate in the study. This is a cluster sample that is limited to those willing to participate in the survey. A cluster sample focuses on natural groups of individuals. One week prior to distribution of the survey, a large poster advertising the survey was placed in the cafeteria.

It is important to sample because the population is too large to collect data from everyone. Sampling provides a picture of the population without any significant difference in the results. The sample for this study represents the population. The only

significant difference between the sample and the population is that the subjects in the sample group frequently eat in the cafeteria and those in the population may not.

#### Instrumentation

It is necessary to collect data to determine if the Eat Smart Program has been effective in creating health awareness. This was accomplished through a survey developed by the researcher. The survey is available in Appendix A. Many questions were based on the effectiveness of the Eat Smart signs located in the cafeteria. Other wellness program areas were also questioned. Demographic data was collected at the end of the survey. The survey included a statement guaranteeing the participant's privacy. The survey was developed so all questions could be answered by checking the most appropriate answer. Several questions also asked for the participant to discuss their answer.

#### Statistical Analysis

This study utilizes a nominal form of showing data. Nominal data is classified into categories, which indicate a difference between the groups. The statistics used are primarily descriptive in nature. Descriptive statistics are very simple and include mode, mean, median, range, variance, and standard deviation. The results are presented in terms of numbers and percentages.

## Chapter 4 Results

### Introduction

The purpose of this study is to determine the perception of employees regarding the health benefits of the Eat Smart healthy eating program in the cafeteria of the Marshfield Medical Complex. A survey was distributed in the cafeteria in July, 2004, and all employees had the opportunity to participate. Surveys underwent statistical analysis and the results are presented in this chapter.

### Results

Table 1. How many times per week do you eat in the cafeteria?

	Frequency	Percent
Never	1	1.0
1-2 times per week	16	15.2
3-4 times per week	50	47.6
5+ times per week	38	36.2
Total	105	100.0

This table indicates that all but one participant in the study eat in the cafeteria of the Marshfield Medical Complex at least once per week. The majority of respondents dine in the cafeteria at least three times per week.

Table 2. Do you participate in the Eat Smart program in the cafeteria by using the Eat Smart Card?

	Frequency	Percent
Yes	47	44.8
No, I am not interested	41	39.0
No, I am not aware of the program	15	14.3
No response	2	1.9
Total	105	100.0

Just under half of all survey respondents participate in the Eat Smart program. All but one respondent dine frequently in the cafeteria.

**Table 3. How often do you choose to eat the Eat Smart meal-of-the-day?**

	Frequency	Percent
Never	27	25.7
1-2 times per week	64	61.0
3-4 times per week	12	11.4
No response	2	1.9
Total	105	100.0

About seventy-two percent of all survey respondents choose the Eat Smart meal-of-the-day at least once per week, while about twenty-six percent never choose it.

**Table 4. Does the display plate for the Eat Smart meal-of-the-day help you to make your meal choice?**

	Frequency	Percent
Yes	65	61.9
No	36	34.3
No response	4	3.8
Total	105	100

The majority of respondents do utilize the display plate when choosing their meal.

**Table 5. Does receiving the 13<sup>th</sup> meal free make a difference in how many times you choose the Eat Smart meal-of-the-day?**

	Frequency	Percent
Yes	34	32.4
No	68	64.8
No response	3	2.9
Total	105	100.0

Cafeteria patrons are offered an Eat Smart card. Every time they purchase an Eat Smart meal, they receive a sticker on the card. After collecting twelve stickers, they are able to redeem the full card for a free Eat Smart meal. Only about thirty-two percent of respondents believe that the free thirteenth meal influences how many times they eat the Eat Smart meal-of-the-day. Sixty-five percent would choose the healthy meal even if they did not receive the thirteenth meal free.

Table 6. Do the signs listing nutritional information influence your choices?

	Frequency	Percent
Yes	66	62.9
No, I don't bother reading them	35	33.3
No, it is difficult to get information from these signs	2	1.9
No, I am not influenced	1	1.0
No response	1	1.0
Total	105	100.0

Signs providing nutritional information have an influence on the meal choice of almost sixty-three percent of all respondents. Only two percent believe the signs are difficult to gather information from.

Table 7. Do you follow a clinically prescribed diet?

	Frequency	Percent
Low sodium	3	2.9
Calorie controlled	4	3.8
Fat controlled	5	4.8
Carbohydrate controlled	3	2.9
Multiple response	12	11.4
Other diet	4	3.8
No response	74	70.5
Total	105	100.0

Only thirty-one out of one hundred and five participants follow a clinically prescribed diet. The specific diets followed are shown in Table 7. Four participants indicated following a diet other than the choices listed. The other responses included two participants who follow a low cholesterol diet, one who avoids foods that cause heartburn, and another who does not follow a diet but chooses to eat sensibly.

