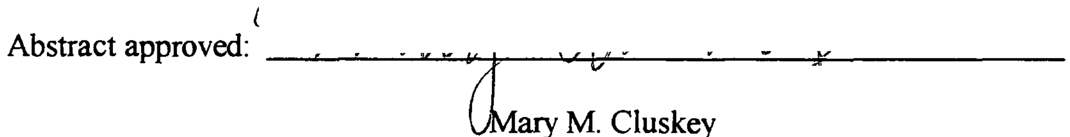
AN ABSTRACT OF THE THESIS OF

Julie K.Taggart-Hudson for the degree of Masters of Science in Nutrition and Food Management presented on June 9,1998. Title: Nutrient-Content and Health Claims Labeling on Oregon Restaurant Menus.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The recency of the Food and Drug Administration menu-labeling regulations and the lack of research available on restaurateur response initiated this study. Advocates claim the new regulations will protect consumers and foster the selection of nutritious choices, however, critics believe the regulations will result in restaurateurs removing all nutrition information from their menus. This research describes Oregon restaurateurs perceptions of the new FDA regulations, current and past experience with nutrition labeling and the impact of the new FDA regulations on their nutrition labeling practices.

Study methodology involved a focus group of local restaurateurs and a statewide survey of randomly selected Oregon restaurateurs. A total of 160 questionnaires were returned, representing a 50% response rate. Data analysis included descriptive statistics and associations between variables through use of chi-square analysis.

Forty five percent of respondents currently use nutrition labeling, 12% of respondents have past experience with nutrition labeling and 43% of respondents have never used nutrition labeling. The majority of respondents (55%) were interested in

learning more about making nutrition claims on their menus. Benefits associated with nutrition labeling included reaching a wider variety of customers, increasing sales, fulfilling customers wishes and satisfying personal beliefs in healthy dining. Lack of customer interest and the new FDA regulations were the most frequently cited factors involved in the decision not to use nutrition labeling. Only 8% of respondents believed the new FDA regulations had affected their operations, however, over one quarter, 27%, of respondents were not even aware of the new FDA regulations. Overall understanding of the new regulations was extremely poor. Professional organizations such as the National Restaurant Association (NRA) are the preferred resource for advice on nutrition labeling of menu items. However, many opportunities exist for dietitians in the area of nutrition and health claims labeling on restaurant menus but before progress can be made, we must aggressively market our services to restaurateurs.

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Nutrient-Content and Health Claims Labeling on Oregon Restaurant Menus

by

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APPROVED:

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I understand that my thesis will become part of the permanent collection of Oregon State University libraries. My signature below authorizes release of my thesis to any reader upon request.

Julie K. Taggart-Hudson, Author

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Nutrient-Content and Health Claims Labeling on Oregon Restaurant Menus

1. INTRODUCTION

1.1 Statement of Problem

In response to a decision by the U.S. District Court in Washington, D.C., the Food and Drug Administration (FDA) recently amended its food-labeling regulations, removing the provisions exempting restaurant menus from conforming to standards for nutrient-content and health claims. Previously, restaurants were exempt from the nutrition labeling rules detailed in the 1990 Nutrition Labeling and Education Act (NLEA). However, as of 2 May 1997, nutritional information substantiating claims made on menus must be available to restaurant customers. Restaurants and other foodservice operations, including delicatessens and caterers, making nutrient-content or health claims on their menus must now comply with FDA regulations (1).

If a restaurant makes either a nutrient-content or health claim, then the regulations require demonstration that there is a "reasonable basis" for believing that the menu item merits the claim. Restaurants may determine nutrient levels using a variety of methods. Unlike food manufacturers, restaurateurs are not required to use expensive laboratory nutrient analysis. Nutrient levels derived from computer databases, cookbooks, or some other "reasonable" source that can provide assurance that the food or meal meets the requirements for the claims are acceptable (2).

There is no mandated format for menu labeling of nutrient-content and/or health claims. The "Nutrition Facts" labels seen on packaged foods are not required on restaurant menus. While the nutritional information does not have to be printed on the menu, substantiation must be readily available to consumers or regulatory officials upon request (3). Concrete evidence, such as written calculations or computer printouts, must be presented by the restaurateur at the request of regulatory authorities. Nutrition information presented orally by wait staff is also acceptable; however, as added insurance the restaurant should also have the information available in writing (4). Brochures or resource recipe books are acceptable methods of substantiating nutrient-content or health claims when information is requested by customers (2).

With an increase in dining out frequency, studies focusing on the provision of nutrition information in restaurants become increasingly important. Meals eaten outside of the home, including the trend toward home meal replacements, contribute to overall dietary intakes. According to the National Restaurant Association (NRA), the typical person (eight years and older) consumed an average of 4.1 meals per week--213 per year--away from home in 1996 (5). Americans spent 44 percent of their food dollars outside the home in 1996. This is up from 25 percent in 1955 (6). The continuing trend of Americans consuming more meals outside the home necessitates attention to the content, accuracy, and delivery of point of choice nutrition information (7).

One in three adults meets the definition of overweight, an increase from one in four as recently as 1980 (8). Although restaurants are not solely responsible for the increased number of overweight adults, they have a unique opportunity to encourage

more healthful selections from their menus. While there are no research studies to prove a connection, the meals obtained from restaurants, shopping malls, and elsewhere probably merit some of the responsibility for the increased number of overweight Americans (8).

Despite the increased number of overweight Americans, we continue to express an interest in improving our diets, even when eating out. According to the National Restaurant Association's report, Tableservice Restaurant Trends--1995, more than 50 percent of customers 35 and older and two out of five customers 18 to 34 look for lower fat menu options when eating out. Restaurateurs also reported that their customers are increasingly requesting vegetarian dishes. The frequency with which eating establishments have been accommodating these wishes by making claims about menu items is not well known. The FDA cited information from the National Restaurant Association's annual menu contest in its final rule on claims for restaurant foods. The NRA found that 89% of all printed menu entries had at least one nutritional or health claim. However, it is not known how representative this number is for menu practices across the country (6).

The year 2000 nutrition objectives contained in the Healthy People 2000 report are related to obesity, diet-health relationships, application of the U.S. Dietary Guidelines to foodservice operations, and food labeling, among others (9). The relationship between diet and chronic diseases such as diabetes, heart disease, hypertension, and some cancers is well established (10, 11). However, the likelihood of progressing with the nutrition objectives of Healthy People 2000 diminishes without attention to the broader

environment. Environmental interventions providing simple strategies to improve the dietary habits of the population in adopting healthier lifestyles are needed.

Pressure from two consumer advocacy groups, Public Citizen and the Center for Science in the Public Interest (CSPI), influenced the decision by the U.S. District Court in Washington, D.C. to standardize nutrition and health claims made on restaurant menus. The intent of the regulation is to protect the consumer from misleading and/or dishonest claims and to foster selection of nutritious choices (3, 6). Critics, however, feel the new regulations will discourage restaurateurs from making any type of nutrition or health claim on their menus or in their advertisements (12).

In 1995, the Center for Science in the Public Interest analyzed and rated entrees labeled "lite" or "healthy" on menus from seven of America's largest restaurant chains using nutrition labeling (13). Composites from six different samples of the same entree from the same restaurant chain were analyzed for fat, saturated fat, sodium, cholesterol and calories by an independent laboratory. A total of seventeen dishes were tested from TGI Fridays, Denny's, El Torito/Chi-Chi's, Chili's, the Olive Garden, and Big Boy. Results indicated items labeled "lite" or "healthy" often contained more fat than the menu stated. However, the labeled items were healthier than the regular menu items; containing less fat, fewer calories, and more fruit and vegetables than typical restaurant food. Of the 17 dishes tested, 13 met CSPI's criteria for "Better Bites" containing no more than 30% of calories from fat and no more than 10% of calories from saturated fat. The sodium content of all the menu items analyzed exceeded the 600 mg limit required

for "healthy" meals set by the NLEA. This analysis reinforces the necessity of continued studies on the provision of nutrition information in restaurant settings.

The purpose of this research was to explore the restaurateur's response to the new FDA nutrition labeling regulations on a local and statewide basis. What was the prevalence of Oregon restaurateurs making nutrition or health claims on their menus? Did the characteristics of those making nutrition or health claims differ from those who were not? Did Oregon restaurateurs understand the current regulations regarding nutrition and health claims? Were they applying the new labeling regulations to their businesses and if so, how? What were the issues facilitating or interfering with the understanding and implementation of the new FDA regulations? There are many studies on the "Nutrition Facts" label required for processed foods (14-16); meeting consumer nutrition information needs in restaurants (17); and environmental interventions to promote healthy eating (18-20). However, no research on restaurateurs nutrient-content and/or health claims menu labeling practices and response to or understanding of the FDA regulations was currently available.

1.2 Glossary of Terms

1. *Nutrition Labeling and Education Act of 1990 (NLEA)* = Congressional Act requiring nutrition information on the label of almost all foods. Ensures that nutrition-related claims are reasonably used and have consistent meanings throughout the marketplace.

2. *Absolute claims* = Assertion made about the exact amount or range of a nutrient in a food. Ex. "Low fat" and "calorie free." Although the definitions of these terms do not have to appear in print, in the ad, on the menu or promotional materials, the food must satisfy the specific requirements (2).

3. *Relative or comparative claims* = Statement that compares the amount of a nutrient in a food with the amount of that nutrient in a reference food. "Light" and "less" are examples of relative claims (2).

4. *Implied claims* = A statement made that implies that a nutrient is present or absent in a food. "High in oat bran" implies the food is high in fiber, which means the food must meet the criteria for a "high fiber" claim (2).

5. *Reference Amount* = Standardized serving size set by the FDA. Serves as the basis for both health claims and nutrient-content claims. Reference Amounts represent the average amount of a food eaten at one time by the average person (2).

6. *Nutrient-content claim* = A word or phrase used to describe the level of a nutrient in a particular food or dish. Phrases and words such as "low fat," "light," and "healthy," now have very specific definitions and criteria. Nutrient claims are based on Reference Amounts of food (2).

7. *Fresh* = Food cannot have been frozen, thermally treated or any other form of preservation used if the term "fresh" is used to imply an unprocessed product. Otherwise, the term should accurately describe the product (2, 21).

8. *Health claim* = A statement that describes the association between a food and its role in a disease or health status. Health claims are based on Reference Amounts of food (2).

9. *Authorized health claims* = The FDA has authorized claims in the following ten categories because of the sound scientific consensus supporting these diet-disease relationships:

*Calcium *and* osteoporosis

*Sodium *and* hypertension

*Dietary fat *and* cancer

*Dietary saturated fat and cholesterol *and* risk of coronary heart disease

*Fiber-containing grain products, fruits, and vegetables *and* cancer

*Fruits, vegetables and grain products that contain fiber, particularly soluble fiber, *and* risk of coronary heart disease.

*Fruits and vegetables *and* cancer

*Folate *and* neural tube defects

*Dietary sugar alcohol *and* dental caries

*Soluble fiber from whole oats *and* risk of coronary heart disease (22).

10. *Natural* = No regulations govern uses of the term “natural.” The FDA definition for “natural” means nothing synthetic or artificial is contained in the food (2).

11. *Healthy* = Food must be low fat, low in saturated fat, contain 480 milligrams or less of sodium per serving and provide at least 10 percent of the Daily Value per Reference Amount for protein, fiber, iron, calcium, vitamins A or C. If using this term to describe meals or main dishes, they must be low fat, low in saturated fat and have 600 milligrams or less of sodium and 90 milligrams or less of cholesterol per serving. A main dish must contain 10 percent of the Daily Value for two nutrients, and, for meals, 3 nutrients (2).

Table 1.1 Authorized Nutrient-Content Claims and their Criteria

	Free	Low	Very Low	Reduced	Light/Lite	No Added
Calories	<5	<40		25% less	1/3 less*	
Fat	<0.5g	3g or less		25% less	50% less*	
Sat. Fat	<0.5g**	1 g or less		25% less		
Chol.	<2mg***	20mg****		25% less		
Sodium	<5mg	140mg	35mg	25% less	50% less	salt
Sugar	<0.5g			25% less		sugar

(Unauthorized claims are represented by solid cells)
*If 50% or less of the calories are from fat: 1/3 fewer calories or 50% less fat per reference amount (RA)
If >50% of calories are from fat: 50% less fat per RA
**Also must be less than 0.5g trans fatty acid per RA
***Also must contain 2g or less of saturated fat per RA to be labeled cholesterol free
****To be low cholesterol must also contain 2g or less of saturated fat and 13g or less of total fat per RA (2,21)

1.3 Research Question

Have the FDA's new nutrient-content and health claims menu-labeling regulations affected the nutrition labeling practices of Oregon restaurateurs in the first year of application of the laws to foodservice operations?

1.3.1 Research Objectives

1. To describe the factors influencing the use of nutrition labeling on Oregon restaurant menus.

2. To compare Oregon restaurateurs' nutrition labeling practices by geographic region, industry segment, ownership, size of restaurant, and sales.

3. To describe Oregon restaurateurs' perceptions of the new FDA regulations, past experience with nutrition labeling, current nutrition labeling practices and impact, if any, of the new FDA regulations.

1.3.2 Null Hypotheses

$H_0 1$: Usage of nutrition claims or health claims on restaurant menus in Oregon is not associated with the restaurateur's (1) knowledge of the new FDA regulations, (2) understanding of the new FDA regulations, and (3) interest in making nutrition and health claims.

$H_0 2$: There are no differences in the (1) geographical location, (2) industry segment, (3) ownership, (4) size, and (5) sales between restaurateurs who do and those who do not make nutrition or health claims on their restaurant menus.

$H_0 3$: A restaurateur's decision to use nutrition or health claims is not associated with (1) desire to reach a wider variety of customers, (2) concern with increasing sales, (3) customer interest, and (4) personal beliefs regarding nutrition and healthful dining.

1.3.3 Research Design

The research described was a cross-sectional, descriptive study conducted in the winter and spring of 1998. Both a focus group and survey instrument were used.

Descriptive statistics included the following information about respondents:

(1) Demographics to include: geographic region, industry segment, type of ownership, average customers per day, and approximate gross sales for 1997.

(2) Characteristics restaurateurs considered important for items labeled "healthy."

(3) Prevalence of nutrition and health claims in Oregon restaurants.

(4) Respondents past experiences with nutrition or health claims labeling.

(5) Perceived obstacles to using nutrition or health claims.

(6) Perceived benefits of using nutrition or health claims.

(7) Nutrition labeling practices of Oregon restaurateurs, to include methods used, number of items labeled, types of items labeled and methods of substantiation.

(8) Preferred resources for advice on nutrition labeling.

(9) Knowledge, understanding and impact, if any, of the existence of new FDA regulations.

(10) Number, if any, of restaurateurs that eliminated nutrition or health claims since implementation of the FDA regulations.

1.3.4 Assumptions and Limitations of the Study

The assumptions for this study included:

1. The researcher assumed responses of Oregon restaurateurs, while not generalizable nationwide, are similar to restaurateurs everywhere and useful to fellow researchers.

2. The researcher assumed input from a local focus group and a pilot test reflected the general opinions and issues of restaurateurs statewide.

3. The researcher excluded bars/lounges since food sales are not their major source of revenue and assumed that such exclusion would not bias the study.

4. The researcher also assumed that respondents would be truthful in completion of the survey instrument.

The limitations for this study included:

1. Low response rates which are the norm in this population.

2. Lack of control over whom actually completes the survey is a limitation of using the self-administered, mailed questionnaire.

3. All respondents were members of the Oregon Restaurant Association

1.4 Significance of the Research

The recency of the FDA regulations and lack of research available on restaurateur response necessitated this study. No published studies analyzed the response of restaurateurs to FDA menu-labeling regulations. Advocates claimed the new regulations will protect the consumer and foster selection of nutritious choices, however, critics believed the regulations will result in discontinuation of nutrition labeling of menus by many restaurateurs. Research exploring the effect of the new FDA regulations on nutrition labeling practices is essential if these questions are to be answered.

2. LITERATURE REVIEW

2.1 History of Nutrition Labeling

The Food Safety and Inspection Service (FSIS), part of the U.S. Department of Agriculture (USDA), and the Food and Drug Administration, part of the U.S. Department of Health and Human Services have jurisdiction over food labeling regulation in the United States. Labeling of meat and poultry products is regulated by the FSIS. All other food products and ingredients are regulated by the FDA, to include regulation of meats not covered by USDA. Foods served in restaurants also fall under FDA jurisdiction. Although technically the USDA's labeling regulations could be applied to restaurants, the USDA plays no direct role in menu labeling regulations (2).

It was not until 1969, that the White House Conference on Food, Nutrition, and Health recommended the federal government develop a mechanism for classifying the nutritional components of food. While nutrition labeling remained voluntary for most foods, in 1973 the FDA issued regulations for foods containing added nutrients and foods advertising nutritional properties or dietary usefulness. From 1975 to 1990 the regulatory community continued to explore the issue of mandatory nutrition labeling (2, 23).

As a result of growing evidence of the role of diet in certain chronic diseases a committee was convened by the Food and Nutrition Board of the National Academy of Sciences in 1989 to examine how to improve food labels. The following year, the FDA published proposed regulations on mandatory nutrition labeling for most foods, to

include requiring uniform use of health claims and standardized serving sizes. Although President Bush signed the Nutrition Labeling and Education Act (NLEA) into law in November of 1990, regulations for making health claims did not go into effect until May 8, 1993. Regulations for nutrition labeling and making nutrition claims did not go into effect until May 8, 1994 and FSIS regulations for meat and poultry nutrition labeling did not go into effect until July 6, 1994 (9, 23). Restaurants were exempt under the NLEA until January of 1993 when the FDA made compliance with regulations mandatory for nutrient and health claims appearing on signs and placards. Menu claims remained exempt.

In March of 1993 two consumer advocacy groups, Public Citizen Inc. and Center for Science in the Public Interest, filed suit against the department of Health and Human Services and the FDA, charging that the menu exemption violated the NLEA and the Administrative Procedure Act. In response, the FDA proposed to require that menu items about which claims are made be subject to the nutrient and health claims regulations.

As a result of the FDA's failure to finalize its 1993 proposal, the U.S. District Court in Washington, D.C., ruled that Congress intended restaurant menus to be covered by the NLEA and in 1996 ordered the FDA to extend its nutrition labeling and claims regulations to include menu items containing claims. In August of 1996 the FDA issued a final rule removing the restaurant menu exemption and establishing criteria under which restaurants must provide nutrition information on menu items. On May 2, 1997, the FDA menu labeling regulations took effect (1).

2.2 Literature

Due to the recency of the new FDA regulations, minimal published research was available on the subject of nutrient-content or health claims labeling on restaurant menus. Much of what was available dealt with the "how to" of complying with the new FDA regulations when making nutrient-content or health claims on restaurant menus. The bulk of the material reported in trade journals, while informative, was not research based. Some reported studies in the literature dealt with related issues such as the role nutrition plays in restaurants, menu-labeling formats and environmental interventions conducted in foodservice facilities aimed at health promotion.

2.2.1 Trade Journals

According to a recent *Restaurants and Institutions* article (24), menu items labeled heart-healthy were not always great sellers, despite customer requests for sensible choices. Anecdotal evidence cited in the article supported the success of leaner options when flavor, value and choice were not sacrificed. The author also suggested restaurateurs may resort to removing healthy menu item designations rather than risk noncompliance with the new government menu labeling regulations. However, therewais no research data available to support the author's opinions.