Table 8. Do you participate in any of the following other diets?

	Frequency	Percent
Weight Watchers/Slim Fast	1	1.0
Weight Watchers	14	13.3
Atkins/South Beach	1	1.0
Atkins diet	5	4.8
Vegetarian/Mediterranean	1	1.0
Vegetarian/Slim Fast	1	1.0
Vegetarian diet	2	1.9
Mediterranean diet	1	1.0
South Beach diet	3	2.9
No response	76	72.4
Total	105	100.0

Twenty-nine respondents indicated they followed a diet other than the clinically prescribed diets listed in Table 7. Four respondents follow a combination of diets, as can be seen from Table 8. The largest number of respondents follow the Weight Watchers diet. This large amount may possibly be attributed to Weight Watchers classes offered in the hospital.

Table 9. If you are following any of the controlled diets, why do you choose to follow those diets?

	Frequency	Percent
Personal choice	26	24.8
Doctor recommended	6	5.7
Influenced by wellness exam	1	1.0
Personal choice, doctor recommended and wellness exam	3	2.9
Personal choice, doctor recommended and other	1	1.0
Personal choice and doctor recommended	4	3.8
Personal choice and wellness exam	1	1.0
Other reason	4	3.8
No response	59	56.2
Total	105	100.0

Every employee of Saint Joseph's Hospital must undergo a yearly wellness exam. The exam incorporates a computer-based assessment of overall health and gives suggestions for improving health. Marshfield Clinic employees do not participate in a yearly wellness exam so the results in Table 9 are limited in that aspect.

**Table 10. Does the cafeteria offer adequate vegetarian choices?**

	Frequency	Percent
Yes	56	53.3
No	13	12.4
Not applicable	32	30.5
No response	4	3.8
Total	105	100.0

Just over half of all respondents feel the cafeteria offers adequate vegetarian choices. Over twelve percent of respondents feel the cafeteria needs more vegetarian options.

**Table 11. Do you look at nutritional information online?**

	Frequency	Percent
Yes, on the hospital Intranet	34	32.4
Yes, on the World Wide Web	7	6.7
No, did not know it was available on the Intranet	33	31.4
No, I am not interested	26	24.8
Sometimes	1	1.0
Yes, Intranet and WWW	1	1.0
No, other reason	2	1.9
No response	1	1.0
Total	105	100.0

Nutrition information for the cafeteria's menu choices is provided on the hospital Intranet. Many respondents are not aware that this information is available. One participant responded they were not able to look at nutritional information online because they did not have access to a computer.

**Table 12. Does the monthly nutrition display provide you with useful information?**

	Frequency	Percent
Yes	75	71.4
No	26	24.8
No response	4	3.8
Total	105	100.0

Again, the majority of respondents at about seventy-one percent find the monthly nutrition display to be helpful. This question allowed respondents to give additional comments. A complete transcript of all comments from the survey is available in Appendix C. Comments were primarily split between two viewpoints. Comments were either positive, indicating that the display was well done, or respondents expressed they were too busy to stop and look at it. Two respondents indicated it was in a spot with too much traffic, it was too crowded to actually look at it.

**Table 13. Do you utilize the handouts located on the Eat Smart Board?**

	Frequency	Percent
Yes	44	41.9
No, I am not interested	34	32.4
No, I didn't know they were available	26	24.8
No response	1	1.0
Total	105	100.0

Only about forty-two percent of respondents use handouts from the Eat Smart board. Another twenty-five percent are not aware that they are available.

**Table 14. Have you used the Guide to Making Healthy Food Choices from the Eat Smart Board?**

	Frequency	Percent
Yes	31	29.5
No	11	10.4
No response	63	60.0
Total	105	100.0

The Guide to Making Healthy Food Choices is only utilized by about thirty percent of respondents. Additional comments from this question indicated those who did use the guide found the information to be helpful.

Table 15 Have you tried any recipes from the Eat Smart Board?

	Frequency	Percent
Yes	18	17.1
No	26	24.8
No response	61	58.1
Total	105	100.0

While only about seventeen percent have tried the recipes, additional comments for this question were very positive. Three respondents indicated the recipes were very good and that it was fun to try something different. Two more respondents had taken the recipes home but have not tried them yet.

Table 16. How helpful is the information from the Eat Smart Board?

	Frequency	Percent
Not Helpful	0	0.0
Slightly	6	5.7
Moderately	18	17.1
Very	18	17.1
Extremely	2	1.9
No response	61	58.1
Total	105	100.0

All respondents who answered this question found the information on the Eat Smart Board to be at least slightly helpful. The mean response for this question was 3.35, while the standard deviation was .780. Respondents indicated that the board provides a lot of information that is already known, but new information is helpful.