To commemorate the one year anniversary of the new FDA menu-labeling regulations, the National Restaurant Association explored the current practices and opinions of several restaurateurs (25). The article, which focused on a handful of

restaurants, presented only examples, no scientific data. According to the information presented, restaurateurs either created healthy menu items with the help of a dietitian or had their recipes analyzed by a dietitian if they decided to continue using nutritional claims on their menus. Questions raised included what effect the NLEA had on restaurants, had claims been dropped or were restaurateurs looking at the new regulations as a way to attract the health-conscious diner. Cost and applicability of the new regulations were cited as probable obstacles to application of the NLEA to restaurants. Due to a lack of FDA resources, unspecified local law enforcement agencies were being asked to deal with enforcement issues. Despite confusion over the issue of enforcing the regulations, compliance was recommended by the National Restaurant Association. Questions and concerns raised in this article were addressed by this research effort.

2.2.2 Nutrition and Restaurants

A recent study by the Australian Centre for International and Tropical Health and Nutrition, University of Queensland, Brisbane examined the influence of the foodservice industry on compliance with the Australian dietary guidelines (26). Data collection was accomplished via telephone and face-to-face interviews. Researchers reported that nearly 40% of 1683 randomly selected Brisbane residents participating in a telephone survey had eaten foods from the foodservice industry on the day prior to the interview. Additionally, the respondents who had eaten out on the previous day were less likely to have had intakes that met the Australian dietary guidelines, having reported significantly

less consumption of vegetables, fruit and dairy products. Face-to-face interviews of key industry and government stakeholders revealed that supportive environmental changes in the Australian foodservice industry were necessary if public health nutrition programs were to be successful. As a result of this study, Hughes, et al. recommended addressing both the business concerns of food suppliers and the goals of health professionals if compliance with the Australian dietary guidelines was to be an achievable goal. The important role the foodservice industry played in the overall nutritional intake of the public was illustrated by this research.

In a qualitative research study by Potter and Williams (27) the attitudes of customers toward 'healthy' restaurants were examined in conjunction with the 'Healthy Eats Restaurant Accreditation Project' in Newcastle, New South Wales, Australia. Project objectives included promoting the belief that 'healthy' food is tasty and increasing the number of 'healthy' restaurants. Researchers found that cost factors, personal preferences and restaurant cleanliness, not availability of healthy food options, were the primary reasons customers chose both restaurants and restaurant meals. While customers expressed interest in healthier menu options when asked by restaurateurs, data from this research indicated health was not the first priority when eating out.

Benson examined strategies and willingness of rural Canadian restaurateurs to promote healthy foods (28). Using telephone interviews of the restaurants under the jurisdiction of an Alberta health unit, lack of customer demand, lack of food availability and maintenance of quality were identified as obstacles related to serving five of 20 foods identified by the researchers as healthy. The majority of restaurateurs surveyed

were willing to train staff (88%) and try new recipes (84%) in promotion of healthy foods. Eighty percent of respondents rated video/audio tapes, information sheets and posters as useful employee education materials. Strategies acceptable to rural restaurateurs for promoting healthy foods included use of menu inserts (76%), table tents (68%) and door decals (72%). The authors recommended nutrition services focus on helping restaurateurs offer healthy foods through training in alternative food preparation methods and determining appropriate menu items to promote.

Food preparation methods used and nutritional information provided by Nebraska restaurants were reported in a poster session at the American Dietetic Association's 1996 annual meeting (29). Neubauer et al. looked at developing strategies for marketing nutritious menu items on restaurant menus. Of 1043 mailed surveys to Nebraska restaurants, 428 useable surveys were returned, a 41% response rate. Sixty one percent of respondents reported an increase in customer interest in healthy menu selections. The majority (41%) of nutrition programs available in Nebraska restaurants and menu item selections were developed by chefs. Food distributors were the second greatest contributors of nutrition programs (33%) and menu selections (34%). However, 71% of the Nebraskan restaurants responding to the survey did not provide any nutritional information for their menu items. Only 29% of respondents reported labeling or marketing any healthy menu items and also indicated that healthy menu items comprised less than 25% of the total number of items available on the menu. Researchers also examined types of food preparation methods used in Nebraska restaurants. Low fat cooking methods (steaming, baking, sauteing and roasting) were used to prepare over

half of the beef and pork menu items, 43% of seafood items and 39% of fish dishes. Researchers concluded that although managers indicated more consumers were requesting nutritious menu selections, Nebraska restaurants were not aggressively marketing healthier menu items.

Determination of the major obstacles foodservices perceived to nutrition labeling was the purpose of a recent study by Almanza et al (30). Questionnaires were sent to 150 research and development directors of the top 400 foodservice organizations as listed in *Restaurants and Institutions* magazine. Sixty eight responded for a response rate of 45%. Current nutrition labeling practices, perceived responsibility to use nutrition labeling, perceived effect on sales and obstacles to nutrition labeling affected the restaurateur's willingness to use nutrition labeling. Only 22, or 32% of respondents provided their customers with nutrition information at the time of this study and two thirds felt nutrition labeling would not have an effect on sales. The majority of restaurateurs who felt there would be an effect on sales perceived a negative effect. Menu and personnel related factors were cited as the main obstacles to nutrition labeling in large organizations. The most important menu related obstacles to labeling were too many menu variations, limited menu space available, and loss of flexibility. Alternatively, limited space, too many menu variations and cost of product analysis were the most important obstacles for operations not providing nutrition labeling. Resources to start labeling, such as training personnel, time and cost were important obstacles to companies not using nutrition labeling. However, because the study was conducted in 1994, it did not address FDA regulations or restaurateur response to nutrition labeling regulations. Only the top 400

largest foodservices as listed in *Restaurant &Institutions* magazine were surveyed, making results generalizable only to an elite section of the foodservice industry. The authors identified the need for further study in smaller foodservice operations.

As part of research for a consumer guide on family and chain restaurants, Warsaw investigated the nutritional content of menu items from 104 large restaurant chains (31). Her efforts yielded nutrition information for some menu items from 47 restaurants. Eight restaurant chains could only provide nutrition information for their healthier items and the remaining 47 restaurants refused to provide nutrition information for any of their menu items. The research was not limited to restaurant chains making nutrition claims. Sixteen restaurants provided basic nutrition information to consumers, 10 provided ingredient information to consumers and four provided diabetes/food exchange information. This article, which was published prior to application of the NLEA to restaurants, reported perpetuation of misleading nutrition half truths. Despite these half truths, such as "fried in 100% cholesterol free oil/shortening," the author concluded that healthy changes in restaurant menus, while slow, had occurred. A recommendation drawn from the research advocated dietitians as change agents in increasing the quantity and quality of restaurant nutrition information and educating consumers to make healthful menu choices when dining out.

Determination of chefs' attitudes, knowledge and practices concerning healthful food preparation was the focus of a recent study by Reichler et al (32). A questionnaire was used to measure food science knowledge, likelihood of and attitude toward using healthy food preparation methods, attitude toward nutrition and attitude toward the U.S.

Dietary Guidelines. Both practicing chefs (n=158; a 72% response rate) and student chefs (n=289; a 99% response rate) participated in the survey. The majority of respondents, 66%, had taken at least one formal nutrition course. Overall, more than 70% of the food science questions were answered correctly by chefs, with independent chef members of the American Culinary Federation of New York City scoring the lowest. Questions dealing with cholesterol and fat were missed most frequently by practicing and student chefs. Significantly greater positive attitudes about nutrition were exhibited by independent and corporate chefs than student chefs, yet student chefs had the most positive attitude regarding the U.S. Dietary Guidelines. While most chefs indicated a belief that their customers did not care about nutrition, they also felt the chef was responsible for the nutrient content of the food served and that nutrition information should be provided if the customer was interested. Chefs identified taste, training and time as barriers to using healthy food preparation methods. Unfortunately, the use of such a large number of student chefs limited the generalizability of this research. The authors stressed the importance of teamwork between dietitians and chefs to increase the number of healthy menu items available in foodservice operations. Training emphasis for chefs was needed in the areas of "healthy" recipe modification and food preparation methods. Fostering teamwork between chefs and dietitians is needed to increase the likelihood of more restaurants successfully marketing menu items that meet the requirements of the U.S. Dietary Guidelines and retain their customer appeal.

A 1991 study by Sneed et al (33) examined attitudes toward nutrition, nutrition marketing practices, the relationship between attitudes toward nutrition and nutrition

marketing, and nutrition training practices in *Restaurants & Institutions* list of top 400 foodservice organizations ranked by sales. A questionnaire was sent to the research and development directors at 200 restaurant companies, seventy responded (35%). Although 63% of respondents indicated that they currently marketed nutrition or planned to, only 39% said they provided nutrition information to consumers. Registered dietitians were employed or hired as consultants by 37% of respondents. The majority of respondents did not believe nutrition played an important part in the decision of where customers ate or that restaurants had a responsibility to improve customers health. Limited employee nutrition training was also reported by the researchers.

An assessment of the "Dine to Your Heart's Content" program in Virginia by Paul et al. examined the nutrition perspectives of both restaurateurs and customers (34). Of the customers surveyed, 88% stated an interest in consuming a heart healthy diet and 55% reported health considerations often motivated menu choices. Customers rated cholesterol, saturated fat, total fat, sodium and calories as the most important nutrient components of menu items. Two program areas in need of improvement from the restaurateur's point of view were nutrition education for employees and help in identifying appropriate menu items to market. Nonetheless, overall restaurateur satisfaction with the program was high. Patrons and restaurateurs supported providing nutrition information in restaurants.

Although conducted before application of the Nutrition Labeling and Education Act of 1990 to restaurants, these studies provided insight into the various ways the provision of nutrition information has been accomplished in foodservice operations.

Recommendations from the majority of these studies called for increased cooperation and collaboration between restaurants and dietitians in pursuit of improving dietary intakes when dining out.

2.2.3 Menu-Labeling Formats

Although data was lacking in the area of nutrition labeling on restaurant menus and the impact of the NLEA, much research existed on nutrition labeling formats in restaurants. Unlike processed foods, the "Nutrition Facts" label was not mandated for restaurant menu items making health or nutrient-content claims. One obstacle to using a format designed for processed foods was the limited amount of space available on menus. The amount of text required to describe menu items limits the amount of nutrition information that can be used to market nutritional components of menu items.

Almanza compared an apple format, a colored dot format, and a pamphlet format to determine consumer preference for nutrition information guidelines presentation on a university restaurant menu (35). Although the colored dot format was the most visible, the pamphlet format led to a greater selection of entrees identified as meeting nutrition guidelines. Limitations of the study included use of a nonrandom population and a low response rate.

In a second study by Almanza (36), the apple format was rated the easiest to use and required the least time when compared with a leaflet and a colored dot format. Attractiveness, ease of use, and clear presentation of nutrition information were

identified as important factors in selecting a nutrition labeling format. This study did not look at customer comprehension of menu labeling formats or effect on sales.

Both of these reports (35, 36) called for studying consumer comprehension of nutrition labeling on menus and appropriate formats to convey nutrition information. The impact on sales following labeling was also recommended for further study.

2.2.4 Environmental Interventions

Customers continue to express interest in point of choice nutrition information (37). Several studies of cardiovascular risk reduction programs supported the feasibility of restaurant-based health promotion interventions (38, 39). Research on environmental interventions in dining establishments not associated with community based cardiovascular risk reduction programs also supported provision of point of choice nutrition information in restaurants.

In a 1989 meta-analysis, Mayer, et al. examined point of choice dietary interventions that used some form of controlled evaluation and appeared in peer-reviewed journals (20). The meta-analysis included studies by several researchers conducted in a variety of foodservice establishments. Cincirpini targeted multiple foods using posters, labels, and rebates in a university cafeteria and attributed the largest changes toward low calorie and low fat food choices to the rebate component of the program (40). Using information placed on a chalkboard targeting three daily specials, Colby et al. determined messages that included taste were most effective in increasing

purchases of low fat, low sodium, and low cholesterol daily specials in a family-style restaurant (41). The Project Las Vegas LEAN (Low-fat Eating for Americans Now) targeted improving community nutrition habits through provision of nutrition training for chefs (42). Participating chefs developed healthful menu items that also focused on taste. This illustrated the importance of nutrition education for chefs if long-term menu changes are to be a success.

As a result of labeling the three lowest calorie salads, vegetables and entrees in a cafeteria setting, Dubbert et al. were able to increase sales of low-calorie salads and vegetables (43). However, sales of the lower calorie entrees were not increased by labeling, suggesting customers are less adaptable in their entree preferences.

Selection of low fat entrees advertised via posters, table fliers and menus increased 20 to 35% in a cafeteria based study by Mayer et al (44). A recent study by Fitzpatrick et al. evaluated customer satisfaction with a restaurant-based nutrition program (45). Results indicated customers were highly satisfied with low-fat menu items, suggesting provision of such choices would be supported by customers.

In a recent study by Perlmutter et al (46), the acceptability of fat and sodium modified entrees were compared before and after implementation of a marketing program. The researchers examined how marketing these items effected total entree sales in an employee cafeteria. Although overall acceptability ratings for modified entrees did not change, researchers noted that customers may be more tolerant to flavor changes in modified entrees when they are marketed as lower in fat and sodium. This research also supported marketing entrees nutritional attributes.

In a study by Albright (18), two of four restaurants participating in a study examining the effect on sales of labeling low fat and low cholesterol menu items had significant increases in the sales volume of targeted items. The primary determinant of choice was taste. Overall, point-of-choice nutrition intervention research indicates this can be an effective approach to improving diet (20, 47-49).

2.3 Rationale

Research information on the nutrition labeling practices of restaurateurs not associated with *Restaurant & Institutions* top 400 was lacking. The literature did not examine the current issues facing this population nor the extent to which they understand the new regulations concerning nutrition labeling on restaurant menus.

Although minimally researched, the topic of nutrition and health claims labeling on restaurant menus is a timely area of study as illustrated by its inclusion in the 1998 proceedings of the 79th annual National Restaurant Association Show. In a seminar entitled "Nutrition: The New Wave for Restaurants" nutrition and regulatory issues related to restaurant menu labeling were addressed. Through use of a panel discussion the session also dealt with recent trends in customers' attitudes toward nutrition and a new computer program designed to aid restaurateurs who make nutrition or health claims on their menus. The seminar was moderated by an NRA staff dietitian. Participants included representatives from the FDA, the Produce for Better Health Foundation, ESHA research and a chef from an award winning Chicago restaurant (50).

The first portion of the seminar, given by the FDA representative, dealt with the NLEA and the FDA regulations as they apply to foodservice operations. In addition to covering the basics of making menu nutrition and health claims, the FDA representative was also available to answer questions. Of interest to this research was her response to a question about the enforcement of the new FDA regulations. After stating enforcement of the regulations is not yet possible at the national level by the FDA, the representative went on to say that state and local authorities are responsible for enforcing the new regulations. However, when asked which particular state and local authorities, she specified FDA state offices or the "mini-FDAs" and local better business bureaus as the primary enforcement agencies. Literature names local health departments as additional avenues for enforcement (6).

Also of interest to this research was the presentation by the ESHA Research representative. This portion of the seminar presented the ESHA computer program developed in conjunction with the NRA to aid restaurateurs making nutrition or health claims in their operations. Nutrition Recipe Analysis (1998, ESHA Research, Salem, OR) is advertised as a CD-ROM program designed to help manage recipes, provide accurate nutrition information, calculate costs and save money. The program will be available for purchase in the fall of 1998 at a cost of $199.00 to NRA members. The program allows the restaurateur to enter a recipe and print both a nutritional analysis and a nutrition facts label. The program does <u>not</u> tell the restaurateur which of the recipes they enter meets FDA regulations for nutrition or health claims labeling. Restaurateurs using this program still have to understand and apply the complicated FDA regulations.

Another computer program designed to meet the restaurateurs nutrition labeling needs, Nutrition ProClaimer™ (1998, Prime Label Consultants, Washington, D.C.), was on display at the NRA show. Unlike the Nutrition Recipe Analysis program, Nutrition ProClaimer™ evaluates all possible FDA nutrient content and health claims, asks key questions allowing comparison to similar products, aids in the exact wording requirements for valid claims and explains why invalid claims are rejected (50).

Inclusion of a nutrition seminar in the program and the existence of a new NRA computer program intended to help restaurateurs make nutrition claims on their menus illustrated the restaurateur's current interest in nutrition claims and restaurant menus. However, an exploration of whether or not they know what kinds of claims can and cannot be made on their menus and advertisements has not been conducted. Other unknowns include: Is cost an obstacle? Are nutrition and/or health claims on their menus? If so, are they able to substantiate the claims? Is it an FDA approved claim? What are they using for documentation? By studying the response of restaurateurs to the new FDA regulations on nutrition and health claims labeling on restaurant menus, these questions were investigated within a subset of Oregonian restaurateurs.

3. METHODOLOGY

Oregon restaurateurs' nutrition labeling practices and their response to the new FDA regulations were the focus of this investigation. The research methodology involved two steps. A focus group consisting of restaurateurs from Benton County, Oregon was first utilized to aid in survey development and to determine the menu labeling concerns of local restaurateurs. This was followed by a self-administered questionnaire mailed to a representative sample of Oregon restaurateurs.

3.1 Focus Group

By using the interview methodology of a focus group, it was possible to capitalize on communication between the researcher and participants. A primary purpose of focus groups is to aid in identifying key variables used in more quantitative studies (51). As recommended by Aday, participants identified issues of concern to the groups that were the primary focus of the study and identified what came to mind when they thought about key study concepts in the early stages of instrument development. This was accomplished by reviewing and commenting on an actual draft of the questionnaire (52). A carefully planned, semistructured discussion was used to elicit the opinions and the underlying reasons for those opinions among participants similar to those of the proposed study (53).

3.1.1 Focus Group Characteristics

Focus group members consisted of local restaurateurs both utilizing and not utilizing nutrition or health claims on their menus. Geography and participant time constraints limited potential members to Corvallis, Oregon. Names of possible participants were obtained from members of the Oregon Restaurant Association located in Corvallis, Oregon. Focus group members from the community encompassed dining establishments with diverse characteristics, including a vegetarian restaurant, a Chinese restaurant, a fine dining establishment and family restaurant. Recruiting a diverse focus group increased the likelihood that the questions developed for the statewide survey would elicit clear results reflective of a cross section of Oregon restaurateurs. The researcher approached potential members with a personal invitation to participate in the focus group and be available on a consulting basis to answer later questions regarding development of the survey instrument.

3.1.2 Sequence of Events

(1) Recruited members for focus group	14-16 January 1998
(2) Finalized questions for focus group meeting	19-23 January 1998
(3) Focus group met	27 January 1998
(4) Developed survey	February 1998

3.1.3 Focus Group Process

Initial survey questions were drafted by the researchers prior to the focus group meeting. During the focus group meeting a think-aloud strategy was used to uncover any problems with clarity. Using a think-aloud strategy involving participants similar to the study's target audience enabled the researcher to test the questions that had been developed to measure study concepts. Participants were asked a string of predetermined probe questions at the time each possible survey question was asked (concurrent think-aloud). The goal of this strategy was to determine what the participants were thinking when they answered the questions and how they arrived at their answers (52). Appendix A contains a partial transcript of the focus group discussion with participants remarks in quotations.