Question seventeen of the survey asked, "What other services could the medical center provide that would help you manage your health?" Several respondents indicated the cafeteria should keep doing what they are doing now, as it is well done. Others had suggestions for improvement. One respondent would like to see Ministry Health Care

produce a cookbook with healthy food recipes. Others would like to see more Eat Smart choices and more in-depth nutritional information listed for all menu items, not just the main entrée choices. One respondent indicated that portion sizes would be helpful for self-serve items. Cafeteria patrons would like to see more vegetarian options and less meat. Another suggestion is to provide the Weight Watchers program for free or reduced cost to employees and to list Weight Watchers points for cafeteria items. Finally, respondents would like to see the facility's wellness center expanded and provide a wider variety of services, including more options for weights in the gym.

**Table 17. Gender of Respondents**

	Frequency	Percent
Male	11	10.5
Female	93	88.6
No response	1	1.0
Total	105	100.0

There is very little variability in the gender of subjects in this study. Almost eighty-nine percent of participants are female, while only eleven percent are male.

**Table 18. Age category of Respondents**

	Frequency	Percent
18-25 years old	8	7.6
26-35 years old	14	13.3
36-45 years old	24	22.9
46-55 years old	34	32.4
56-65 years old	17	16.2
66 or older	6	5.7
No response	2	1.9
Total	105	100.0

**Table 19. Ethnic Background of Respondents**

	Frequency	Percent
Caucasian	100	95.2
American Indian	1	1.0
No response	4	3.8
Total	105	100.0

There is almost zero variability in the ethnic background of participants in this study. All but one subject who answered the question are Caucasian. Four subjects chose not to respond to this question.

Table 20. Highest Educational Level Attained by Respondents

	Frequency	Percent
High school graduate	34	32.4
2-year technical degree	23	21.9
Bachelor's degree	31	29.5
Master's degree	5	4.8
Doctoral degree	4	3.8
3-year nursing diploma	4	3.8
Some college	3	2.9
No response	1	1.0
Total	105	100.0

Only about thirty-two percent of participants have not attended any type of college. Twenty-two percent have a technical college degree, while about thirty percent have a Bachelor's degree. Only about nine percent of subjects have an advanced Master's or Doctoral degree.

## Chapter 5 Discussion

### Introduction

This purpose of this study was to determine the perception of employees of the Marshfield Medical Complex regarding the effectiveness of the Eat Smart program. A comprehensive review of the literature concluded that there were no previous studies that measured the effectiveness of a healthy eating program in a medical center cafeteria. A survey distributed in July, 2004 gathered the opinions of employees and the results were statistically analyzed and presented in the previous chapter.

### Limitations

There were two major limitations for this study. The results of this research are limited to the health care workers of the Marshfield Medical Complex. The data cannot be applied to health care workers in any other facility. The second limitation involved the number of employees who choose to eat in the cafeteria. The results of this study may only be associated with employees of the Marshfield Medical Complex who choose to dine in the cafeteria, and does not include employees who bring their own lunch or dine somewhere else.

### Conclusions

The findings of this study are similar to previous studies. The results indicate that employees are willing to participate in the program and it is an effective way of distributing nutritional information. Many employees participate in the program and find the information that is provided to be beneficial. All but one survey respondent dined in the cafeteria at least once per week. Almost forty-five percent of subjects participate in the Eat Smart program by utilizing the Eat Smart card. Seventy-two percent of

respondents indicated they choose the Eat Smart meal-of-the-day at least once per week.

Aspects of the program viewed in a positive fashion include the display plate for the Eat Smart meal-of-the-day, signage providing nutritional information, and the monthly nutrition display on the Eat Smart board. The majority of respondents indicated they would still choose the Eat Smart meal-of-the-day even if they did not receive the thirteenth meal free. This indicates that employees are being motivated to eat healthy, even without an incentive.

The results of this study indicate that there is room for improvement in several areas of the Eat Smart program. Only five participants choose to follow a diet because of the results of the required yearly wellness exam. Less than half of all respondents use handouts from the Eat Smart board and look at nutrition information on the Intranet or the World Wide Web. Over thirty-one percent of respondents are not aware that nutritional information is available on the facility's Intranet. Almost twenty-five percent of respondents do not know that handouts providing nutrition information are available on the Eat Smart board.

Many of the subjects who participated in the study follow some type of diet. Thirty-one participants follow a clinically prescribed diet and twenty-nine follow another type of diet. This is a significant amount of employees dining in the cafeteria who are following a diet.

The demographics of this population have very little variability. Eighty-nine percent of subjects were female, while only eleven percent were male. Ninety-five percent of subjects were Caucasian and one percent American Indian. There was some variability

in the age category. Twenty-one percent of participants were between the ages of eighteen and thirty-five, while fifty-five percent were between the ages of thirty-six and fifty-five, and twenty-two percent were over the age of fifty-six. There is also some variability in the level of education of respondents. Twenty-two percent of participants have at least a two-year technical college degree. Thirty-four percent of respondents have a Bachelor's degree, and nine percent have an advanced Master's or Doctoral degree.

### Recommendations

The Eat Smart program should be continued in the Marshfield Medical Complex. Employee participation is evident and the demand indicates that the program should be expanded. All aspects of the program are popular with participants and should remain a part of the Eat Smart program. The medical facility should provide employees with more information on all aspects of the program. A large percentage of individuals are not aware that nutrition information is available online, and that nutrition handouts are available on the Eat Smart board. There may also be a lack of awareness regarding other areas of the Eat Smart program.

This study indicates that participants in the Eat Smart program are primarily Caucasian females. However, since the population for this study was primarily Caucasian and female, it is difficult to determine whether males and other ethnic groups also participate. A future study could incorporate more variability in the demographics of the population.

More research should be conducted regarding this topic in the future. Other medical facilities with a similar healthy eating program should determine the effectiveness of

their program. Medical facilities that have no healthy eating program should implement one as this study proves it to be an effective means of increasing health awareness among employees.

**Appendix A.**

**Institutional Review Board Approval**

University of Wisconsin Stout  
Protection of Human Subjects in Research Form  
[www.uwstout.edu/rps/humnsbjform.doc](http://www.uwstout.edu/rps/humnsbjform.doc)

Data collection/analysis cannot begin until there has been IRB approval of this project.

**Directions:**

- Individuals who have completed the UW-Stout Human Subjects Training and can prove certification are eligible to file this form.
- This form must be filed and approved prior to any student (undergraduate or graduate), faculty, or staff conducting research.
- Complete this form on-line and print. Handwritten forms will not be accepted. For your benefit, save your completed form in case it needs to be revised and resubmitted.
- Send or take the completed form, with required signatures and required materials attached, to Stout Solutions • Research Services, 152 Voc. Rehab. Building.

Research is defined as a systematic investigation, including research development, testing and evaluation, designed to develop or contribute to generalizable knowledge.

A human subject is defined as a living individual about whom an investigator obtains either 1) data through intervention or interaction with the individual; or 2) identifiable private information.

**Investigator(s):**

Name: Kristi Wenzel ID: 0274777 Daytime Phone # 231-2079

e-mail address: wenzelkr@uwstout.edu Signature: \_\_\_\_\_

Name: ID: Daytime Phone #  
e-mail address: Signature: \_\_\_\_\_

Name: ID: Daytime Phone #  
e-mail address: Signature: \_\_\_\_\_

*For students:*

Research Advisor's Name: Dr. Ann Parsons Department: Biology

Signature: \_\_\_\_\_ Date of Approval: \_\_\_\_\_

Research Advisor: Have you completed UW-Stout's Human Subjects Training? Yes  No . Training must be completed prior to IRB review of this form.

**Project Title: Assessment of the Eat Smart Program Promoting Healthy Choices in a Medical Center Cafeteria.**

**Sponsor (Funding agency, if applicable):**

Is this project being supported by Federal funding? Yes  No

**You must answer all of the following questions completely and attach all required forms.**

1. Describe the proposed research stating the objectives, significance, and detailed methodology (approximately 250-500 words; descriptions are to be written in future tense).  
**Research objectives**
1. To determine the perceived benefits of the Eat Smart Program at the Marshfield Medical Center by gathering the opinions of employees through a survey.
2. To determine the impact that providing nutrition information has on employee food choices.
3. To determine what techniques are working well and what can be improved within the Eat Smart Program.

**Significance and Methodology**

See Attachment 1 (note- two pages)