3.2 Survey of Oregon Restaurants

The aim of this research was to obtain baseline data on the nutrition labeling practices of Oregon restaurateurs following the application of the NLEA to restaurant menus. Restaurateurs are traditionally a difficult target population to study due to their hours of operation and demanding pace of work. Restaurants are a risky business venture with a high rate of failures.

Several factors were considered prior to selecting the self-administered questionnaire as the primary data collection method for this research project. Given the research question and target population, a self-administered questionnaire seemed the

least expensive, most effective means of obtaining the desired information. Although mailed questionnaires traditionally have lower response rates than in-person approaches (52), lack of staff available to conduct personal or telephone interviews reinforced the decision to use a self-administered questionnaire for data collection.

3.2.1 Survey Instrument Development

The principal research question and hypotheses along with recommendations from the focus group and the literature aided in the selection of questions for the survey instrument. By reviewing studies and questionnaires dealing with similar subjects, possible methodological problems were anticipated. Input from the focus group minimized errors that often result when questions are developed solely by researchers without first hand experience.

After making revisions based on the focus group's recommendations, a rough draft of the survey instrument was submitted to the Oregon State University survey consultant. The result of the consultant's twenty years of experience was a more reader friendly, unbiased survey instrument (Appendix B).

Following revision by the survey consultant, the questionnaire was pilot tested. Due to time and financial constraints pilot testing of the survey instrument was limited to Corvallis, Oregon restaurateurs willing to serve as unpaid consultants. Input from the pilot testing resulted in several minor changes to the survey instrument to increase

clarity. The researcher also added the choice "all natural, fresh" to the list of possible components of a "healthy" menu item to the first survey question.

Addition of an incentive was another recommendation stemming from the pilot test. However, no specific incentive that would increase the likelihood of their completing the survey if received in the mail could be determined. Therefore, the researcher did not include a financial incentive in the first mailing. Final drafts were carefully reviewed by the researchers prior to submitting for printing.

3.2.2 Sample Population

Oregon restaurateurs were randomly selected from Oregon Restaurant Association membership. The Oregon Restaurant Association membership officer was instrumental in providing a membership list. After receiving the membership list, a determination of eligible participants for random selection was necessary. Impartiality was a central issue in designing the sample. Criteria for exclusion included restaurants with duplicate menus, limited menu chains, coffee only shops, and bars/lounges.

3.2.3 Sample Size

Determination of sample size reflected population size of the 1998 Oregon Restaurant Association membership list. Ideally, the sample size is small enough to be financially and logistically feasible, yet large enough to minimize variable sampling error and generalize results to the population of interest (52, 53). Unfortunately, it is

impossible to ensure representativeness unless you are able to study the entire population. An initial sample size of 345 Oregon restaurateurs were selected as potential survey participants.

3.2.4 Subject Selection

After establishing the sampling frame, selection of survey participants was accomplished by systematic random sample. The sampling fraction for a restaurateur entering the sample was one in four. An effort to minimize the periodic ordering of elements in the sample frame was made to avoid biasing the data. The membership list printout pages were randomly reordered and the first subject was selected randomly. Because the membership list was arranged by the restaurants geographical location (e.g., zip code) the first name on the first page was not used as the starting point for subject selection. By starting the selection process of every fourth element at a random point in a randomly reordered list, possible bias from periodic ordering was minimized.

3.3 Survey Instrument

In addition to restaurant demographics, the items on the instrument included characteristics of claims, use and experience with menu labeling, methods and resources for making claims, knowledge and understanding of claims, impact of nutrition labeling regulations, and obstacles and benefits of making nutrition claims (see Appendix B - Survey Instrument).

3.3.1 Identification of Variables

Several resources aided in the development of the survey questions. Origin of the choices of variables considered potentially important characteristics of menu items labeled as "healthy" were the FDA regulations and *A Practical Guide to the Nutrition Labeling Laws for the Restaurant Industry* (2). The variables used for questions dealing with benefits and obstacles to nutrition labeling (30), methods of nutrition labeling (35, 36) and statements meant to assess understanding of FDA regulations (2) were obtained from literature review, focus group input, pilot testing and personal experience. A survey developed by researchers at the University of Nebraska - Lincoln to study food preparation methods and nutritional information provided by Nebraska restaurants was also helpful in determining appropriate variables to use in this research study.

3.3.2 Questionnaire Content

Based on their use of nutrition labeling, respondents were instructed to complete different sections of the questionnaire. The first page of the questionnaire was intended for all respondents and addressed the restaurateur's perception of important characteristics of menu items labeled healthy. After prompting thought about the components of "healthy" menu items, the next question looked at current and past nutrition labeling experience and probed for reasons restaurateurs chose not to use nutrition labeling.

Page two of the questionnaire was intended for restaurateurs with previous or current experience with nutrition labeling of menu items. This section included nutrition labeling methods, the number and type of menu items labeled, and preferred substantiation methods. Restaurateurs that had never used nutrition labeling were instructed to skip to page three.

The final section of the questionnaire was for all respondents. Page three briefly explained the new FDA regulations and addressed prior knowledge of, understanding of and response to the law. Restaurateurs were also asked what they perceived as the benefits, if any, of nutrition labeling.

Page four of the questionnaire dealt with the impact, if any, of the new FDA regulations, sources used for help or advice if the decision to incorporate nutrition labeling on their menus was made and finally, restaurant demographics. Demographics included industry segment classification as defined by the Oregon Restaurant Association, type of ownership, average daily customer count, and approximate gross sales for 1997.

3.3.3 Questionnaire Structure

With the exception of two open-ended questions, closed-ended questions predominate throughout the survey. Numerical codes were assigned to each possible answer for the closed-ended questions to decrease possible errors and aid in computer processing of responses.

3.4 Survey Administration

On 9 March 1998, the first cover letters (Appendix C), questionnaires, and business reply (postage paid) envelopes were mailed to the sample. Although advance notice of a survey is recommended (52) input from the focus group and pilot test discouraged the researcher from sending a mailed advanced notice to this population. With the exception of the advanced notice, Salant and Dillman survey procedures were used (54). Eight days after the initial mailing a follow-up postcard (Appendix D) was mailed, thanking those who had already responded and reminding those who had not responded of the importance of their input.

Prior to the initial mailing, the researchers considered using the technique of systematic random replacement, replacing those sample subjects who did not respond to the first round of follow-up mailings. However, with such a low initial response rate, the researchers were concerned that another round of mailed surveys to 300 new potential respondents would result in another 10 percent response, wasting time and the limited resources available.

In order to increase response rate, the researchers decided to personally contact nonrepondents via telephone or by personal delivery of the survey instrument to the restaurant. Restaurants within driving distance of Corvallis (Portland metro area, central Oregon coast, Salem and surrounding area, Eugene and surrounding area, and southern Oregon restaurants located off Interstate 5) received a second survey and business reply envelope hand delivered with a personal explanation and request for participation.

Telephone calls were made to the remaining restaurants who had not responded prior to mailing them a second survey.

3.4.1 Incentives to Respondents

Financial constraints prevented the researchers from utilizing monetary incentives to boost study participation. However, a nonmonetary incentive of offering the survey results to interested respondents was included in the cover letter. Restaurateurs were instructed to write "copy of results requested" on the return envelope to receive the results at the completion of the survey.

In response to the initial low return rate, an incentive in the form of a prize drawing was added to the second round of survey deliveries and mailings. The prize was fifty dollars, to be awarded at the close of the survey to one of the respondents. Publicizing the drawing was accomplished via a business card containing the pertinent information (Appendix E). This was a less expensive alternative to enclosing money in each survey envelope, particularly when several restaurateurs reported discarding the survey without opening the envelope. Survey responses received prior to the addition of the monetary incentive were also eligible for the prize drawing.

3.4.2 Sequence of Events

(1) Sought approval from the University Institutional Review Board for the Protection of Human Subjects for the survey.	January 1998

(2) Consultation with survey research center.	January 1998
(3) Finalized mailing list of the sample by a systematic random sample.	February 1998
(4) Pilot tested survey instrument locally.	February 1998
(5) Evaluated results of pilot test, made revisions and prepared surveys for mailing.	February 1998
(6) Mailed first cover letter, questionnaire, and business reply envelope.	9 March 1998
(7) Mailed follow-up postcards.	17 March 1998
(8) Began data collection via personal contact (Hand delivery).	23 March 1998
(9) Mailed second surveys to restaurateurs contacted by phone.	15 April 1998
(10) Mailed second follow-up postcards to restaurateurs contacted by phone.	23 April 1998
(11) Entered data and analyzed results.	April-May 1998

3. 5 Statistical Analysis

Data was entered as received into the spreadsheet program Excel by the researchers. Through application of the Statistical Analysis Software (SAS) package the attributes of survey respondents was accomplished using univariate statistics, such as percentages, frequencies, and means. Causal comparison and comparison of observed and theoretical frequencies were conducted using the chi-square test.

Validity is essential for assessing the quality of any measurement device. Input from the focus group and the pilot test enhanced the validity of the instrument's results. Reliability, or consistency in measurement, is required for generalization of results. Pilot testing, reviewing existing survey instruments and previous experience established reliability of the instrument to some degree in terms of plausibility and consistency (55).

Historically, response rates are below 60% in this target population (16, 30, 33, 35). A fifty to 60 percent rate of return is a reasonable goal, although lower rates of return are acceptable. An increase of 20% can be anticipated with one follow-up mailing or more (53). In this case, a reminder postcard, followed by a personal contact and delivery or second mailing of the questionnaire and letter, and then another reminder postcard was utilized.

3.6 Budget

Expenses (estimated in $)		
Stamps (.32/ea.)	140.00	
Stamps (.20/ea.)	80.00	
Printing	100.00	
Business reply envelopes	50.00	
Office supplies	50.00	
Statistical consultation	237.00	
OSU Survey Research Center consultation	76.00	
Travel	200.00	
Total Expenses		$933.00

4. RESULTS

Improvement of nutrition information provided in foodservices is difficult without first assessing the current situation and gaining an understanding of the restaurateur's perspective. The intent of this research was to gain insight on the Oregon restaurateurs current and past experiences with nutrition labeling, their nutrition labeling beliefs, the impact and their understanding of the new FDA regulations on nutrition labeling, and the perceived obstacles and benefits to nutrition labeling.

4.1 Focus Group Results

Focus group input supported this research. Insights gained from this small subset of the target population allowed the researchers to better understand some of the daily challenges restaurateurs face in running a successful restaurant. In addition, the focus group enabled the researchers to gain a better understanding of local restaurateurs attitudes and beliefs regarding nutrition labeling. The consensus of the participants guided later decisions in the evolution of the final survey instrument.

Participants included one vegetarian, casual/family dining restaurant; one traditional "mom and pop" casual/family dining establishment; a fine dining restaurant; and the owner of both a Chinese and an Italian restaurant. Reported earnings ranged from $250,000 to $5,000,000. All restaurants were independently owned with 100 to 500 customers per day. These demographics were similar to those of survey respondents.

Participants believed customers perceptions of healthy food differ from customer to customer. In addition to information on what restaurateurs perceived were important characteristics of healthy menu items, this discussion also elicited the common complaint that because nutrition information changes so rapidly, it is difficult to stay current when making claims. Restaurateurs agreed some, but not all, of their customers were interested in healthy dining when eating out. However, because different customers have different beliefs of how a healthy menu item should look and taste, creating products that are popular, flavorful and attractive was a challenge for restaurateurs. In the competitive restaurant industry, owners reported a reluctance to offer menu items based on nutritional value alone or to risk an FDA fine for improperly using nutrition or health claims labeling on their menus.

Only one of the four focus group members, the owner of the vegetarian restaurant, acknowledged making a nutrition or health claim on their menu. Although the menu items labeled with hearts were based on information from an earlier program of the American Heart Association, the owner expressed uncertainty of the labels current status relative to the FDA regulations. Due to concern over regulatory compliance the owner was considering discontinuing designating her healthy menu items with hearts. Researchers reassured the restaurateur that menu items labeled via a program of the American Heart Association constitute a reasonable basis for the claim as defined by the FDA. Additionally, the researchers recommended inclusion on the menu of an explanation containing the criteria used to determine the accuracy of the menu claims.

Two of the four participants reported making nutrition claims on their menu in the past but discontinuing the practice due to the new menu labeling regulations. After the meeting, however, researchers discovered one of them still had a "Lighter Fare" section on their menu and the participant who stated they had taken the hearts off their menu was mistaken. Both the section labeled "Lighter Fare" and the hearts are considered nutrition claims. In order to comply with the new regulations the menu verbiage could be changed to Light Bites to indicate smaller portion sizes and a notation made on the menu to define the terms definition. If the menu items were lower in calories the term light or lite could be used to indicate the item contains less than 50% of its calories as fat and also has 1/3 fewer calories or 50% less fat per reference amount (2). The restaurant with the hearts still on their menu could explain the criteria for the symbol they created or they could use a symbol with the criteria required by a health professional organization such as the American Heart Association (2). A significant finding from the focus group was that two of the four participants were making nutrition claims when they thought they had removed them from their menus.

The fourth participant had never utilized nutrition labeling. None of the participants reported a customer or regulatory official requesting proof a menu item merited a nutrition claim since application of the new regulations. This did not surprise the researchers because the literature indicated enforcement by the FDA is likely to be sporadic and it was not known how many consumers were aware of the new FDA menu labeling regulations or would request substantiation of a menu claim.

Although focus group participants were aware of the new FDA regulations, they were not familiar with the details of the regulations. Trade journals and newspaper articles were the primary sources of their information. Participants believed the likelihood of knowing about the regulations would decrease for restaurateurs who did not read the trade journals or owned smaller operations in less populated areas. Focus group members had not heard about the regulations from the FDA or either of the two organizations, CSPI or Public Citizen, instrumental in the US District court decision to apply the NLEA to restaurant menus.

Focus group participants were interested in the specifics of the new FDA regulations. Despite two of the restaurants discontinuing nutrition labeling, none of the four participants felt the new FDA regulations had an impact on their operations. Feelings about the regulations were mixed. Participants did not appreciate further government regulations but also believed their customers should be protected from false or misleading nutrition claims on restaurant menus. A common complaint was lack of time or expertise to accomplish nutrition labeling on their menus.

Advice from the focus group concerning questionnaire development included keeping the length of the survey to four pages or less to allow completion in five to ten minutes. Use of the focus group also resulted in changing the wording of one question to increase clarity and rewording the questions measuring understanding to read less like a test. Consistency was added as a possible response to the question dealing with reasons not to use nutrition labeling. When asked if the questionnaire or cover letter content was oriented toward a nutrition perspective, participants responded in the negative. The

intent of the researchers was to create as unbiased an instrument as possible. Participants recommended stressing the researcher's student status and the minimal time required to complete the survey in the cover letter. If the researcher was to utilize telephone interviews for follow up, group members preferred to receive calls before 10:00 a.m.

By using the qualitative research tool of a focus group, the researcher explored the phenomenon of interest and refined both the survey instrument and cover letter. Local restaurateurs' personal perceptions on nutrition and health claims menu labeling were obtained via a carefully planned, semistructured discussion as recommended by Monsen (51).

4.2 Statewide Survey Results

Initially, 345 surveys and follow up postcards were mailed to randomly selected members of the Oregon Restaurant Association (ORA). This number represents approximately 25% of their membership as of January 1998. When only 34 restaurateurs (10%) responded to the initial mailing, the decision was made to personally deliver a second survey to nonrespondents or to notify nonrespondents by phone prior to mailing a second survey. Contacting ALL nonrespondents, enabled exclusion of restaurants that had gone out of business. When the status of potential respondents is known, sample members who are ineligible for the study can be excluded (52). A sample size of 322 possible respondents resulted after 23 failed or unopened businesses were eliminated. Through persistence, 160 usable surveys were returned for a 50% response rate.

Data was entered as received into the spreadsheet program Excel. Through application of the Statistical Analysis Software (SAS) package the attributes of survey respondents was accomplished using descriptive statistics on the following:

(1) Demographics: geographic region, restaurant industry segment, type of ownership, average customers per day, and approximate gross sales for 1997.

(2) Important characteristics of menu items labeled "healthy."

(3) Prevalence of nutrition and health claims on Oregon restaurant menus.

(4) Past experience with nutrition or health claims.

(5) Perceived obstacles to using nutrition or health claims.

(6) Perceived benefits of using nutrition or health claims.

(7) Nutrition labeling practices including methods used, number of items labeled, types of items labeled, and substantiation methods.

(8) Preferred resources for advice on nutrition labeling.

(9) Knowledge, understanding, and impact of the new FDA regulations.

(10) Number, if any, of restaurateurs that had eliminated nutrition or health claims due to implementation of the new FDA regulations.

4.2.1 Restaurateur Demographics

Table 4.1 represents the breakdown of respondents by Oregon Restaurant Association geographic region. As illustrated, regional response rates were similar to the geographic region of both possible respondents and Oregon Restaurant Association membership. The breakdown of the ORA regions is shown in Appendix F.

Table 4.1 Respondent Frequency by ORA Membership Region

ORA Regions	Actual Respondents (n=160)	Possible Respondents (n=322)	ORA Membership (N=1371)
Region 1	58 (36%)	135 (42%)	567 (41%)
Region 2	22 (14%)	36 (11%)	147 (11%)
Region 3	21 (13%)	45 (14%)	197 (14%)
Region 4	17 (11%)	32 (10%)	132 (10%)
Region 5	7 (4%)	14 (4%)	65 (5%)
Region 6	19 (12%)	23 (7%)	95 (7%)
Region 7	16 (10%)	37 (11%)	168 (12%)

For chi-square analysis, respondents were grouped by population size into the following categories: Urban (36%, n=57), Urban/Rural (32%, n=51) and Rural (33%, n=52). Urban restaurants were comprised of respondents from the Portland metro area; Urban/Rural respondents were located in medium sized cities (16,000 to 110,000); and rural restaurants encompassed respondents from towns with populations less than 16,000.

4.2.1.1 Industry Segment

Industry segment classification of respondents was as follows: casual/family dining (56%, n=89), fine dining (22%, n=35), limited menu/deli (11%, n=17) and bar/tavern/lounge/club/brewpub (11%, n=18). The vast majority of responses came from restaurants in the casual/family dining industry segment.

4.2.1.2 Ownership

Eighty nine percent (n=141) of responding restaurants were independently owned. Franchises comprised only 5% (n=8) of responses and chain restaurants comprised the remaining 6% (n=9).

4.2.1.3 Average Daily Customer Count

Restaurants with an average daily customer count under 100 (n=33) comprised 21% of the responses. Most of the restaurants reported an average customer count of between 100 and 199 (42%, n=65). Restaurants serving between 200 and 499 customers per day made up 24% of the responses (n=37). The remaining 13% of respondents (n=20) reported serving over 500 customers per day.

4.2.1.4 Gross Sales for 1997

Only 82% of respondents provided their approximate gross sales for 1997. Of those able to share, the breakdown is as follows: $249,000 or less (17%, n=22), $250,000 to $499,999 (24%, n=32), $500,000 to $999,999 (28%, n=37), $1,000,000 to $1,999,999 (16%, n=21) and $2,000,000 or more (15%, n=19). The majority of restaurants grossed between $500,000 and $999,999 in 1997.

4.2.1.5 "Average" Respondent Demographics

The average respondent's restaurant was an independently owned, casual/family dining establishment with an average of 100 to 199 customers per day and gross sales for 1997 of over a half million dollars but under one million dollars located in the Portland metro area. Table 4.2 illustrates the respondents demographics. All respondents were members of the Oregon Restaurant Association when the membership list was generated in January of 1998.