2. Does your research involve human subjects or official records about human subjects? Yes  No   
If yes, continue with this form. If no, stop here!
3. Human subjects training must be completed prior to filing this form. Have you completed UW-Stout's Human Subjects Training (<http://www.uwstout.edu/rps/hstraining>)? Yes  No
4. Please note that research cannot begin until this project has been approved by the IRB. When is the data collection for the research *intended* to begin and end? **June 1, 2004** to **July 1, 2004** (enter month/year)
5. Can the subjects be identified directly or through any type of identifiers? Yes  No  If yes, please explain.
6. Special precautions must be included in your research procedures if any of these special populations or research areas are included. Are any of the subjects:
- |  |   |   |
|--|---|---|
| (a) minors (under 18 years of age)?              | Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> | Does the research deal with questions concerning:   |
| (b) legally incompetent?                         | Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> | (a) sexual behaviors? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> |
| (c) prisoners?                                   | Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> | (b) drug use? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>         |
| (d) pregnant women, if affected by the research? | Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> | (c) illegal conduct? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>  |
| (e) institutionalized?                           | Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> | (d) use of alcohol? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>   |
| (f) mentally incapacitated?                      | Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> |   |
7. Voluntary participation/consent form:  
Describe the method (a) for selecting subjects and (b) for assuring that their participation is voluntary. If subjects are children and they are capable of assent, they must give their permission, along with that of their parent, guardian, or authorized representative. NOTE: A school district cannot give permission or consent on behalf of minor children.  
**Subjects will volunteer to participate in this study. All employees will have an equal opportunity to participate. A poster will be placed in the dining area one week prior to the survey notifying employees of the upcoming survey. A short article will also be placed in "The Outlook", a hospital-wide publication. The researcher will be handing out the survey on a Wednesday during the summer. The survey is enclosed as attachment 3 (note- 1 page front and back). Wednesday is the day chosen because the cafeteria typically has the highest volume on that day. Employees who wish to participate can pick up a survey. The consent form (attachment 2) will be handed out with the survey. The consent form will also notify participants that their participation is completely voluntary and that there is no penalty for choosing not to participate.**
8. Procedures: Describe how subjects will be involved in detail, especially if the study involves false or misleading information to subjects or withholds information such that their informed consent might be questioned or if the research uses procedures designed to modify the thinking, attitudes, feelings, or other aspects of the behavior of the subjects.  
**This research project involves no false, misleading, or otherwise withheld information to subjects. The participants will be employees of the Marshfield Medical Center who volunteer to participate. The researcher will administer a survey collecting the opinions of employees regarding the effectiveness of the Eat Smart Program. The questions on the survey are worded in such a way as not to try to persuade the participant in their perception of food choices. This survey is intended solely for the purpose of collecting data related to the objectives. See attachment 3 for survey. All surveys will be placed into a sealed common box as they are completed. Surveys will remain in this box until all surveys for the project have been collected. The researcher will then review the surveys and analyze the results. All data will be collected within a time period of three days.**
9. Confidentiality: Describe the methods to be used to ensure the confidentiality of data obtained.  
**No identifiable information will be collected during this study. Participants will be informed not to place their name or other identifiable information on the consent form or the survey. The only risk associated with confidentiality is that others in the cafeteria will see those who choose to participate. This will not pose any problems as this survey will not**

affect promotions, raises, or other job related benefits in any way. Confidentiality will be assured as all surveys will be placed into a sealed common box. Results will not include any identifiable information as they will be tallied and undergo data analysis. After the results are compiled and distributed, all raw data will be destroyed.

10. Risks: Describe the risks to the subjects and the precautions that will be taken to minimize them. (Risk includes any potential or actual physical risk of discomfort, harassment, invasion of privacy, risk of physical activity, risk to dignity and self-respect, and psychological, emotional, or behavioral risk.) Also, address any procedures that might be different from what is commonly established practice for research of this type.

**There are very minimal risks that exist in this study. The only risks that exist relate to confidentiality. As stated in question nine, the only risk is that others may see those who participate. There are no anticipated problems associated with this risk. All data collected will be kept completely confidential. No names or identifying information will be collected in the the survey instruments. All procedures in this study are comparable to those of similar studies.**

11. Benefits: Describe the benefits to subjects and/or society. (These will be balanced against risk.)  
**The data collected in this study will be beneficial to Saint Joseph's Hospital and Marshfield Clinic by providing information to them regarding the perceived effectiveness of their Eat Smart Program. The purpose of the study is to determine the degree of impact the Eat Smart Program is having on employee food choices within the medical center. By determining which techniques are effective and which are not, improvements can be made to better the Eat Smart Program. The determination of of what type of information employees find beneficial will help the medical center to decide which areas to focus on in the future. The medical center has the opportunity to benefit greatly from this study because the findings may lead to improvements in the Eat Smart Program which could cause a higher participation rate and a greater awareness of health and nutrition among employees.**

**The benefits of this study are not limited to the Marshfield Medical Center. Similar organizations will also benefit because the data collected can be applied to them as well. The results of this study will be useful to all clinics and hospitals that have an on-site cafeteria. Many employers are also offering employee wellness programs. A program similar to the Eat Smart Program could be implemented as a part of a wellness program in any type of organization. Even restaurants can utilize the information from this study to promote healthy choices within their establishment.**

**This study will benefit all places where food is served, including hospitals, clinics, work-sites and restaurants. Any organization with a cafeteria can find the results of this study beneficial.**

12. Attachments to this form: (NO ACTION WILL BE TAKEN WITHOUT THESE FORMS)

- a) Description of the proposed study, as requested in number one.
- b) Consent form(s). Form(s) should include explanation of procedures, risk, safeguards, freedom to withdraw, confidentiality, offer to answer inquiries, third party referral for concerns, and signature (only if the subjects can be identified by any means. If the survey is strictly anonymous, then a signature is not required). Sample consent forms can be found at [www.uwstout.edu/rps/ConsentForms.PDF](http://www.uwstout.edu/rps/ConsentForms.PDF).
- c) Questionnaire/Survey Instrument. Also, if the survey is being conducted verbally, a copy of the introductory comments and survey questions being asked must be attached to this form. If the survey is a published/purchased instrument, a photocopy of the complete survey will suffice.