Table 4.2 Responses by Demographics

Industry Segment (n=159)				
Fine Dining	**Casual/Family**	**Limited Menu/Deli**	**Bar/Club/Brewpub**	
35 (22%)	89 (56%)	17 (11%)	18 (11%)	
Ownership (n=158)				
Franchise	**Chain**	**Independently Owned**		
8 (5%)	9 (6%)	141 (89%)		
Average Customer Count (n=155)				
Under 100	**100 to 199**	**200 to 299**	**Over 500**	
33 (21%)	65 (42%)	37 (24%)	20 (13%)	
1997 Gross Sales (n=131)				
$249,000 or less	**$250,000 to $499,999**	**$500,000 to $1,000,000**	**$1,000,000 to $1,999,999**	**Over $2,000,000**
22 (17%)	32 (24%)	37 (28%)	21 (16%)	19 (15%)

4.2.2 Null Hypotheses

In addition to the descriptive statistics reported later in this chapter, three null hypotheses were examined by the researchers. Using chi-square (χ^2) test for independence, the following null hypotheses were examined by the researchers and the results are reported in Table 4.3 on page 51.

$H_0 1$: Usage of nutrition claims or health claims on restaurant menus in Oregon is not associated with the restaurateur's (1) knowledge of the new FDA regulations, (2) understanding of the new FDA regulations, and (3) interest in making nutrition and health claims.

$H_0 2$: There are no differences in the (1) geographical location, (2) industry segment, (3) ownership, (4) size, and (5) sales between Oregon restaurateurs who do and those who do not make nutrition or health claims on their restaurant menus.

$H_0 3$: A restaurateur's decision to use nutrition or health claims is not associated with (1) desire to reach a wider variety of customers, (2) concern with increasing sales, (3) customer interest, and (4) personal beliefs regarding nutrition and healthful dining.

4.2.2.1 $H_0 1$: Knowledge, Understanding and Interest

Chi-square tests were used to examine the relationship between usage of nutrition and health claims and restaurateurs' knowledge of the new FDA regulations, understanding of the new FDA regulations and interest in making nutrition claims. Restaurateurs were either aware of the new FDA regulations or they did not know the

regulations existed. There was no evidence of a relationship between knowledge of FDA regulations and usage of nutrition or health claims. The null hypotheses of no association was not rejected. Understanding of the new regulations could not be tested statistically due to a lack of correct answers. However, there was evidence of an association between usage of nutrition labeling and the restaurateurs' interest in making nutrition claims. The null hypothesis of no association was rejected.

4.2.2.2 $H_0 2$: Nutrition or Health Claims Practices by Demographics

Chi-square analysis was also used to test for a relationship between nutrition and health claims labeling practices and restaurateur demographics. Results indicated there was no relationship between restaurant geographic location, ownership, size or sales and the decision to use nutrition or health claims labeling. The null hypothesis of no association was not rejected for all four variables. The only demographic variable with a statistically significant relationship to nutrition labeling usage was the industry segment. The null hypothesis of no association was rejected (refer to Table 4.3, page 51).

4.2.2.3 $H_0 3$: Benefits of Nutrition Labeling

Chi-square analysis to determine whether an association existed between usage of nutrition and health claims and restaurateurs' personal beliefs regarding the benefits of providing nutrition information revealed several statistically significant relationships. There was evidence of an association between nutrition labeling and restaurateurs belief

that labeling would allow them to reach a wider variety of customers. An association between use of nutrition labeling and restaurateurs belief that labeling would increase sales or provide a marketing advantage also existed. Chi-square analysis of use of nutrition labeling and restaurateurs belief that their customers were interested in healthful dining revealed a statistically significant association (see Table 4.3). The restaurateur's use of nutrition labeling was also associated with their personal beliefs on the importance of healthy eating. There was evidence of a relationship between usage of labeling and restaurateurs perceived benefits of labeling.

Table 4.3 Null Hypotheses Chi-Square Testing Results

Null Hypotheses; d.f.(n)	**H_0 Rejected or H_0 Not Rejected**	**p value; χ^2 value**
$H_0$1: Usage of nutrition claims is not associated with the restaurateur's:	Chi-Square	
(1) Knowledge of the FDA regulations; 1(n=157)	$H_0$1(1) not rejected	p=.332; χ^2=.938
(2) Understanding of the new FDA regulations	$H_0$1(2) not tested	----
(3) Interest in making nutrition claims; 2(n=148)	**$H_0$1(3) rejected**	p=.021*; χ^2=7.747
$H_0$2: There are no differences in usage of nutrition labeling by:		
(1) Restaurant geographic location; 2(n=157)	$H_0$2: (1) not rejected	p=.398; χ^2=1.840
(2) Restaurant industry segment; 3(n=157)	**$H_0$2: (3) rejected**	p=.001**; χ^2=15.673
(3) Restaurant ownership classification; 2(n=156)	$H_0$2: (2) not rejected	p=.944; χ^2=0.115
(4) Restaurant size; 3(n=153)	$H_0$2: (4) not rejected	p=.827; χ^2=0.892
(5) Restaurant sales; 4(n=128)	$H_0$2: (5) not rejected	p=.250; χ^2=5.384
$H_0$3: Usage of nutrition claims is not associated with the perceived benefit of:		
(1) Reaching a wider variety of customers; 1(n=150)	**$H_0$3: (1) rejected**	p=.001**; χ^2=23.407
(2) Increasing sales/marketing advantage; 1(n=150)	**$H_0$3: (2) rejected**	p=.001**; χ^2=22.076
(3) Customer interest in "healthful" dining; 1(n=150)	**$H_0$3: (3) rejected**	p=.001**; χ^2=26.984
(4) Personal belief in healthful dining; 1(n=150)	**$H_0$3: (4) rejected**	p=.027*; χ^2=4.861

Chi square test assesses evidence against the H_0.
*Significant at p<.05;
**Significant at p<.01

4.2.3 Nutrition Labeling Practices

Forty five percent of respondents (n=70) used nutrition labeling, 12% (n=19) of respondents had past experience with labeling and 43% (n=68) of respondents had never used labeling. The majority (55%, n=87) were not currently using labeling.

Restaurateurs with past (n=19) and/or present (n=70) experience using nutrition labeling on their menus were asked to answer questions dealing with their labeling practices on page two of the questionnaire (n=89). Restaurateurs without any nutrition labeling experience (n=68) did not complete this portion of the survey.

Restaurateurs with labeling experience were also asked how they accomplished menu labeling, the number of "healthy" menu items they labeled, the types of "healthy" menu items they offered and the preferred mechanisms for substantiating their nutrition or health claims.

Independently owned, casual/family dining establishments with an average of 100 to 199 customers per day and grossing between $250,000 and $499,999 in 1997 were most likely to be currently using nutrition labeling. More detailed restaurateur demographics are illustrated in Table 4.4 based on their use of nutrition labeling.

Table 4.4 Demographics by Labeling Usage

	CURRENTLY LABELING	PAST EXPERIENCE	NO EXPERIENCE	TOTAL
INDUSTRY SEGMENT:				
-Fine Dining	n=8; 11%	n=5; 28%	n=22; 32%	n=35; 22%
-Casual/Family Dining	n=48; 69%	n=10; 55%	n=29; 42%	n=89; 56%
-Limited Menu/Deli	n=10; 14%	n=0	n=7; 10%	n=17; 11%
-Bar/Club/Brewpub	n=4; 6%	n=3; 17%	n=11; 16%	n=18; 11%
OWNERSHIP:				
-Franchise	n=4; 6%	n=0	n=4; 6%	n=8; 5%
-Chain	n=4; 6%	n=1; 5%	n=4; 6%	n=9; 6%
-Independently Owned	n=61; 88%	n=18; 95%	n=60; 88%	n=141; 89%
AVERAGE CUSTOMERS:				
-Under 100	n=12; 18%	n=3; 17%	n=17; 25%	n=33; 21%
-100 to 199	n=29; 43%	n=5; 28%	n=30; 43%	n=65; 42%
-200 to 499	n=16; 24%	n=6; 33%	n=15; 22%	n=37; 24%
-500 or More	n=10; 15%	n=4; 22%	n=6; 9%	n=20; 13%
1997 GROSS SALES:				
-$249,999 or Les	n=10; 19%	n=3; 18%	n=7; 12%	n=22; 17%
-$250,000 to $499,999	n=13; 25%	n=2; 12%	n=16; 27%	n=32; 24%
-$500,000 to $999,999	n=11; 21%	n=5; 29%	n=21; 36%	n=37; 28%
-$1,999,999 or LESS & ($2,000,000 or MORE)	n=7; 13% & (n=11; 21%)	n=5; 29% & (n=2; 12%)	n=9; 15% & (n=6; 10%)	n=21; 16% & (n=19; 15%)

4.2.3.1 Nutrition Labeling Method

When restaurateurs were asked how they preferred to communicate the nutritional attributes of their menu items, one third (34%, n=30) reported dedicating a special section of the menu to their "healthy" menu items. A third of the respondents also reported using special symbols to designate their "healthy" menu items (30%, n=27). Instructing wait staff to mention "healthy" choices was another popular method (42%, n=37) of communicating nutritional information. Few restaurateurs reported using a separate menu or menu insert for "healthy" menu items (17%, n=15).

In addition to the choices offered, restaurateurs could also specify methods used to designate "healthy" menu items which were not included on the questionnaire. Restaurateurs comments on alternative methods used to communicate nutritional attributes of their menu items (25%, n=22) were divided in to the following categories: table tents/pointers, menu notes availability of substitute ingredients such as low fat salad dressings, availability of vegetarian dishes, use of fresh/all natural ingredients, and description of a healthier cooking method. Several respondents also reported their menus contained a broad statement designating the use of "Heart Smart" recipes using no added fat, lard or MSG and the leanest meats available.

4.2.3.2 Quantity of Labeled Menu Items

The majority of restaurateurs with experience using nutrition or health claims labeling (73%, n=65) chose to designate between one and five of their menu items as

"healthy." Another 17% (n=15) reported labeling six to ten of their menu items. The remainder of respondents (10%, n=9) reported labeling more than ten menu items.

4.2.3.3 Types of "Healthy" Menu Items

Restaurateurs were also asked what types of items they targeted as "healthy" on their menus. The majority of respondents indicated they labeled entrees (87%, n=77). Side dishes were labeled by 56% (n=50). A large number (55%, n=49) labeled vegetables. Fewer restaurateurs reported labeling breakfast items (42%, n=38). In addition to the variables listed, 19% (n=17) of respondents selected the 'other' variable. The types of alternative menu items labeled by the respondents were grouped in the following categories: soups, desserts, specials, skim milk and condiments such as low fat sour cream.

4.2.3.4 Substantiation Methods

Not only were the researchers interested in how many restaurateurs were using nutrition or health claims labeling, they were also interested in how restaurateurs would substantiate those claims. Restaurateurs were presented a list of options for substantiating claims and asked which choices they would or had used to back up their nutrition or health claims. As illustrated in Table 4.5, use of a recipe with the nutritional breakdown or analysis was the most frequently selected method of substantiation (46%, n=38). The nutrition label from the package of a preprepared item came in a close

second (41%, n=34). Written calculations for recipes were selected by 22% (n=18) of respondents. Very few restaurateurs would/have used books containing nutrient tables (15%, n=12) or computerized recipe printouts (12%, n=10). Twenty three percent of respondents indicated they would or have used another means to document the veracity of a nutrition or health claim, to include going over the recipe and ingredients with the customer and use of a consultant.

Table 4.5 Frequency of Use of Substantiation Methods

Substantiation Method (n=83)	**Would Use Freq**	**Would Use %**	**Would NOT Use Freq**	**Would NOT Use %**
Recipe with nutritional analysis	38	46%	45	54%
Nutrition label from package	34	41%	49	59%
"Other"	19	23%	64	77%
Written calculation for recipe	18	22%	65	78%
Book with nutrient tables	12	14%	71	86%
Computerized recipe printout	10	12%	73	88%

4.2.4 Nutrition Labeling Beliefs

The majority of questions measuring nutrition labeling beliefs were intended for all respondents. Researchers were interested in learning what restaurateur's consider are important characteristics of menu items labeled healthy, the perceived benefits of nutrition labeling and the preferred source for advice on nutrition labeling.

Those restaurateurs not currently using nutrition labeling were asked to answer questions regarding the reasons they did not use nutrition labeling and, subsequently, to choose the most important reason they did not use nutrition labeling. Respondents currently using nutrition labeling were instructed to skip this section.

4.2.4.1 Characteristics Important in Menu Items Labeled "Healthy"

The first question on the survey was intended to get the restaurateur thinking about what attributes were important to "healthy" menu items. The vast majority of restaurateur's felt that menu items labeled "healthy" should be low in fat/saturated fat (90%, n=139) and low in cholesterol (83%, n=128). Three fourths of the respondents felt that menu items labeled "healthy" should be low in sodium (73%, n=113). When asked if a menu item labeled "healthy" should be a good source of vitamins/minerals, the majority said yes (68%, n=106). Most restaurateurs also felt menu items labeled "healthy" should be all natural, fresh (62%, n=95). A slim majority of restaurateurs (57%, n=88) felt that "healthy" menu items should be low in calories. Responses were split fairly evenly in regards to fiber content, however, the majority (52%, n=80) did not feel it was important for a menu item labeled "healthy" to be high in fiber. Menu items labeled "healthy," as described by the respondents, should be low in calories, low in sodium, low in fat/saturated fat/cholesterol, a good source of vitamins/minerals and all natural, fresh. Characteristics considered important for menu items labeled "healthy" varied by the respondent's labeling practices as illustrated in Table 4.6.

Table 4.6 Characteristics of Healthy Menu Items by Label Usage

Frequency of Selection as an Important Characteristic of a "Healthy" Menu Item: (n=155)	**Currently Label**	**Labeled in the Past**	**Never Labeled**
Low in Calories	59%	67%	**51%**
Low in Sodium	**72%**	78%	73%
High in Fiber	**46%**	50%	51%
Good Source of Vitamins/Minerals	72%	**61%**	67%
Low in Fat/Sat Fat	97%	89%	**84%**
Low in Cholesterol	91%	94%	**72%**
All Natural/Fresh	**59%**	61%	64%

*Percentages in bold are the lowest of the three label usage categories

4.2.4.2 Obstacles to Nutrition Labeling

Those respondents without any nutrition or health claims labeling on their menus were asked to explain their reasons for not using labeling. Non-labelers were split fairly evenly on customer interest in "healthy" items. Fifty one percent indicated their customers were interested in "healthy" items while 49% indicated their customers were not interested in "healthy" items. Eighteen percent (n=15) of respondents believed loss of flexibility in changing their menu was a factor in deciding not to use nutrition labeling. Cost effectiveness played a role in the decision not to use nutrition labeling for a minority of restaurateurs (n=13, 16%). Inconsistency with recipe preparation by cooks was an obstacle focus group members contended influenced their decision not to use

nutrition labeling, however, only 15% (n=12) of survey respondents supported this as an obstacle. When asked if past attempts at nutrition or health claims labeling were unsuccessful, only 13% (n=11) of respondents said this was a reason for their decision not to use nutrition labeling. Ten percent (n=9) of respondents believed the amount of time required to accomplish nutrition labeling was a reason they decided not to use nutrition labeling on their menus. Difficulty training employees to implement nutrition labeling was a factor cited by 7% (n=6) of respondents in their decision not to use nutrition labeling.

When asked to comment on any "other" factors that influenced their decision not to use nutrition or health claims labeling on their menu, 52% commented. These comments were grouped by the following categories: regulatory constraints, lack of customer interest, menu factors and customer responsibility for dietary decisions.

4.2.4.3 Most Important Reason NOT To Use Nutrition Labeling:

Restaurateurs NOT using nutrition labeling (n=87) were asked to choose the MOST important reason they chose not to make nutrition claims. In addition to the variables listed by the researchers, respondents had the opportunity to list "other" reasons that affected their decision. As illustrated in Table 4.7, the most important reason selected by restaurateurs not using nutrition labeling on their menus were lack of customer interest in "healthy" items (37%, n=29) and "other" (45%, n=35).

Table 4.7 Frequency of Choosing Reason as MOST Important for NOT Labeling

Most Important Reason:	**Freq (n=78)**	**%**
"OTHER"	**35**	**44.9**
Lack of customer interest in "healthy" items	**29**	**37.2**
Past attempts unsuccessful	3	3.8
Difficulty training employees	3	3.8
Not cost effective	3	3.8
Consistency in menu item preparation	2	2.6
Takes too much time	2	2.6
Difficult to change menu	1	1.3

4.2.4.4 Benefits of Using Nutrition Labeling

All respondents were asked to indicate what benefits, if any, there were to using nutrition labeling. The researchers were interested in understanding what factors health professionals should stress when developing interventions aimed at providing nutrition information in restaurants. The majority of respondents felt reaching a wider variety of customers was a benefit of nutrition labeling (68%, n=103). Most restaurateurs also felt nutrition labeling would create a marketing advantage over competitors (59%, n=89). Almost 48% (n=72) reported that customers were asking for "healthy" menu items. While the vast majority of restaurateurs claimed they personally believed in "healthful" dining (79%, n=120), a small minority believed there were no benefits to providing nutrition labeling of menu items (12%, n=17). Results are illustrated in Table 4.8.

Table 4.8 Frequency of Identifying Benefits of Nutrition Labeling

Benefits:	**Frequency (n=152)**	**%**
Personally Believe in Healthful Dining	120	79%
Reach a wider variety of customers	103	68%
Increase Sales/Marketing Advantage	89	59%
Customers Asking for Healthy Items	72	48%
No Benefits	17	12%
"Other"	14	9%

4.2.4.5 Preferred Source for Nutrition Labeling Advice

All respondents were asked to indicate whether or not they would use the following resources for assistance with nutrition labeling. Responses are illustrated in Table 4.9. The majority of restaurateurs said they would use the National or the Oregon Restaurant Association for labeling advice (83%, n=128), followed by the American Heart Association or other health agency (70%, n=103), the American Dietetic Association (53%, n=82), the FDA (51%, n=78), their chefs (49%, n=75) and "other" (10%, n=16). "Other" choices included nutrition consultants, books and classes.

Table 4.9 Frequency of Identifying Sources for Nutrition Labeling Advice:

Sources: (n=154)	**Would Use Freq**	**Would Use %**	**Would NOT Use Freq**	**Would NOT Use %**
Restaurant Association	128	83%	26	17%
American Heart Association	103	70%	51	33%
American Dietetic Association	82	53%	72	47%
FDA	78	51%	76	49%
Chef	75	49%	79	51%
Other	16	10%	N/A	N/A

4.2.5 FDA Regulations

The remainder of the questionnaire was intended for all respondents. The new FDA regulations were introduced to the restaurateur on page three of the survey instrument. The intent of this portion of the instrument was to determine restaurateurs knowledge of the new regulations, their understanding of the new regulations and the impact, if any, of the new regulations on nutrition labeling practices.

4.2.5.1 Knowledge of FDA Regulations

Because of the recency of the application of the FDA regulations, the researchers were interested in how many restaurateurs were aware the regulations became effective in May of 1997. Restaurateurs were asked if they had heard or read about the new FDA regulations prior to receiving the survey. The majority of restaurateurs (71%, n=112) had

heard about the regulations from the National or Oregon Restaurant Association and a large number of restaurateurs reported reading about the new regulations in a newspaper or magazine article (54%, n=84). Very few respondents reported hearing about the regulations from a professional conference or workshop (8%, n=13) and even fewer heard about the regulations from a source not listed as a selection variable (3%, n=5). However, almost one fourth (23%, n=36) of respondents had not heard of the new FDA regulations from any source.

4.2.5.2 Understanding of FDA Regulations

Restaurateurs understanding of the FDA regulations was assessed using two questions addressing content and one addressing self-assessment of understanding.

Table 4.10 Understanding of FDA Regulations: Frequency of Responses

Statements Measuring Understanding:	**Label**		**Do Not Label**	**chi-square analysis**
Q8a. By law, a menu item must have 50% less fat to be labeled "reduced fat."	55% **13%** 32%	Agree **Disagree*** Unsure	31% **22%** 47%	(incorrect answer) χ^2(2, n=152) =8.773, p=0.012
Q8f. I know a lot about the new FDA specifications for nutrition or health claims labeling on menus.	**7%** 65% 28%	**Agree*** Disagree Unsure	**17%** 57% 26%	χ^2(2, n=150) =3.183,p=0.204.
Q8g. By law, the term "Lite Bite" may be used to mean smaller portion sizes if an explanation appears near the menu item(s).	**34%** 15% 51%	**Agree*** Disagree Unsure	**17%** 16% 67%	χ^2(2, n=151) =5.996, p=0.050

*Correct answers to statements are noted by bold print.

As illustrated in Table 4.10, the correct answer to the statement Q8a is false: By law, a menu item must have 50% less fat to be labeled "reduced fat." The correct percentage for items labeled "reduced fat" is actually only 25%. The majority of restaurateurs incorrectly agreed with the previous statement (42%, n=64), only 18% answered correctly (n=27) and the remainder of respondents were unsure (41%, n=62). The second statement, Q8g, dealing with content of the new regulations is a true statement. By law, the term "Lite Bite" may be used to mean smaller portion sizes if an explanation appears near the menu item(s). The majority of respondents were unsure if the statement was true or false (61%, n=92). Fifteen percent disagreed with the statement (n=23) and the 24% (n=37) who agreed with the statement answered correctly. The low percentage of correct answers corroborates with the high number of restaurateurs who disagreed with Q8f, the self assessment of understanding statement. "I know a lot about the new FDA specifications for nutrition or health claims labeling on menus." Only 13% (n=19) of restaurateurs felt they knew a lot about the regulations, 60% (n=91) disagreed, 27% (n=41) were unsure and none of the respondents answered all three statements correctly.

4.2.5.3 Impact of the FDA Regulations

When restaurateurs were asked if the new FDA regulations had any impact on their operations, the overwhelming majority responded with a negative (n=145, 92%). Most of the 8% (n=12) saying the FDA had impacted their operations were restaurateurs

who discontinued using nutrition labeling as a result of the new regulations. The majority of restaurateurs comments on the impact of FDA regulations dealt with their inability to comply with the regulations or a general dislike of government interference.

Researchers were also interested in gauging the restaurateurs opinions regarding enforcement of the regulations by the FDA. There has been speculation about the FDA's ability to enforce the new menu labeling regulations (25). Thirty six percent (n=55) believed the FDA was able to enforce the new regulations, while 33% were unsure (n=51) and 31% disagreed (n=48). The majority of restaurateurs were either unsure or disagreed (64%, n=99) that the FDA would be able to enforce the regulations.

When asked if the new regulations had impacted the portion sizes served in their restaurants, the resounding answer was no (77%, n=117). Several resources available to restaurateurs have discussed the prudence of smaller portion sizes for entrees when making nutrition claims (2, 24). Only nine restaurateurs (6%) indicated they had decreased portion sizes to meet the new guidelines and 17% (n=26) were unsure if they had decreased portion sizes due to compliance issues with the new FDA regulations.

Very few restaurateurs reported having a customer request proof that a menu item labeled "healthy" met FDA guidelines (6%, n=10). The vast majority had not had a customer request proof that a menu item met FDA guidelines (80%, n=122) and 14% (n=21) did not know if a customer had ever requested substantiation of a claim.

In addition to restaurateur response to the new FDA regulations, the researcher also determined whether respondents wanted to know more about nutrition labeling. If restaurateur interest in the subject was minimal, future research and nutrition

interventions would be more difficult with limited potential for success. Fortunately, the majority of respondents indicated they would like to know more about making nutrition claims on their menus (55%, n=82). Thirty four percent (n=50) were not interested in learning about making nutrition claims and 11% (n=17) were not sure if they wanted to learn more about nutrition labeling.

5. DISCUSSION

By exploring the nutrition labeling practices of Oregon restaurateurs following application of the NLEA to restaurant menus, the researchers have aspired to make a significant contribution to the literature. This chapter focuses on discussion and applications drawn from the results of the statewide survey.

Mail surveys are the most frequently used market research data collection method and also a widely misused technique. Validity and reliability of the survey results were maximized by following Vichas (56) ten standards for conducting successful mail surveys. Content validity was reviewed by both researchers and the Oregon State University Survey Research Center. Face validity was reviewed by pretesting the survey instrument with local sample respondents.

5.1 Response Rate

Use of the mailed survey enabled researchers to identify the current nutrition labeling practices of Oregon restaurateurs and the impact of the new FDA regulations on those practices. Although the researchers did not expect a high initial response rate, the response to the first mailing of the surveys was a disappointing 10%. Questionnaires were collected from 9 March 1998 to 6 May 1998 yielding a final response rate of 50%. The substantial increase in responses was due to telephone contact with the restaurateur prior to remailing the survey or by hand delivering the second survey to the target

restaurants within driving distance; 95 restaurateurs were contacted by phone resulting in a 49% response rate and 193 surveys were hand delivered resulting in a 41% response rate. When contacted the majority of restaurateurs admitted misplacing or discarding the initial survey, some without first reading the cover letter. Conducting research on this population was difficult and a 50% response rate was achieved through diligence.

Survey research indicates response rates are affected by respondent education level and their interest in the topic (52). Education level of restaurateurs varies greatly as does their interest in the topic of nutrition labeling. However, a recent survey of research and development departments of large corporations only yielded a response rate of 45% despite the higher education levels required for corporate positions (30). In a second survey by Neubauer (29) a 41% response rate was reported for useable surveys.

The survey instrument used in this study was designed with attention to the varying education levels of the potential respondents. Clarity and ease of completion were considered throughout the questionnaire developmental process.

Interest in nutrition labeling was split fairly evenly with 55% reporting they would like to know more about the topic and 45% indicating they were uncertain or did not want to know more about nutrition labeling. Although the majority of Oregon restaurateurs were not using nutrition labeling on their menus (55%), most respondents expressed an interest in learning more about the subject. Researchers concluded the low initial response rate was due to an overall dislike of mail surveys and busy schedules. This conclusion was based on restaurateur responses when they were personally contacted by the researcher and both ORA and focus group input and advice.

Lack of interest in the topic by bar owners was noted by the researchers and further evidenced by the pub owner missing the focus group meeting. While Oregon bars are required to serve some food depending on the amount of alcohol they serve, the focus group and ORA input accurately predicted a low interest in nutrition labeling in this segment of the industry. Although an attempt was made by researchers to exclude operations deriving most of their business from alcohol sales, seven respondents were bar/tavern owners, 2 managed clubs (e.g., Elks), and nine owned brewpubs. Eight of the known drinking establishments that received a hand delivered a second survey responded, however, each of the eight was also a fullservice restaurant.

The researchers primary interest was foodservice operations potentially affected by the new FDA nutrition labeling regulations. As with the focus group, the majority of respondents were associated with fine dining or casual/family dining establishments (78%, n= 124).

5.2 Restaurateur Demographics

When examining restaurateur response by region (Table 4.1, pg. 46) the regional response rate was similar to the regional make up of the possible respondents (n=322) and the population of interest (n=1371). Responses were also divided fairly evenly between urban, urban/rural, and rural restaurants.

According to the NRA Restaurant Industry Pocket Factbook (5), 45% of eating and drinking establishment were sole proprietorships or partnerships in 1992 as

compared to 89% of the survey respondents. This supported the researchers goal of contributing data to the literature regarding smaller foodservice operations. Research on the nutrition practices of larger corporations already exists (30).

Average daily customer count of the majority of respondents was under 200, common for smaller sized restaurants. Restaurants serving between 200 and 499 customers per day accounted for 24% of the respondents. The remaining 13% reported serving over 500 customers per day. Average customer counts supported the researchers desire to focus on smaller restaurants versus the larger corporation with access to greater resources.

Although 18% of respondents were unwilling or unable to provide information on their approximate gross sales for 1997, the majority of those choosing to respond reported earning between $500,000 and $999,999 the previous year. This compared with lower gross sales (under $299,000) of participants in the survey of Nebraska restaurants (29) and much higher sales (over $326 million) in a survey of the top 400 foodservice organizations as listed in 1993 by *Restaurants & Institutions* magazine (30).

The average respondent independently owned a casual/family dining establishment located in the Portland metro area with an average of 100 to 199 customers per day and gross sales for 1997 of over a half million dollars but under one million dollars. All respondents were members of the Oregon Restaurant Association when the membership list was generated in January of 1998. A limitation of the study was that the sample population consisted only of ORA members. It was assumed that ORA members did not differ from Oregon restaurateurs who chose not to join the ORA. Results of this

study can be generalized to Oregon restaurants and to those demographically similar, (e.g., Washington), but perhaps not to restaurants nationwide. However, the findings of this research are applicable as building blocks for future research on a broader scale.

5.3 Null Hypotheses

In addition to the descriptive statistics discussed later in this chapter, three null hypotheses were considered in this research. Chi-square (χ^2) tests for independence were reported in the previous chapter and illustrated in Table 4.3 on page 51.

5.3.1 $H_0 1$: Knowledge, Understanding and Interest

$H_0 1$: Usage of nutrition claims or health claims on restaurant menus in Oregon is not associated with the restauranteur's (1) knowledge of the new FDA regulations, (2) understanding of the new FDA regulations, and (3) interest in making nutrition and health claims.

5.3.1.1 Knowledge of the New FDA Regulations

Chi-square tests revealed no statistically significant relationship between usage of nutrition and health claims and restaurateurs knowledge of the existence of the new FDA regulations; the null hypothesis of no association was not rejected.

The majority of respondents had heard or read about the new FDA regulations from either the National or Oregon Restaurant Association. This was not a surprising statistic since the sample population was drawn from ORA membership. Oregon Restaurant Association membership dues also cover membership in the National Restaurant Association. Therefore, researchers were surprised that almost one third of the respondents had not heard about the regulations from the ORA or NRA. Fewer respondents had read about the new regulations in a newspaper or magazine article and fewer still had learned about the regulations in a professional conference or workshop.

Of particular interest to this research was that almost one fourth (23%, n=36) of survey respondents had not heard about the regulations from any source and 53% (n=19) of those unaware of the regulations were using nutrition labeling on their menus. Researchers were surprised to find lower awareness rates (72%, n=49) among those respondents currently using nutrition labeling compared to (78%, n=52) those respondents without nutrition labeling experience. Respondents with past experience had the highest awareness rate (89%, n=17). Based on these statistics, researchers speculated that as more restaurateurs become aware of the new FDA regulations, more restaurateurs will remove nutrition labels from their menus. These statistics also illustrated the need for better communication of the existence of the FDA regulations to Oregon restaurateurs. Both the NRA and the ORA have published articles in their magazine and newsletter, however, many restaurateurs remained unaware of the regulations at the time of this survey. Awareness of the new regulations may be even lower among restaurateurs not affiliated with any professional associations.

Television and word of mouth were the alternative sources of information cited by restaurateurs utilizing nutrition labeling. Those not using nutrition labeling cited peers, the health department, the American Culinary Federation (ACF) and television as alternate sources of information regarding the new FDA regulations. Prior to conducting this study, researchers had speculated about the possibility of the FDA notifying restaurateurs of the new nutrition labeling regulations, however, the FDA was not listed by any of the restaurateurs as a source of information.

Ultimately, the restaurateur is expected to stay current on all regulations that have a potential effect on their operations. Without reading the various trade journals, the challenge of staying competitive and complying with regulations is even more daunting.

5.3.1.2 Understanding of the New FDA Regulations

Understanding, as measured by two questions testing comprehension of menu labeling regulations and a self assessment question were examined for relationships between understanding and usage of nutrition labeling. However, chi-square analysis was not possible secondary to lack of correct answers by any respondent to all three of the questions measuring understanding of the new FDA regulations. This in itself indicated a general lack of understanding by Oregon restaurateurs of the complex regulations placed on nutrition labeling in foodservice establishments.

When the variables were examined separately, as shown in Table 4.10 (page 63), no association was found between usage of nutrition labeling and the restaurateurs self

assessment of their comprehension level (Q8f). There was, however, an association between answering the statement Q8a incorrectly and usage of nutrition labeling, which indicated restaurateurs using nutrition labeling may overestimate their understanding of the regulations. There was also an association between answering Q8g correctly and usage of nutrition labeling. However, answering one question correctly could have been due to chance and cannot support an association between usage of nutrition claims and the restaurateurs understanding of the regulations. Findings do support the need for efforts aimed at increasing restaurateurs understanding of the new FDA regulations, particularly those who are making nutrition claims on their menus.

There were several possible outcomes indicated by these findings. The overwhelming lack of understanding could lead to misleading and incorrect application of the nutrition labeling regulations. This would result in a disservice to those customers using nutrition labeling to aid in their meal choices. Alternatively, restaurateurs may become frustrated by the complexity of the laws and their own lack of understanding and remove nutrition labels from their menus. In this case, the customer would no longer be provided a potentially valuable service.

5.3.1.3 Interest in Making Nutrition Claims

Usage of nutrition labeling was associated with the restaurateurs interest in making nutrition claims. The majority of restaurateurs using nutrition labeling expressed an interest in learning more about making nutrition claims on their menus (67%, n=45)

versus (44%, n=36) those restaurateurs not using nutrition labels. This was an encouraging statistic because 55% (n=81) of those surveyed, regardless of current use of nutrition labeling, were interested in making nutrition claims. This data supports efforts aimed at assisting restaurateurs interested in making nutrition claims on their menus. Although the majority of respondents indicated an interest in making nutrition claims, most restaurateurs were not making claims, and of those making claims, the accuracy of their claims was not known. Dietitians and other qualified professionals need to be proactive in assisting those restaurateurs interested in making accurate nutrition claims.

5.3.2 Nutrition or Health Claims Practices by Demographics

$H_0$2: There are no differences in (1) geographic location, (2) industry segment, (3) type of ownership, (4) size, and (5) sales between restauranteurs who do and those who do not make nutrition or health claims on their menus.

Results indicated there was no evidence of a relationship between geographic location, ownership type, size or sales and the decision to use nutrition or health claims labeling. The null hypotheses of no association was not rejected for all four variables.

Participants in the focus group meeting had predicted that small restaurants in less populated areas would be less likely to use nutrition labeling. Survey results, however, did not support the focus group's view. Discovering a lack of association for these four variables indicated efforts to promote the use of restaurant nutrition labeling should not be restricted based on the restaurants' geographic location, ownership type,

size or sales. Assuming the owner of a small, isolated restaurant would not use nutrition labeling or have an interest in making nutrition claims is potentially a false assumption. Dietitians should not be judgmental about which restaurants to approach when enlisting participation in restaurant based nutrition interventions or when promoting their consultation services.

An association may, however, exist between these same demographic variables and correct usage of nutrition or health claims. These findings do not disprove the assumption by focus group members that smaller operations may find complying with the new regulations more difficult than their larger competitors with research and development departments.

The only demographic variable with a statistically significant relationship to nutrition or health claims labeling usage was the restaurant's industry segment classification (as shown in Table 4.3, page 51). The majority of restaurants utilizing nutrition labeling were part of the casual/family dining segment (69%, n=48). Greater than half (55%) of the total casual/family dining respondents (n=87) used nutrition labeling on their menus. There were several possible reasons for this finding. Casual/family restaurants may be the type of establishment customers frequent more often, making provision of nutrition information more important to their customers. Competition among casual/family restaurants for customers may also play a role in the large number of operations providing nutrition labeling. Efforts to improve the quantity and quality of nutrition labeling on restaurant menus should begin with the most interested industry segment, the casual/family dining restaurant.

Responding restaurateur demographics are described in Table 4.4 (page 53) on the basis of their use of nutrition labeling. As illustrated only eight percent of fine dining establishments participating in the survey used nutrition labeling. This may be due in part to the tendency of people treating themselves to a more expensive meal to overindulge and ignore any dietary constraints. The majority of restaurateurs in the limited menu/deli category indicated they used nutrition labeling, while a minority of drinking establishments reported using nutrition labeling. Researchers were not surprised to discover that such a small number of drinking establishments used nutrition labeling on their menus. Overall, this segment of the industry exhibited a lack of interest in nutrition labeling.

5.3.3 Nutrition Labeling Benefits

$H_0$3: A restauranteur's decision to use nutrition or health claims is not associated with (1) desire to reach a wider variety of customers, (2) concern with increasing sales, (3) customer interest, and (4) personal beliefs regarding healthful dining.

5.3.3.1 Reach a Wider Variety of Customers

There was an association between nutrition labeling and restaurateurs belief that labeling would allow them to reach a wider variety of customers. The vast majority of respondents who used nutrition labeling on their menus (88%) believed reaching a wider variety of customers was a benefit of providing nutrition information. Surprisingly, half

of the respondents not using nutrition labeling (51%, n=42) also felt providing this information would enable them to reach a wider variety of customers. However, the perceived benefit did not cause these respondents to use nutrition labeling. This could possibly be due to stronger beliefs regarding obstacles to making nutrition claims and/or misinterpreting the new FDA regulations. Unfamiliarity often discourages people from trying new things.

It was also interesting to note that while 51% of respondents not using nutrition labeling believed implementing nutrition claims would enable them to reach a wider variety of customer, 49% also believed their current customer base was not interested in healthy items. Expansion of customer base through nutrition labeling would lead to increased business without sacrificing the needs of current customers and would be a useful argument when speaking to restaurateurs about the benefits of nutrition labeling.

5.3.3.2 Benefit of Increasing Sales & Marketing Advantage

An association between use of nutrition labeling and restaurateurs belief that labeling would increase sales or provide a marketing advantage also existed. The majority of restaurateurs using nutrition labeling (79%, n=54) believed that a benefit of providing nutrition information on their menus was increased sales and a marketing advantage over competitors compared with 41% (n=34) of respondents not using nutrition labeling. Data showing increased sales resulting from the implementation of a nutrition labeling program such as Project LEAN (42) aid in creating more positive

attitudes toward nutrition labeling. Dietitians and health professionals with data supporting increased sales as a benefit of providing nutrition information on menus are more likely to convince restaurateurs to use nutrition labeling.

5.3.3.3 Satisfying Customer Interest

The restaurateurs belief that their customers were interested in healthful dining revealed a statistically significant association to usage of nutrition labeling. A significantly greater percentage of restaurateurs using nutrition labeling (71%, n=48) believed their customers were interested in healthful dining than restaurateurs not using nutrition labeling (28%, n=23). This corresponded with the belief held by 49% of respondents not using labeling that their customers were not interested in healthy fare when dining out. Although their customers may not be requesting healthy choices, that does not automatically translate to a lack of interest. Studies have shown (18, 41, 42) that items labeled healthy sell well when their taste was also marketed.