The project or activity described above must adhere to the University's policies and institutional assurance with the U.S. Department of Health and Human Services regarding the use of human subjects. University review and approval is required. **REMINDER: You are in violation of UW-Stout, UW System, and federal government policies if you begin your study before IRB approval is obtained.**

Projects that are not completed within one year of the IRB approval date must be submitted again. Annual review and approval by the IRB is required.

-----  
**Institutional Review Board Action:**

\_\_\_\_\_ Project approved through expedited review.

\_\_\_\_\_ Project approved through expedited review provided minor modifications are completed.

\_\_\_\_\_ Project approved through the full board review process; date of meeting: \_\_\_\_\_



## Assessment of the Eat Smart Program Promoting Healthy Choices in a Medical Center Cafeteria.

### Attachment 1

#### Significance

The Eat Smart Program has been in effect in the cafeteria at Saint Joseph's Hospital and Marshfield Clinic in Marshfield, Wisconsin since Fall, 2002. There is very little background data regarding similar programs in medical center cafeterias. This survey will determine perceived benefits of the Eat Smart Program by gathering the opinions of employees. The purpose of the study is to determine the degree of impact the Eat Smart Program is having on employee food choices. By determining what techniques the participants of this program (the employees) feel is effective and what is not, improvements can be made to better the program. This data will benefit the Marshfield Medical Center, as well as any other organizations that may be interested in implementing this type of program.

#### Methodology

The goals of this study are to determine the perceived benefits of the Eat Smart Program, to determine the impact the Eat Smart Program has on employee food choices, and to identify which techniques within the program are working well and what can be improved. The study will consist of providing employees of Saint Joseph's Hospital and Marshfield Clinic with a survey (see attachment 3). The majority of employees from the medical center eat lunch in the cafeteria known as the Four Seasons dining area.

One week prior to the survey, a poster advertising the upcoming survey will be placed in the Four Seasons dining room. A notice will also be placed in the hospital's weekly publication "The Outlook". The researcher will work very closely with the foodservice director of Saint Joseph's Hospital to create the poster and the notice for "The Outlook" in the spring as the planned project date approaches.

On a Wednesday during the summer, the survey will be handed out to employees who enter the cafeteria. The day of Wednesday was chosen because it is the day, which normally has the highest volume of customers. The survey will be given out during lunch and supper, during the times of 11:00 A.M. until 1:30 P.M. and from 5:00 P.M. until 7:00 P.M. A table will be set up outside of the cafeteria where the researcher will hand out the consent form and survey (attachments 2 and 3). The table will be placed near the poster that is advertising the survey. All those wishing to complete the survey will be notified through the consent form that their participation is completely voluntary, and those not participating will not be punished in any way. All data collected will be kept confidential and no identifiable information will be collected. Those who choose to participate in the survey will have until the following Friday to return it to the cafeteria. The survey may be returned to a labeled, sealed common box located in the Four Seasons dining area. All participants who return their survey on the day the researcher is present will be rewarded with one free granola bar, donated by Saint Joseph's Hospital.

Upon collection of all completed surveys, the researcher will analyze the data and provide a final report to the medical center. The research will also be disseminated by other means such as UW-Stout Research Day and the American Dietetic Association Conference.



Stout Solutions • Research Services  
11 Harvey Hall

University of Wisconsin-Stout  
P.O. Box 790  
Menomonie, WI 54751-0790

715/232-1126  
715/232-1749 (fax)  
<http://www.uwstout.edu/rps/>

**Date:** February 5, 2004

**To:** Kristi Wenzel  
Cc: Dr. Ann Parsons

**From:** Sue Foxwell, Research Administrator and Human  
Protections Administrator, UW-Stout Institutional  
Review Board for the Protection of Human  
Subjects in Research (IRB)

**Subject:** **Protection of Human Subjects--Expedited Review**

Your project, "Assessment of the Eat Smart Program Promoting Healthy Choices in a Medical Center Cafeteria," has been approved by the IRB through the expedited review process. The measures you have taken to protect human subjects are adequate to protect everyone involved, including subjects and researchers.

This project is approved through February 5, 2005. Research not completed by this date must be submitted again outlining changes, expansions, etc. Annual review and approval by the IRB is required.

Thank you for your cooperation with the IRB and best wishes with your project.