If dietitians and other health professionals focus their efforts on promoting use of menu nutrition claims based on the known benefits of nutrition labeling, including customer interest, likelihood of success is improved. However, restaurateurs will probably require reassurance that their customers will purchase healthy items prior to their implementing nutrition labeling.

5.3.3.4 Satisfying Personal Beliefs

The restaurateurs use of nutrition labeling was also associated with their personal beliefs on the importance of healthy eating. Regardless of use of nutrition labeling, most restaurateurs expressed a personal belief in the importance of healthful dining. However, an overwhelming majority (87%, n=59) of nutrition labelers believed a benefit of providing this service to their customers was satisfying their own personal beliefs. This compared with 72% (n=59) of restaurateurs not using nutrition labeling. Researchers speculated that although a majority of non-labelers personally believed healthful dining was important, they did not translate this belief into a reason to offer nutrition information on their menus.

Many respondents who did not use nutrition labeling expressed strong opinions regarding who was responsible for nutritional intake. The customer's personal responsibility for their own dietary intake was a widespread belief of non-labeling respondents. Despite their personal belief in healthful dining, many respondents believed their customers were able to make "healthy" choices without menu labeling. This seems uncertain when most respondents were confused about nutrition labeling.

Others believed providing nutrition education to the general public would be a more effective method of improving customers restaurant selections than regulating nutrition labeling. While nutrition education is important, it is just one of many areas affecting the health of Americans. The intent of the researchers was not to assign responsibility but to provide baseline information upon which future improvements in

the area of nutrition labeling on menus could be built. Success in convincing restaurateurs to offer nutrition labeling is more likely if increasing customer base, marketing advantages and satisfying customers needs are stressed, versus satisfying the restaurateurs personal beliefs on the importance of healthful dining.

5.4. Nutrition Labeling Practices

Responses by both restaurateurs currently using nutrition labeling (n=70) and those who used nutrition labeling in the past (n=19) were similar. Labeling format, number of labeled menu items, types of healthy menu items offered and the preferred mechanism for substantiating a nutrition or health claim are discussed in the following sections.

5.4.1 Nutrition Labeling Method

Use of a special section of the menu, use of special symbols and instructing wait staff to mention "healthy" choices were popular methods of communicating nutrition information among restaurateurs with experience using nutrition labeling. Among the alternative methods restaurateurs reported using to designate "healthy" menu items were: use of table tents or pointers; notations on the menu advertising the availability of substitute ingredients, such as lite sour cream; description of the item includes use of a low fat cooking method, such as grilling; menu item labeled "calorie saver"; and use of bulleted items. Interestingly, some restaurateurs believed their vegetarian menu items

automatically qualified as "healthy," further illustrating the need to educate restaurateurs and the public that not all vegetarian items are low in fat, calories, and sodium.

Several of the respondents indicated they did not designate specific menu items as "healthy," instead they included a statement on their menu referencing use of Heart Smart recipes using no added fat, lard or MSG and the leanest meats available. Although they did not add fat, the menu items would most likely not qualify as "healthy" under FDA guidelines due to the fat content found naturally in the ingredients. Often, the customer could tailor the nutritional content of their meal by modifying ingredients when they order, making meeting the FDA guidelines for "healthy" unlikely and inconsistent.

Several respondents also stressed their use of only the freshest, all natural ingredients as part of their "healthy" menu. Unfortunately, fresh does not equate to healthy (refer to glossary of terms, page 6-7). A fresh medium size avocado contains approximately 300 calories and 30 grams of fat. Six ounces of cooked fresh salmon contains approximately 320 calories and 14 grams of fat (57). This is not to imply that either of these foods is unhealthy, but to illustrate that although fresh, they would not meet the FDA guidelines for a "healthy" label. Without assistance from a nutrition expert, restaurateurs are unlikely to make this distinction on their own.

5.4.2 Quantity of Labeled Menu Items

The vast majority of restaurateurs with experience using nutrition or health claims labeling designated one to five of their menu items as "healthy". Fewer reported

labeling six to ten menu items. Even fewer respondents reported labeling more than ten of their menu items as "healthy." Those restaurateurs labeling more than ten of their menu items generally made broad statements stressing their use of healthier ingredients and cooking methods. However, some of the respondents within this subsample (n=9) used a special section of their menu or special symbols to designate their healthier fare. Of the respondents no longer using nutrition labeling, the majority previously labeled one to five of their menu items. Only one respondent reported labeling more than ten items prior to discontinuing the service.

5.4.3 Types of Healthy Menu Items Offered

Entrees were the most frequently targeted menu items. Side dishes were the next most popular "healthy" menu offerings followed by vegetables and breakfast items. Soups, desserts, specials, fruit sides, skim milk, condiments such as fat free salad dressings and smaller portions were alsomentioned as additional types of "healthy" menu items targeted by restaurateurs.

Results of this study indicated restaurateurs were most interested in labeling their entrees. Because entrees typically contribute the largest proportion of calories in a meal, targeting entrees with nutrition labeling corresponded with the objective of promoting health through dietary intake.

5.4.4 Substantiation Methods

Not only were the researchers interested in how many restaurateurs were using nutrition or health claims labeling, we were also interested in how restaurateurs would substantiate those claims. When presented a list of options for substantiating claims and asked which choices they would use or had used to back up their nutrition or health claims, use of a recipe with the nutritional breakdown or analysis was the most frequently selected method of substantiation. The nutrition label from the package of a preprepared item came in a close second and written calculations for recipes were selected by almost one fourth of respondents.

Very few restaurateurs would use or had used books containing nutrient tables or computerized recipe printouts. These results suggested restaurateurs may have minimal interest in nutrition labeling computer programs such as the NRA sponsored Nutrition Recipe Analysis program due to be released in the fall of 1998. While computer programs designed to aid the restaurateur in analyzing their recipes may be popular with larger restaurant corporations with research and development staffs or registered dietitians, smaller operations may be more reluctant to invest the time and money required to implement computerized nutritional analysis of recipes. Researchers predict few independently owned, smaller operations will purchase the new computer program. A future NRA sales analysis of the demographics of restaurants that purchase the program would support or disprove this belief.

Twenty three percent of respondents indicated they would use or had used another means to document the veracity of a nutrition or health claim. Not surprisingly, few of the restaurateurs no longer making nutrition claims commented on how they would have backed up their claims. Of those that commented one respondent indicated their chef had been trained and certified by the American Heart Association Heart Smart Program, however, they removed the items due to poor sales. Another respondent indicated they could not back up their claims so they removed them. Although the last comment came from a respondent who did not answer the question dealing with preferred substantiation methods, they did comment that having to substantiate their claims was a very good reason not to make any claims. These remarks suggested the new regulations impacted their decision to discontinue nutrition labeling. They also indicated restaurateurs lack confidence in the accuracy of their nutrition claims and their desire not to make a false claim. The consumer, particularly those with diet related diseases, benefits when misleading claims are discontinued. The scope of this research did not cover analysis of the actual nutritional content of menu claims. However, it is doubtful that restaurateurs were certain of the accuracy of the claims that were removed.

Those respondents currently using nutrition labeling were more apt to comment on alternative methods for substantiating their claims. Responses varied from showing the customer the original recipe, verbally stating the ingredients, or telling them how the item was prepared to using a "certified nutritionist" or the American Heart Association to substantiate a claim. Whether the "certified nutritionist" was a registered dietitian or a mail order nutrition "expert" is not known. One respondent indicated they would use

verbiage not regulated by the FDA. Overall responses indicated restaurateurs were confused and frequently misinformed concerning acceptable methods for substantiation of nutrition or health claims and many would not use any substantiation method.

This uncertainty creates an excellent opportunity for dietitians and other trained professionals who are interested in doing consulting for restaurateurs making nutrition claims on their menus. Although the intent of the regulations was to improve the quality of nutrition claims, without enforcement there is less likelihood of effectiveness. However, dietitians working with restaurateurs increase both the quantity and quality of nutrition claims currently made on menus.

5.5 Nutrition Labeling Beliefs

In contrast to the 89% reported by the NRA annual menu contest (6), the majority of respondents reported in this research did not currently use nutrition or health claims labeling on their menus. Only forty five percent of study participants (n=70) indicated they currently used nutrition or health claims labeling on their menus. Based on NRA literature it is possible the 89% reflected all menus containing a salad or vegetarian item (58).

Of those not currently using nutrition or health claims labeling, 22% (n=19) reported prior experience using nutrition or health claims labeling. The primary reasons cited for discontinuing use of nutrition labeling were lack of customer interest and the new FDA regulations. In general, respondents opposed additional regulatory control over

their operations. Some respondents believed avoidance of the new FDA regulations by removing their nutrition claims was the best solution to bypass further government regulations.

The remainder of this section will focus on the nutrition labeling beliefs, attitudes and perceptions of Oregon restaurateurs based on their usage of nutrition claims. The comments of respondents were of particular interest when examined with their nutrition labeling practices in mind.

5.5.1 Characteristics Important in Menu Items Labeled Healthy

"Healthy" as defined under the NLEA, means a main dish must be low fat, low in saturated fat, contain 600mg or less of sodium per serving and 90mg or less of cholesterol per serving. In addition a main dish must contain 10 percent of the Daily Value for two nutrients. A meal must contain 10 percent of the Daily Value for three nutrients. The FDA has also defined specific criteria to delineate a main dish from a meal. A main dish must weigh at least 6 ounces per serving, contain at least 40 grams each of a minimum of two separate foods from a minimum of two defined food groups and be represented as a main dish. A meal must weigh at least 10 ounces per serving, contain at least 40 grams each of a minimum of three separate foods from a minimum of two defined food groups and be marketed as a breakfast, lunch, dinner or meal. Defined food groups are as follows: (1) bread, cereal, rice and pasta, (2) fruit and vegetable, (3) milk, yogurt, and cheese, and (4) meat, poultry, fish, dry beans, eggs and nuts (2).

After determining the important characteristics of healthy food as defined by regulatory agencies, the researchers decided to investigate the restaurateur's perspective. Overall, restaurateurs believed "healthy" food should be low in calories, low in sodium, a good source of vitamins/minerals, low in fat and saturated fat, low in cholesterol, and all natural/fresh. The majority of respondents did not believe a menu item labeled healthy should be high in fiber. Low in fat and saturated fat was the most frequently agreed on characteristic of healthy menu items. While a slight majority viewed calories as an important consideration in a menu item labeled healthy, a large number did not consider calorie content an important factor in items labeled healthy. This coincides with the omission of any caloric restriction in the FDA regulations on the use of the term "healthy." With the number of overweight Americans continuing to increase, it is surprising a calorie limit was not included with the requirements for healthy menu items. Despite the increase in weight, consumption of fat has decreased, leading researchers to conclude that Americans have increased their calorie consumption (59). Omission of calorie content for items labeled "healthy" by the FDA along with a much lower selection rate by restaurateurs as an important characteristic of menu items labeled healthy showed Americans have accepted the role of fat in health promotion but pay less attention to the impact of total calories.

Large portion sizes of menu items contribute to our expanding waistlines. Restaurant portions are notoriously large. Customer complaints when portions were reduced was a reason cited by one restaurateur for not using nutrition labeling. Very few restaurateurs indicated they have decreased portion sizes, yet 45% used nutrition

labeling. These results highlight the importance of paying attention to the total calorie content and portion sizes of even "healthy" menu items.

Although three of the ten authorized health claims refer specifically to fiber, it was not considered an important characteristic of healthy menu items by the majority of respondents. Based on this information, researchers concluded restaurateurs understand the importance of fat, saturated fat, cholesterol, sodium and vitamin/mineral content to healthier menu items, but underappreciated the role of both caloric intake and fiber content. More restaurateurs believed healthy food should be "all natural/fresh" than "low in calories" or "high in fiber."

Restaurateurs using nutrition labeling on their menus made more comments regarding the important characteristics of menu items labeled "healthy" than those not using nutrition labeling. "Other" characteristics restaurateurs believed were important for menu items labeled healthy included the following: sugar free; no msg; no chemicals, additives, or coloring; no preservatives; prepared to order; organic/hormone free; and, home grown/vine ripened. This reflects a belief held by many restaurateurs and often the general public that fresh, organic, no chemicals added and preservative free are essential for "healthy" food. While in actuality, some of these very processes help preserve the nutritional composition and safety of our food supply. In a recent menu analysis the NRA equates fresh with healthy (55). Vegetarian items were often synonymous with "healthy" fare in the responses of several restaurateurs. Taste was mentioned as an important characteristic of menu items labeled healthy by one respondent and is supported by the literature (18) and researchers. However, this research identified a need

to emphasize the guidelines behind the new FDA regulations and foster better understanding of the regulations by restaurateurs if Oregonians are to be making better choices when dining out.

As illustrated in Table 4.6 (page 58), no patterns are evident when the responses were divided by respondent labeling practices. Although, significantly more restaurateurs with prior labeling experience believed calories were important in menu items labeled as healthy than restaurateurs with no experience using nutrition labeling. When compared with the FDA definition for "healthy," stated earlier, both labelers (past and present) and non labelers agreed with the majority of the nutritional components delineated in the definition. High in fiber was the only characteristic the majority did not agree should be included in the FDA's definition for menu "healthy" menu item.

Restaurateurs expressed much concern with the freshness and natural characteristics of the foods they served. The majority of comments made by respondents dealt with issues related to food additives, preservatives, wholesomeness and added sugars.

5.5.2 Nutrition Labeling Obstacles

As stated earlier, 55% of respondents did not use nutrition or health claims labeling on their menus. Of the 87 respondents not currently using nutrition labeling, 19 reported making menu nutrition claims in the past (22%). These respondents were analyzed separately to ascertain their chief reasons for discontinuation of nutrition

labeling. Researchers were particularly interested in comparing the responses of those with past experience using nutrition labeling with those who had never made any menu claims.

5.5.2.1 Reasons for Discontinuing Use of Nutrition Labeling

As illustrated in Appendix Table A (page 131), the most important factors influencing a restaurateur's decision not to use nutrition labeling were lack of customer interest in "healthy" items and "other." For the most part, reasons cited under the "other" category dealt with factors relating to regulatory constraints, lack of customer interest, menu factors and customer responsibility for their own eating habits. Remarks are divided (see Appendix Table A) based on comment category and restaurateur's experience with nutrition labeling.

Of those restaurateurs never using nutrition labeling, the majority indicated their own open-ended response was the most important factor in their decision not to use nutrition labeling. The bulk of the remaining respondents stated lack of customer interest as the most important reason for not using nutrition labeling.

In contrast to findings from a study of the obstacles to nutrition labeling of larger corporations (30), several of the restaurateurs chose not to use nutrition labeling because they believed the customer, not the restaurant, was responsible for their dietary intake.

Comments from restaurateurs who had discontinued using nutrition labeling on their menus cited the new FDA regulations and lack of customer interest as the primary

reasons for taking labels off their menus. As with the restaurateurs who had never used nutrition labeling, the majority of respondents reported lack of customer interest (n=9, 50%) and their own reasons (n=6, 33%) as the primary rationale for removing nutrition labeling from their menus. The bulk of the reasons stated in the comment section dealt with the new FDA regulations and lack of customer interest.

5.5.2.2 Impact of FDA Regulations

Unlike restaurateurs who had never used nutrition labeling, those who reported discontinuing labeling (n=19) were also more likely to report that the FDA regulations made an impact on their operations. When asked if they had quit using nutrition labeling due to the new FDA regulations the majority of respondents with past labeling experience agreed with the statement, 28% disagreed, and 28% were unsure. Specific comments are illustrated in Appendix Table B, page 133.

Only one of the 7 comments (refer to Appendix Table B) reflected a positive response to the new labeling regulations. This same respondent reported lack of customer interest as the primary reason for discontinuing menu labeling, rather than the new FDA regulations. In contrast to the survey wide rate of 77%, 17 of the 19 restaurants (89%) that removed their nutrition labels had heard about the new regulations. As evidenced by the high awareness rate among restaurateurs who removed nutrition labels from their menus, decreasing numbers of restaurateurs may choose to provide nutrition labeling as they become more aware and familiar with the new FDA

regulations. The new regulations have resulted in some restaurateurs discontinuing nutrition labeling, however, the accuracy of their past claims remains unknown. Whether consumers gain or lose a benefit with the removal of these nutrition labels also remains unknown.

An overwhelming majority of restaurateurs not using nutrition labeling have NOT felt an impact from the new FDA regulations. However, as one respondent stated, the decision to use nutrition labeling may be affected by the FDA regulations in the future. Overregulation and customer responsibility for their own intake were mentioned by the only restaurateur who had never used labeling and was impacted by the new regulations.

Several respondents indicated that although they do not use nutrition labeling, they offer many items they consider healthy. Based on responses concerning what restaurateurs believed were important characteristics of healthy items, researchers would advise the customer to be wary when dining out. Even healthier restaurant meals can easily contain 500 to 1,000 calories (13).

5.5.3 Benefits of Using Nutrition Labeling

The majority of survey respondents felt reaching a wider variety of customers was a benefit of nutrition labeling and most restaurateurs also felt nutrition labeling would create a marketing advantage over competitors. Despite the vast majority of respondents claiming they personally believed in "healthful" dining, many of the comments made by

restaurateurs not using nutrition labeling were negative toward any regulations. Fewer comments were made by restaurateurs using nutrition labeling.

Appendix Table C (page 134) illustrates comments regarding the possible benefits of using nutrition labeling. Overall, more labelers believed reaching a wider variety of customers, increasing sales/marketing advantage and meeting customer needs were benefits of using nutrition labeling. The majority of both labelers and non-labelers held personal beliefs on the importance of healthful dining and were interested in nutrition labeling. Developers of nutritional interventions designed for restaurants benefit from knowing what motivates the restaurateur to promote "healthy" food in their operations. Most restaurateurs believed there were some benefits to providing nutrition information to their customers. Researchers and other health professionals need to reinforce and build on these beliefs.

5.5.4 Preferred Sources for Nutrition Labeling Advice

As health professionals, the researchers were interested in what kind of professional restaurateurs would consult for advice should they decide to initiate nutrition or health claims labeling on their menus. The majority of restaurateurs said they would use the National or the Oregon Restaurant Association for labeling advice, followed by the American Heart Association (AHA) or other health agency, the American Dietetic Association, the Food and Drug Administration and chefs.

The NRA staff dietitian would be an excellent source of advice. The American

Heart Association would also be an appropriate source for information but not necessarily the best resource for nutrition information. The American Dietetic Association did not necessarily represent the nutrition professional to all respondents as evidenced by it being selected less frequently than the NRA and AHA.

Although the least preferred source of nutrition labeling advice, almost half of the respondents believed their chefs would be a good source of information and guidance. This belief is contrary to the study results reported by Reichler et al (32). Based on the results of their research, Reichler et al. concluded that training emphasis for chefs was needed in recipe modifications for preparation of healthy menu items. Chefs did not rate highly in their nutrition knowledge and use of chefs for labeling advice is not likely to increase the accuracy of nutrition labeling in restaurants.

Ten percent of respondents said they would use a resource not listed as a question variable. Interestingly, the alternate resources cited most frequently were nutrition consultants, nutritionists, dietetic pamphlets, nutrition books, and college nutrition classes. Results of this research indicated dietitians need to promote themselves as the nutrition expert to restaurateurs.

5.6 FDA Regulations

Although the bulk of respondents had heard about the new FDA regulations from the National or Oregon Restaurant Association or read about the regulations in a newspaper or magazine article, a surprising number of restaurateurs had not heard about

the new FDA regulations prior to receiving the questionnaire. Twenty eight percent of the restaurateurs using nutrition labeling were unaware of the new FDA regulations and 22% of those respondents who had never used nutrition labeling were unaware of the existence of new FDA regulations. Restaurateurs who had discontinued using nutrition labeling had the highest awareness rate at 89%, only 11% of these respondents were unaware of the new FDA regulations.

Although the majority of restaurateurs were aware of the new FDA regulations, understanding of the new regulations was minimal. Because of the confusing nature of nutrition information and the new regulations, researchers were not surprised that few restaurateurs responded correctly to the statements measuring understanding. The low percentage of restaurateurs rating their knowledge of the new FDA regulations as high also corresponded with the high percentage of incorrect answers. None of the 13% of restaurateurs that believed they knew a lot about the regulations answered both of the questions designed to measure understanding correctly.

The majority of survey respondents expressed an interest in learning more about making nutrition claims on their menus. When the numbers were analyzed based on nutrition labeling practices, the restaurateurs currently using nutrition claims were most interested in learning more about making those claims. As expected, restaurateurs who had never used nutrition labeling were less interested than those who were using nutrition labeling. However, they were more interested in nutrition labeling than the researchers assumed. Interest level was similar among restaurateurs who had discontinued labeling.

Despite the low initial response rate to the survey, restaurateurs expressed an interest in learning more about making nutrition claims on their menus. Health professionals, particularly dietitians, should capitalize on restaurateurs current interest in this issue by working in partnership with local restaurants to improve the quality and quantity of nutrition and health claims menu labeling.

5.7 Comments on FDA Regulations and Nutrition Labeling

A surprising number of respondents commented on the new FDA regulations and nutrition labeling, indicating an interest in this timely topic. Remarks are grouped by the respondents usage of nutrition labeling as illustrated in Appendix Table D, page 135.

As expected, comments made by restaurateurs currently using nutrition labeling were more positive. Although not all of the comments made by restaurateurs using nutrition labeling were positive. The comments made by restaurateurs no longer making nutrition claims illustrated the impact the new FDA regulations had on their decision to remove menu claims. One restaurateur requested a "user friendly" comprehensive summary to the do's and don'ts of nutrition labeling. The NRA guide (2) fits that description. However, not all restaurateurs were aware of this guide. Restaurateurs who have never used nutrition or health claims on their menus had the most to say about the subject, both positive and negative, this is also illustrated in Appendix Table D.

Many of the respondents indicated that nutrition and "healthy" eating was the customer's, not the restaurants responsibility as shown in Appendix Table E, page 137.

This last set of comments illustrated the belief held by many restaurateurs, particularly those not using nutrition labeling, that customers were responsible for what they chose to eat. When designing nutrition intervention efforts aimed at restaurateurs, health professionals should consider this underlying reason for why many restaurateurs did not provide nutrition information for their healthier choices.

Other reasons such as confusion over the new FDA regulations and general dislike for government regulations also played a part in the decision not to use nutrition labeling. It cannot be assumed that all restaurateurs will be open to nutrition interventions or providing nutrition information for menu items. If health professionals stress the restaurants responsibility or civic duty to provide such information for their customers, efforts to increase nutrition labeling in restaurants is likely to be unsuccessful, particularly with restaurateurs who have never used labeling. Success is more likely if the health professional stresses the ease of accomplishing nutrition labeling and the restaurateurs potential benefits associated with using nutrition labeling.

6. CONCLUSIONS

As of May 1997, restaurants making nutrition or health claims on their menus are no longer exempt from the nutrition labeling rules detailed in the 1990 Nutrition Labeling and Education Act (NLEA). While provision of nutritional information on restaurant menus is not mandatory, those restaurants choosing to make claims must have a "reasonable basis" for believing their claims are valid. Substantiation of claims made on menus must be available at the request of both customers and regulatory officials (2).

The purpose of this research was to explore the restauranteur's response to the new FDA menu nutrition labeling regulations on a local and statewide basis. Study methodology included use of both a focus group and a mail survey.

The need for improvements in dietary intake is evidenced by the increasing number of overweight Americans. Many chronic diseases in this country are diet related (10, 11). As Americans continue to eat a substantial number of their meals away from home, provision of nutrition information in foodservice operations becomes an important area of study. However, minimal research on the nutrition labeling practices of restaurateurs and their response to the FDA regulations has been available. This research was conducted in an effort to fill that void.

Exploration of the nutrition labeling practices of restaurateurs approximately one year after application of the new FDA menu labeling regulations, contributes significantly to the literature. By studying restaurateurs experiences with labeling, beliefs about nutrition labeling, and impact of the new FDA regulations researchers were

able to augment the minimal data previously available. Literature review revealed few research studies dealing with the restaurateur's perspective on nutrition labeling. Health promotion efforts and outcomes were the primary focus of the bulk of the restaurant nutrition interventions reported in the literature.

Input from a focus group played a critical role in the development of the survey instrument. Information from the group gave the researchers a more targeted questionnaire by providing insights to the restaurateur's perspective on nutrition labeling.

The findings from the statewide survey regarding the three null hypotheses of interest to the researchers are illustrated in Table 4.3, page 51. There was no evidence of a relationship between usage of nutrition or health claims on restaurant menus in Oregon and the restauranteur's knowledge of the new FDA regulations. Restaurateurs using nutrition claims or not using claims on their menus had no difference in knowledge or understanding of the federal regulations. There was evidence of a relationship between the restaurateur's interest in making nutrition claims and their usage of nutrition labeling.

Testing for evidence of an association between understanding and use of claims was not possible. Chi square testing on this variable was not possible due to lack of correct responses to statements measuring understanding of the regulations. This result indicated that training restaurateurs on the essentials of nutrition and health claims menu labeling was needed, if, as suspected, these respondents were representative of all Oregon restaurateurs.

Evidence from this study did not support a relationship between the decision to use nutrition or health claims labeling and the restaurateur's (1) geographic location,

(2) ownership type, (3) size, or (4) sales. However, strong evidence of a relationship between nutrition or health claims labeling usage and the restaurateur's industry segment existed. Casual/family dining restaurants were more likely to provide labeling on their menus. One could speculate that this may be due to increased customer demand and competition between restaurants in this industry segment for the casual diner.

Strong evidence also supported a relationship between a restaurateur's decision to use nutrition or health claims and (1) desire to reach a wider variety of customers, (2) concern with increasing sales, (3) customer interest, and (4) personal beliefs about nutrition. More restaurateurs using nutrition labeling believed their customers were interested in healthful dining than restaurateurs not using nutrition labeling.. This corresponded with the belief held by 49% of restaurateurs not using labeling that their customers were not interested in healthy fare when dining out. Developers of nutritional interventions designed for restaurateurs profit from knowing what motivated the restaurateur to promote "healthy" food in their operation.

The statewide survey revealed that 45% of Oregon restaurateurs currently used nutrition labeling. Of the 55% of Oregon restaurateurs not currently using nutrition labeling, 22% reported using labeling in the past. Those respondents reporting removal of nutrition labels from their menus indicated lack of customer interest and the new FDA regulations were the primary factors involved in their decision. This confirms the concern of some critics of the new regulation that the existence of the FDA regulations would inhibit labeling in restaurants.

Geographical location of respondents closely resembled the geographical makeup of the Oregon Restaurant Association membership list. The average respondent independently owned a casual/family dining establishment located in the Portland metro area with an average of 100 to 199 customers per day and gross sales for 1997 of between a half million dollars and one million dollars.

Overall, the majority of restaurateurs believed menu items labeled "healthy" should be low in calories, low in sodium, a good source of vitamins/minerals, low in fat/saturated fat, low in cholesterol, and all natural/fresh. "High in fiber" was the only characteristic not considered important by the majority of respondents for a menu item labeled "healthy."

Despite the belief of restaurateurs that there were benefits associated with nutrition labeling, the majority of restaurateurs also believed their customers were capable of making healthy choices without the provision of nutrition labels on their menus. Efforts aimed at educating consumers, rather than regulating restaurants were advocatedby several respondents. Both labelers and non-labelers personally believed healthful dining is important and expressed interest in learning more about labeling.

Restaurateurs with experience using nutrition labeling rated use of a recipe with the nutritional breakdown or analysis the preferred method of substantiating a menu claim. Use of a nutrition label from the package of a prepared item was another popular method of substantiation. Written calculations, nutrient tables and computerized recipe printouts were less popular forms of substantiating claims. Restaurateur responses indicated the simplest form of substantiation would be used most frequently.

Professional restaurant associations and health agencies, such as the American Heart Association, were selected as preferred sources for nutrition labeling advice more frequently than the American Dietetic Association. Dietitians should promote their expertise in analysis of the nutritional content of restaurant menus and provide labeling recommendations to restaurateurs at a price they are willing to pay. Voluntary nutrition labeling will increase if restaurateurs are able to provide the service quickly and inexpensively with minimal effort. However, if dietitians approach restaurateurs with the attitude that it is the restaurant's responsibility to provide nutrition information on their menu, chances for success shrink. Many restaurateurs made specific comments assigning the responsibility for nutritional intake to the customer. Approaching the restaurateur based on their perceived benefits of providing nutrition information may meet with greater success.

Dietitians and others need to increase promotional efforts aimed at restaurateurs. Restaurateurs need easy, accurate methods to implement labeling; computerized systems and software were not the methods of choice among this group. Dietitians may appeal to the restaurateur's interest in increasing sales and customer base as a financial incentive to motivate use of the dietitian's skills.

Although most restaurateurs were aware of the new FDA regulations, a surprising number of the respondents who currently used nutrition labeling were unaware of the new regulations. Restaurateurs who had discontinued using nutrition labeling reported the greatest awareness of the new FDA regulations. This reinforced the criticism that use of nutrition labeling would eventually decrease due to the FDA regulations.

Understanding of the new regulations was extremely poor. Open-ended items and "other" comments made by respondents overwhelmingly indicated that there was much confusion and inaccuracy relative to nutrition information on menus. The vegetarian dishes and salads considered health-conscious fare by many restaurateurs do not necessarily qualify as "healthy" dishes under the new FDA regulations. Dietitians are in a unique position to work with restaurateurs, increasing the quality and quantity of restaurant menus highlighting nutritious, flavorful food. Many restaurateurs consider items that are organic, chemical free, or fresh as healthful, but are less clear about the importance of calorie content, fiber and other nutrients. By meeting the challenges associated with provision of nutrition information in restaurants, restaurateurs who use nutrition labeling offer a marketable service to their customers.

6.1 Summary

Nutrition labeling benefits both the restaurateur and the consumer. The restaurateur benefits by creating a marketing advantage over competitors, increasing business and providing a service for customers interested in healthy eating. The customer benefits from a reduction in the guesswork involved in making healthy choices when dining out. Description of a menu item such as asparagus, served with Hollandaise sauce may sound healthy to the general public, however, when prepared with vegetable oil, one serving contains approximately 265 calories and 26 grams of fat (57).

For the general population, dining out is not limited to celebrations on special occasions. Decreases in the incidence of overweight Americans and decreases in the incidence of diet related diseases such as heart disease, cancer, and diabetes are not likely without attention to lifestyle modifications. Increasing the availability and marketing of healthier options in foodservice operations is one of the environmental changes needed to facilitate adaptation of healthier lifestyles. The researchers agree with Bronner's (60) call to action for members of the American Dietetic Association when she challenged dietitians to become more involved in working towards the provision of more and better nutrition information at the point of purchase.

This research provided data on the current nutrition labeling practices of Oregon restaurateurs following application of FDA regulations intended to protect the consumer from misleading and/or dishonest claims and to foster selection of nutritious choices. Study results, however, did not statistically support or disprove the belief by some critics that the new regulations would discourage restaurateurs from making any type of nutrition or health claim.

However, there was some suggestion that the regulations have discouraged labeling. In general, with the exception of those restaurateurs who removed their nutrition labels, this study showed the perceived impact of the regulations by respondents was minimal. Of those restaurateurs impacted by the regulation, many discontinued use of nutrition labeling. Removal of nutrition labels was due primarily to the new FDA regulations, perceived lack of customer interest and the inability to support the nutrition claims. The number of designations for healthy menu items removed unnecessarily as a

knee jerk reaction to the regulations remains unknown. Future studies may reveal a greater impact as more restaurateurs become aware of the guidelines.

6.2 Recommendations for Future Research

Many opportunities for future research exist in the area of nutrition labeling on restaurant menus. Prior to this research effort, the only published research available dealt with obstacles to nutrition labeling in large foodservice operations (30) and an abstract that covered the food preparation methods used and nutritional information provided by Nebraska restaurants (29). There was no previous research reporting the affect of the new FDA regulations on restaurateurs nutrient-content and health claims labeling practices. This research reported introductory data on the nutrition labeling practices of restaurateurs following implementation of the NLEA to restaurant menus and suggested many avenues for future research on this timely topic.

While many questions were answered by this research, results were limited to Oregon restaurants. A nationwide survey to determine nutrition labeling practices following implementation of the new FDA regulations would be a worthwhile, though costly, endeavor. Information from a nationwide survey would allow broader generalization of results. Comparison of nutrition labeling practices prior to the new FDA regulations to current practices on a larger scale would also yield useful data.

Studying the issue of nutrition labeling on restaurant menus from the customers perspective is another possibility for future research. What does the consumer expect

from menu items labeled healthy? Does the customers perspective match the restaurateurs? What healthy items are popular with customers? Site specific research indicates healthier fare promoted by both nutritional value and taste were better sellers than healthier fare promoted by nutritional value alone (18). However, on a larger scale, many restaurateurs believe that despite customer expressed interest in nutrition, menu items labeled "healthy" would not sell. Long term tracking of sales of healthier, appealing menu items labeled in compliance with the new FDA standards would prove or disprove the restaurateurs belief that few customers pay attention to nutrition when dining out.

Based on focus group results, researchers suspect many operations may unknowingly use nutrition labeling on their menus. Research analyzing content of restaurant menus for nutrition or health claims, though time consuming, would provide further insight on nutrition labeling practices. Comparison of study participant's responses and beliefs to actual menu content would generate fascinating results.

Another interesting avenue for research is to focus solely on restaurateurs understanding of the new FDA regulations. The survey instrument used in this research contained only three statements aimed at assessing understanding of the regulations. An instrument designed to assess understanding would be a worthwhile endeavor, particularly if undertaken several years following application of the NLEA to restaurant menus. Researchers could also identify effective tools and resources for increasing labeling frequency and accuracy.

An additional opportunity for further research is to focus on the FDA's response to their new regulations on nutrition and health claims labeling. Although there is consensus that the FDA does not have the resources to enforce the regulations on a national level, are different states enforcing the regulations? How are the regulations being enforced? Various agencies for enforcement of the new regulations are mentioned in the literature, to include local law enforcement agencies, health departments and offices of the FDA (25, 50). Research examining the enforcement and evolution of the new regulations is needed. What, if any, are the future effects of regulations that are not enforced?

There is no doubt that the area of nutrition and health claims labeling on restaurant menus will spawn future research. As the number and frequency of Americans eating out continues to rise, research efforts aimed at helping restaurateurs market healthy choices and helping consumers make healthful choices become increasing significant.

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APPENDICES

Appendix A Partial Transcript of Focus Group Discussion

Focus Group Questions

1. What do you consider a healthy menu item?

"It's hard to keep up with it all because things change so fast."
"Some people feel that vegetarian is the only healthy way to go."
"Food has to be fresh, raw vegetables are good. You don't want to overcook the food and have it as healthy as you can. As fresh, whole and unprocessed as you can make it. Not a lot of fat or grease is also important. Baked is healthier than fried."
"What one person sees as a healthy dish another might not think is at all. It's perception - some people perceive vegetarian as healthy. We have a lot of dishes that have cheese in them and I don't think it's that healthy to have a lot of dairy products - high fat."
"People may think our Chinese food is healthy but we have a lot of deep fried items too. People see some restaurants as healthy and some as not healthy. It's perception."
"And I see a trend - there'll be a period of time where nobody wants whipped cream on things, and then maybe a year later that's gone and everybody wants whipped cream."
"People start to eat a little heartier in the winter time. Spring more fresh vegetables and fruit are available. And people say I'll have that."

2. Are your customers interested in "healthy" food?

"I sure think they are. It's just the type groups they are - the football recruits could care less. They come in and have a filet mignon, a side lobster and a side of prime rib."
"Carbohydrates, athletes love carbohydrates."
"Yeah they do, even though those people are big they're tremendous athletes. It varies. What do you think? I think it's more and more menu - I look at local and commercial menus intensely and more and more items are labeled healthy."
"Well, I know too that there weren't many restaurants around town I could eat at ten years ago because nobody had vegetarian items. Now there are, so people must be asking for it. People are looking for choices".
So customers are interested?
"Some of them. I know even me, when I walk into a restaurant and see the heart safe slogan, where they have the little heart, and it catches your eye, and you know you should be interested in heart safe."

Appendix A, Continued

"It varies. People see something that says healthy or signifies healthy they look at it. We don't get a lot of requests like that. But everyday I try to run one low fat soup out of the two. Or vegetarian and one of the two catch of the day entrees is usually low fat. Yesterday it was "Baked salmon with an orange cranberry relish". Something that tastes good and is still low fat."
"Can be flavorful not fried. If you don't prepare it and present it properly people aren't going to pay what we charge. Something a little more special, a little more time into it. Whereas you can get away with just smothering salmon with hollandaise and crab and it sells well - in order to sell something healthier it's much harder. You have to really spend some time to put the colors and texture together to make it look good. Otherwise people are going to go up there & complain. It's what they're there for."

3. Do you have "healthy" food labeled on your menu?

"We took it off our latest menu because of the new FDA regs. The time and money we'd have to spend and having consistency issues. The concern is if we're going to label something healthy how consistently can we make sure it is. That's the big thing that gets us all. No matter how hard we try, unless we're in the kitchen ourselves doing it every time."
You have different people doing the cooking?
"Yeah, it's human error."
"We took the hearts off and instead we box our healthier item, but don't label it as such. Like our red snapper to bring attention to it because it's probably our healthiest item."
You box it but you don't make a claim?
"No we don't make a claim. We had hearts on the menu but as a conservative owner and being unsure about the item's consistency we took them off the menu. Is it always going to be the same? Can we prove it?"
So now you don't have your healthy labels?
"We don't have any healthy labels on the menu. I think we're all aware if we make a claim we have to be able to back it up. But I'm not afraid to call a vegetarian minestrone soup fat free if it has pasta in it or if something I make is a healthy entree. If I make it that day and it is on my special sheet - because I can back it up myself. I know what I put in it. To do it on the menu is different."

Appendix A, Continued

4. Past/present experience with nutrition labeling in restaurants....
Do you have a lot of items that are healthy?

"About 10 are listed as heart healthy. And I haven't pulled them off. Those are ones they did years ago at the American Heart Association. I sent it to them and they went through the whole menu and OK'd them to have that label on the menu so I have that label on the menu. I haven't take them off. I go back and forth. Are they going to send someone out to take a look at the menu."
"All they have to have is come in one time and raise Cain with the guy. Then you're stuck."
"They don't have a task force to go out and do this."
"Were you saying the new AHA guidelines are different? That you have to have ingredients listed?"
"No, you have to have a recipe available, with grams of fat, sodium, calories...You have to provide a breakdown of menu items labeled just like you would see at the store."