**\*NOTE: This is the only notice you will receive – no paper copy will be sent.**

SF:dd

## **Appendix B.**

### **Consent Form and Survey**

Assessment of the Eat Smart Program Promoting Healthy Choices in a Medical Center Cafeteria.

Attachment 2

## **Consent Form**

Employees of Saint Joseph's Hospital and Marshfield Clinic

As a part of my master's thesis, I am conducting a study to determine the effectiveness of the Eat Smart Program in the cafeteria of Saint Joseph's Hospital and Marshfield Clinic. I am collecting data regarding eating habits and awareness of nutrition information. This study will show the impact that the Eat Smart Program has on food choices and determine which techniques are working and what can benefit from improvement within the program.

Through this survey I will be collecting your opinion on your awareness of the Eat Smart Program and information regarding your food choices. This process is completely confidential; surveys will not contain any identifying information. Please do not write your name or any other identifiable information on the survey.

It is not anticipated that this study will present any risks to you. Participation is completely voluntary. If at any time you wish to no longer participate in this study you may do so without penalty.

Any questions or concerns that may arise about the study should be directed to Kristi Wenzel (715) 659-5107 or (715) 231-2079 (researcher), or to Dr. Ann Parsons (715) 232-2563 (research advisor). Questions about the rights of research subjects can be addressed to Sue Foxwell, Human Protections Administrator, UW-Stout Institutional Review Board for the Protection of Human Subjects in Research, 11 Harvey Hall, Menomonie, WI, 54751, phone (715) 232-1126.

I appreciate your willingness to participate and thank you in advance for your cooperation. Please return the completed survey by July 2, 2004. If the survey is returned on the day the researcher is present, you will be rewarded with one free granola bar. You may return the completed survey to the labeled box in the Four Seasons dining room.

## Effectiveness of Eat Smart Program Survey

Please do NOT write your name or any identifiable information on this form. There will be no penalty if you choose not to answer a question. You may voluntarily withdraw from completing this form at any time. Please provide accurate responses to the best of your ability.

1. How many times per week do you eat in the cafeteria?  
 Never     1-2 times per week     3-4 times per week     5 or more times per week
2. Do you participate in the Eat Smart Program in the cafeteria by using the Eat Smart Card?  
(i.e. collecting apple stickers)  
 Yes     No, I'm not interested     No, I'm not aware of the program
3. How often do you choose to eat the Eat Smart meal-of-the-day?  
 Never     1-2 times per week     3-4 times per week     5 or more times per week
4. Does the display plate for the Eat Smart meal-of-the-day help you to make your meal choice?  
 Yes     No
5. Does receiving the 13<sup>th</sup> meal free make a difference in how many times you choose the Eat Smart meal-of-the-day?  
 Yes     No
6. Do the signs listing nutritional information influence your choices?  
 Yes     No, I don't bother reading them  
 No, it is difficult to get information from these signs
7. Do you follow a clinically prescribed diet? If yes, fill in the circle next to the prescribed diet.  
 Low Sodium     Calorie Controlled     Fat Controlled  
 Carbohydrate Controlled     Other (Please List) \_\_\_\_\_
8. Do you participate in any of the following other diets?  
 Weight Watchers     Atkins Diet     Vegetarian Diet     Mediterranean Diet  
 Cabbage Soup Diet     Slim Fast     South Beach Diet
9. If you are following any of the controlled diets (listed in questions 7 and 8), why do you choose to follow those diets? (Please fill in all circles corresponding to your reasons.)  
 It is my personal choice  
 My doctor recommended it  
 The results of the yearly wellness examination influenced me  
 Other (Please List) \_\_\_\_\_
10. Does the cafeteria offer adequate vegetarian choices?  
 Yes     No     Not Applicable
11. Do you look at nutritional information online?  
 Yes, on the hospital Intranet  
 Yes, on the World Wide Web  
 No, I did not know this information was available on the hospital Intranet  
 No, I am not interested in this information

12. Does the monthly nutrition display (on the green felt board) provide you with useful information?  
 Yes     No  
Comments:

13. Do you utilize the handouts located on the Eat Smart Board (across from the tray return)?  
 Yes                       No, I'm not interested                      (If no, skip to question #17.)  
 No, I didn't know they were available                      (If no, skip to question #17.)

14. Have you used the Guide to Making Healthy Food Choices from the Eat Smart Board?  
 Yes     No  
Comments:

15. Have you tried any recipes from the Eat Smart Board?  
 Yes     No  
Comments:

16. How helpful is the information from the Eat Smart Board?  
 Not helpful     Slightly     Moderately     Very     Extremely  
Comments:

17. What other services could the medical center provide that would help you manage your health?

18. What is your gender?  
 Male                       Female

19. What is your age?  
 18-25                       26-35                       36-45                       46-55                       56-65                       66 or older

20. What is your ethnic background?  
 Caucasian                       African American                       Hispanic                       Asian  
 Pacific Islander     American Indian                       Other (Please list) \_\_\_\_\_

21. What is your educational background?  
 High School Graduate  
 Technical School Graduate (2-year degree)  
 College Graduate (4-year degree)  
 Master's Degree  
 Doctoral Degree  
 Other (Please List) \_\_\_\_\_

## **Appendix C.**

### **Transcript of Survey Comments**

## Survey Comments

### **Question 12- Does the monthly nutrition display provide you with useful information?**

- Nice to get information on a monthly basis
- Nicely done
- Never noticed it
- It doesn't tell me anything I didn't know before
- Don't pay attention to it
- At a glance
- When I read it
- Don't usually look at it
- Too busy, too much traffic to stop there and read it
- Don't have time to look at it
- I liked the board showing how portion sizes have changed
- Good info, I share with my family
- It is very well done
- Nicely done
- Never look at it
- Looks like a lot of effort going into it
- Very useful, I read it a few times per month
- Nicely done
- Not a great spot to stop. Gets too crowded. See it more on way out than on way in.
- Interesting

### **Question 14- Have you used the Guide to Making Healthy Food Choices from the Eat Smart Board?**

- There are so many overweight medical center personnel. Suggest continued emphasis on this huge health problem in our midst.
- Sometimes
- Yes, it's nice and large and always interesting
- Good info, I use them with others
- Reviewed, but need to re-review
- I try to avoid sweets since I am diabetic

### **Question 15- Have you tried any recipes from the Eat Smart Board?**

- Do use information in making choices
- I have them at home, but haven't tried them yet
- Great- fun change to try something different
- Yummy!
- Haven't tried them yet but I would like to
- Good recipes

### **Question 16- How helpful is the information from the Eat Smart Board?**

- New info is helpful, but most is already known
- Recent move here, would hopefully utilize more once settled in

**Question 17-What other services could the medical center provide that would help you manage your health?**

- Keep doing what you are doing
- Continued informational update and more healthy food recipes used in cafeteria.
- Produce for sale a healthy foods Ministry Health cookbook.
- Better prices
- More choices for Eat Smart
- Offer more low-carbohydrate foods and include # of grams of carbs per serving
- Have more flavors of Diet Rite soda
- Cheaper wellness exams, can't afford to have routine check-ups!
- Nothing I can think of- I enjoy the information. It really helps me make better choices and be more aware!
- They do an excellent job
- Wellness center
- I think they are doing a good job
- Make healthy food taste better
- Increase selection of weights in the wellness center
- Would like to know fat content of soups, that is what I most often have
- More low fat, low carb choices
- I don't know
- List Weight Watchers points
- Healthy take home meals- frozen or to order
- Reminders of wellness program, a lot of info as a new employee, it is easy to forget
- Free Styrofoam cups (3)
- Faster lines so we can use more break eating instead of shoveling our food
- Provide free or low cost for Weight Watchers program
- Provide exercise programs at low or supplemented cost
- For treat days, instead of cheesecake or ice cream only, have option of granola bar
- Less fried foods, more light foods. More grilled and broiled foods.
- More fresh fruit bar, that is the best!
- More low fat dressing choices
- Carbohydrate count
- Better consistency in size of portion that is dished up by cafeteria personnel
- Example of scrambled egg portions, how much equals 1 egg?
- List calories and fat for salad bar items

**Additional Comments**

- I'd participate in the Eat Smart program more if there were more vegetarian options
- Should be less meat for Eat Smart choices, or one vegetarian option for each day
- Would like to see fiber content listed in display at Today's Feature station
- Need more Eat Smart choices
- Nutritional information on the hospital Intranet is very helpful when counting calories, but would also like the site to list fiber, sugars, etc. along with calories.

-Comment about the Eat Smart menu- majority of meals are casserole type or saucy things over rice or pasta. To vary the menu more, add in things like a pork chop or un-breaded chicken with potatoes and vegetables. Also some of the pre-seasoned chicken breasts are way too salty.

-I don't think that all the "healthy" choices are all that healthy. I think instant rice is used, which doesn't have any food value. Often the vegetables are over-cooked. The portions are small, which means you need to supplement with something like fruit and milk, which drives the overall cost of your meal up. I don't know how popular the entrees with beans are, but many people, especially employees, avoid eating beans at lunch for obvious reasons. Some of the entrees are brown and don't look appetizing. Instead of having one so-called healthy entrée, why don't you work on the rest of the menu? Every day we are offered fried everything- cheese, mushrooms, cauliflower, etc. Often the Chef's Choice is something high in fat and calories as well, such as make your own burrito, taco salad, or chili cheese dog.

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