5. What are some reasons why restaurants might not have healthy food on their menus?

"I don't know. I don't do it just because of that. I mean I started to do it, we had some, and I took it off, because I can point out to guests what is a healthy item. But I'm not getting in to the thing where I'm going to guarantee that this item is going to be. I don't want to do that because I don't want to have to back up what I say. It's too much of a nuisance. We just don't."
Does your menu stay the same from day to day?
"Our main menu does, we have 5-6 specials everyday which we rotate."
"Yes."
"No, Italian menu changes the Chinese doesn't."

6. Are you aware of the new FDA regulations for health/nutrition claims on menus?

"I don't know the exact details of it but I know there are fairly specific new regs. I read about it in a restaurant business article."
How are restaurant owners going to know about the new regs? Does the FDA send out a memo?
"I don't think if you didn't read about them in a magazine that you would know. I haven't heard anything from anybody. I saw it in a newspaper when it first came out. And then we just kind of followed along with it. Unless you have access to restaurant business related magazines/literature, I don't think it's readily known."
Don't most restauranteurs read that kind of stuff?
"I would assume so. I do. I don't know how many. You've got some of the better restaurants here. You know the bigger ones. But some of the little mom and pops I bet they don't even see that stuff."
"I would tend to think you're right. I think maybe the top 10-15 would be aware but not the other 45. I don't read those cover to cover. I bet the mainstream restaurants know but not the littler cafes. They come and go so quickly. They don't know and don't care."

7. How do you feel about these regs? Impact?

"I haven't felt any impact one way or another. Other than the fact that we took the hearts off the menu - two to three years ago because the American Heart Association said you had to know the fat content."
"Nothing so far. I don't know if there is any sense in doing anything special yet. I don't think Oregon is that type of state. Unless it's regulated locally."
"Is it regulated by the health department?"
"Not yet. Peter said unless it is. That's what they said they might do. Until they start requesting everyone fax a copy of their menu and then come back and say you've claimed this and this and this now prove it. I don't see anybody being impacted by it, really. I just hate to see another government regulation. But by the same token if you're somebody that's allergic to something or you're diabetic I see the good in it. But I don't think any of us make anyone sick by saying something was healthy. We do the best we can. When it comes down to the nitty gritty I won't do it as long as I'm in business. I'm getting to an age now where I'm not going to worry about those things. It's just a pain to me but I can see it from the customers point of view."

Appendix A, Continued

8. Do you know how the FDA defines "healthy?"

"Less than a 1,000 mg of salt. I don't know."
Let me read the FDA definition for "healthy" to you.
When it comes to 10%, I can figure protein, the calcium, A & C, but the fiber? Could be tough."
"So what do they consider low fat? Low saturated fat?"
Low is 3 grams or less per reference amount. Saturated fat is one gram.
"My curiosity would be if I have something that's healthy on the fresh sheet, not on the menu, would I have to back it up?"
"If you're putting it out to the public on a menu I'd say you'd have to back it up."
"And when it comes to backing it up, do I need an analysis from the OSU food lab?"
No, it could be as simple as you writing down the ingredients if you have a book with nutrition information.
"So, I would have to go figure it out for the customer and let them know. That's required, if they want to look at it. I can't just tell what's in it and it's all healthy stuff. I'd have to break it down."
"Do you have to have it available or bring it?"
Available.
"What if they demand to look at it?"
It can be under the cash register or in the office.
"Do I have to calculate it out for the customer? If I have the recipe available, do I have to calculate it out for the customer?"
You have to do that.
"You'd have to have the information available for the portion size you're serving. Calculated for that many ounces."

General Comments

"Nutrition labeling is different for big corporations. They already have the researcher. They may even have a dietitian full-time. Full time they measure everything. Consistent menu, consistent items and portions."
I'm trying to look at the independent, smaller rest. Not the top 400.
"The smaller place might shy away from nutrition labeling. There's not time. I don't have an executive position who would have time to do that or anyone on my staff with

the expertise or time to do the analysis. We're going full force all day. I hardly have time to fill out the fresh sheet. Something's always happening."
"Are the new regulations meant to be positive?"
The regulations are meant to be positive from the consumer point of view, making nutrition labeling more consistent for customers.
"I don't think the regulations are bad..."
But there's no research on how restaurants are responding.
"Have you heard anything from customers?"
"All I hear is can you do my wok chicken without oil, dressing on the side. That's the kind of stuff. People that have dietary restrictions let the server know and she lets the kitchen know and we take care of them."
But as far as the FDA regulations, you haven't heard anything?
"No, I haven't heard anything. I haven't heard any customer come in and ask how much fat is in your cashew chicken salad."
You haven't gotten anything from the two groups that pushed for this change either.

General Recommendations

*May want to add to the survey "How will you handle it if someone were to ask for the nutrition information on an item labeled healthy?"
*Consensus among participants was that they would be interested in conducting a customer survey in their restaurants to gain their customers opinions/wishes/desires on this issue to include are we doing enough? What's healthy? What are the customers expectations?
*Time to complete was approximately five to seven minutes for everyone.

Survey Instrument Feedback

1. Overall clarity? Do you think we show bias?

"I think you're being objective, I don't see any bias"
"I think you did a good job putting it together."

Appendix A, Continued

Overall opinion was that the survey was easy to complete and not too lengthy. One person did have some trouble with the FDA knowledge questions and did not rank the answers on number three of the initial survey instrument.

2. How would you respond if I called you and asked the survey questions over the phone?

Seemed to believe most restaurateurs would take the time if I explained I'm a student doing a research project and would only take about 10 minutes of their time. They also reported they receive a lot of phone calls from different companies which can be annoying and sometimes the surveys are too lengthy. If I call, it will be important to stress my student not for profit status and conduct the survey as quickly as possible. Preferred morning calls.

3. Can I use your names as focus group members?

Yes.

4. Cover letter content?

"Cover letter is good. I'd be more inclined to spend a few minutes to fill this out vs. Something from a corporation."

Appendix B Statewide Survey Instrument

SURVEY OF OREGON RESTAURANTS

1. "Healthy" has different meanings to different people. Please indicate whether or not you consider each of the following characteristics important in a menu item labeled "healthy". *(Circle one number for each characteristic listed)*

	Important? YES	NO
a. Low in calories	1	2
b. Low in sodium	1	2
c. High in fiber	1	2
d. A good source of vitamins/minerals	1	2
e. Low in fat/saturated fat	1	2
f. Low in cholesterol	1	2
g. All natural, fresh	1	2
h. Other (Specify________________)	1	2

2. Items thought to be a "healthy" choice are often described on a menu as low fat, dieter plate, heart healthy, lite, unsaturated oil, etc. Do you currently offer any such items on your menu? *(Circle one number)*

1 YES *(Skip to question 3)*
2 NO, I DO NOT OFFER "HEALTHY" MENU ITEMS

☞ 2a. Have you offered such items in the past? *(Circle one number)*

1 YES
2 NO

2b. Please indicate whether each of the following is a reason why you decided not to offer these items. *(Circle one number for each)*

	YES, A REASON	NO, NOT A REASON
A. Past attempts unsuccessful	1	2
B. Lack of customer interest in "healthy" items.	1	2
C. Takes too much time	1	2
D. Difficulty training employees to implement...	1	2
E. Cooks aren't always consistent	1	2
F. Loss of flexibility in changing menu	1	2
G. Not cost effective	1	2
H. Other (Specify________________)	1	2

2c. Which choice from question 2b above is the most important reason you have decided not to offer "healthy" menu choices? *(Please enter the LETTER of your response on the line below)*

________MOST IMPORTANT REASON NOT TO OFFER

☞ **IF YOU HAVE NEVER OFFERED "HEALTHY" MENU ITEMS, PLEASE SKIP TO QUESTION 7, PAGE 3.**

Appendix B. Continued

If you are currently offering "healthy" choice items **OR** if you have offered them in the past, please answer questions 3-6.

---

3. Please indicate whether or not you have used each of the following methods to offer "healthy" choices in your restaurant either currently or in the past. (*Circle the number of your response for each method*)

	Currently or In the Past? YES	NO
a. Special section of the menu	1	2
b. Special symbols for "healthy choices"	1	2
c. Wait staff mentions "healthy choices"	1	2
d. Separate menu or menu insert	1	2
e. Other (Specify______________________)	1	2

4. About how many items do you (or did you) offer as "healthy" choices on your menu? (*Please circle one number for your current menu or for any past offerings*)

	Currently or In the Past?
ONE TO FIVE	1
SIX TO TEN	2
MORE THAN TEN	3

5. Have you offered the following types of menu items as "healthy" choices either currently or in the past? (*For each, please circle one number for your current menu or for any past offerings*)

	Currently or In the Past? YES	NO
a. Entrees	1	2
b. Vegetables	1	2
c. Side dishes	1	2
d. Breakfast items	1	2
e. Other (Specify________________)	1	2

6. If you make/made a nutrition/health claim on your menu, how would/did you back up that claim? (*Circle one number for each*)

	Would Use/Have Used YES	NO
a. Recipe with nutritional breakdown/analysis	1	2
b. Book with nutrient tables	1	2
c. Computerized recipe print-out	1	2
d. Written calculation for recipe	1	2
e. Nutrition label from package, if using preprepared item	1	2
f. Other (Specify______________________)	1	2

Appendix B, Continued

The next section is for everyone

As of May of 1997, the Food and Drug Administration (FDA) requires restaurateurs to be able to back up (if asked) any health or nutrition claims made on any advertisement, including menus. The restaurateur must have a reasonable basis for believing a particular claim is valid. The support for reasonable basis can be provided in a variety of ways.

7. Prior to receiving this questionnaire, had you heard or read about any of these new FDA regulations from each of the following? (*Circle one number for each*)

	YES, I HAD	NO, I HAD NOT
a. Professional organization (National or Oregon Restaurant Assoc.)	1	2
b. Newspaper or magazine	1	2
c. Professional conference or workshop	1	2
d. Other (Specify________________________)	1	2

8. Do you agree, disagree, or are you not sure about the following statements? (*Circle one number for each statement*)

	AGREE	DISAGREE	UNSURE
a. By law, a menu item must have 50% less fat to be labeled "reduced fat"	1	2	3
b. The FDA is able to enforce the new menu labeling regs	1	2	3
c. To meet the new regulations I have decreased portion sizes.	1	2	3
d. I've had a customer request proof that a menu item labeled "healthy" meets FDA guidelines	1	2	3
e. I've quit using nutrition labeling because of the FDA regs	1	2	3
f. I know a lot about the new FDA specifications for nutrition or health claims labeling on menus	1	2	3
g. By law, the term "Lite Bite" may be used to mean smaller portion sizes if an explanation appears near the menu item(s)	1	2	3
h. I'd like to know more about making nutrition claims on menus.	1	2	3

9. What do you perceive as the benefits, if any, of offering "healthy" menu items and/or using nutrition labeling on your menu?
(*Circle one number for each*)

	Benefits of Labeling	
	YES	NO
a. Reach a wider variety of customers	1	2
b. Increase sales/Marketing advantage	1	2
c. Customers are asking for "healthy" items	1	2
d. I personally believe in "healthful" dining.	1	2
e. I don't believe there are any benefits	1	2
e. Other (Specify________________)	1	2

Appendix B, Continued

10. Have the new FDA regulations had any impact on your operation? (*Circle one number*)

1 NO
2 YES
→ 10a. How or in what way(s) have they had an impact? (*Please explain how)*

11. If you decided to make nutrition or health claims on your menu, please indicate whether or not you would use each of the following sources for help or advice?
(*Circle one number for each*)

	Would use? YES	NO
a. National or Oregon Restaurant Association................................	1	2
b. Food and Drug Administration...	1	2
c. American Dietetic Association or local hospital dietitian........	1	2
d. American Heart Association or other health agency.................	1	2
e. Chef..	1	2
f. Other (Specify________________________________)	1	2

12. What is your industry segment classification? (*Circle one number*)

1 FINE DINING
2 CASUAL/FAMILY DINING
3 LIMITED MENU (FAST FOOD)
4 DELI
5 BAR/TAVERN/LOUNGE/CLUB
6 MICRO BREWERY/BREWPUB
7 LODGING
8 OTHER (Specify____________________)

13. Is your operation a franchise, a chain or independently owned? (*Circle one number*)

1 FRANCHISE
2 CHAIN
3 INDEPENDENTLY OWNED

14. On average, how many customers do you have per day? (*Circle one number*)

1 UNDER 100
2 100 TO 199
3 200 TO 499
4 500 OR MORE

15. What were your approximate gross sales for 1997? (*Circle one number*)

1 $249,999 or less
2 $250,000 TO $499,999
3 $500,000 TO $999,999
4 $1,000,000 TO $1,999,999
5 $2,000,000 TO $2,999,999
6 $3,000,000 TO $4,999,999
7 $5,000,000 TO $9,999,999
8 $10,000,000 OR MORE

16. Do you have any comments about offering "healthy" menu items or the new FDA regulations?

Appendix C Cover Letter, Statewide Mail Survey

DEPARTMENT OF NUTRITION AND FOOD MANAGEMENT

OREGON STATE UNIVERSITY
Milam Hall 108 · Corvallis, Oregon 97331-5103
Telephone 503-737-3561

6 March 1998

Dear Owner, Manager, or Chef:

How do you feel about nutrition labeling on restaurant menus? Are you confused about the new requirements for healthy menu options?

I'm a graduate student in Nutrition and Food Management (NFM) at Oregon State University doing thesis research on the restaurateurs' point of view regarding nutrition and health claims on menus.

Enclosed is a questionnaire exploring the issue of nutrition labeling on Oregon restaurant menus. Your participation in this study is voluntary and will be confidential. You may refuse to answer any question, however, your input is crucial to a practical understanding of all sides of this issue. I urge you to take the 5 to 10 minutes needed to complete the enclosed survey. I have provided a postage paid envelope for your convenience in returning this survey to me as quickly as possible. The return envelope has an identification number for mailing purposes only.

If you would like to hear how your fellow restaurateurs feel about this issue, write "copy of results requested" on the return envelope and I'll be happy to share my survey results.

You can contact me at (541) 753-9907 if you have any questions in regards to this survey.
I appreciate you taking your valuable time to share your knowledge and experience with me and to help me complete my research. Many thanks!!

If you would be willing to share a copy of your menu, we would be interested. Just include it in the postage paid envelope with the completed survey.

Sincerely,

Kathy Hudson

Kathy Hudson
OSU Graduate Student, NFM

Mary Cluskey

Mary Cluskey
Asst. Professor, NFM

enc.

Appendix D Reminder Postcard (Front)

Appendix D. Continued (Back)

Recently, we sent you a questionnaire about nutrition labeling on Oregon restaurant menus. If you have already returned the questionnaire, please accept our sincere thanks. If you have not responded and you have some questions about the study, you may call me collect, (541) 753-9907. If by some chance you did not receive the survey or it was misplaced, please call collect, and I will get another one in the mail to you today. Thanks again.

Sincerely,

Kathy Hudson

Kathy Hudson,
OSU grad. student

Appendix E Incentive Card

50 BUCKS for FIVE Minutes

There will be a drawing to select a Winner from completed surveys. Just complete and mail in the envelope provided and you will be eligible to win 50 bucks!
Thank you for taking your valuable time!

Write "copy requested" on the return envelope if you'd like to receive a copy of the study results.
Questions? Call Kathy Hudson @ (541)753-9907

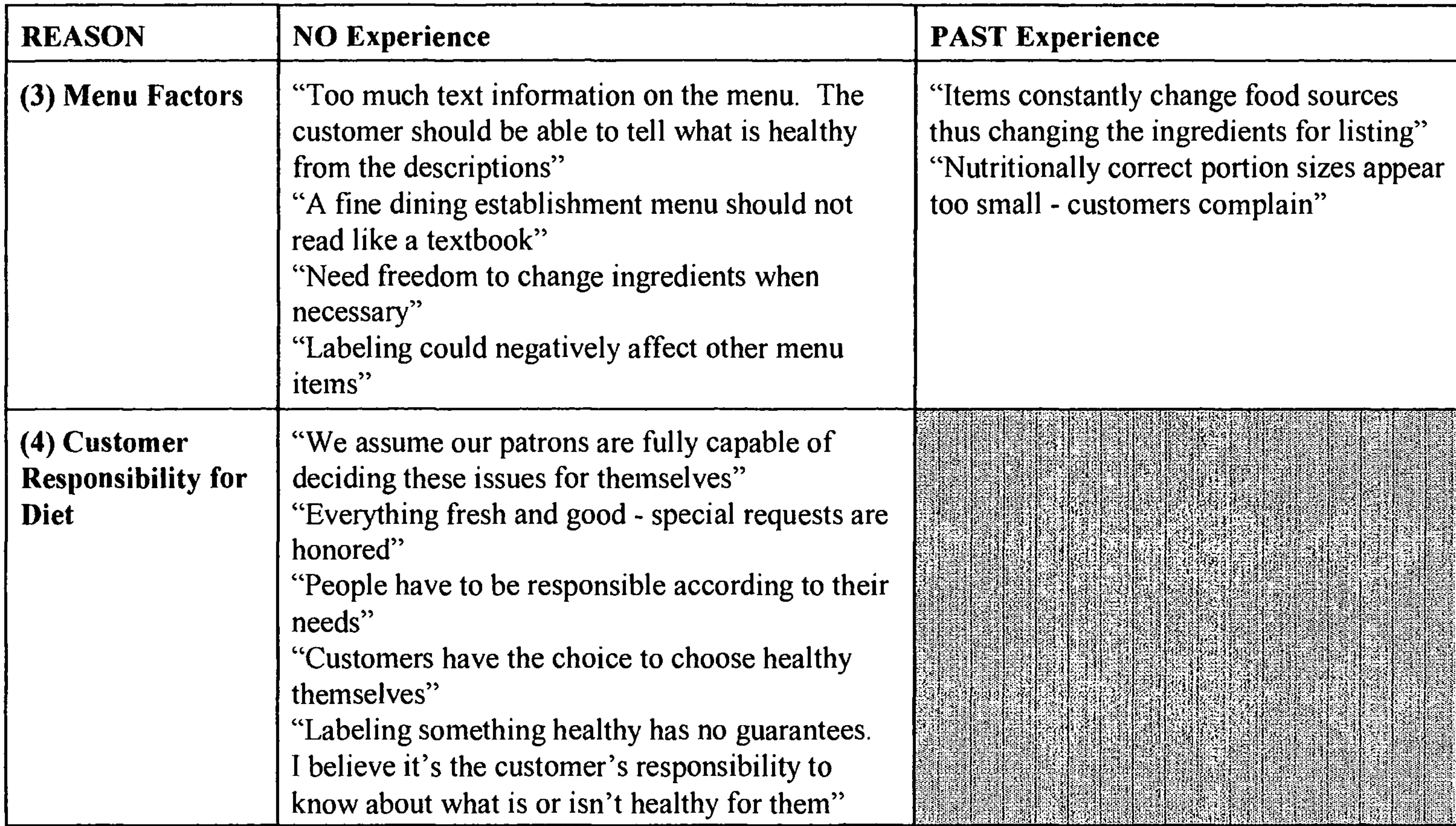
Appendix F Oregon Restaurant Association Regional Plan 1998

Oregon Restaurant Association Regions by County	
Region 1	Multnomah, Washington and Clackamas
Region 2	Marion, Polk, Linn and Benton
Region 3	Lane and Douglas
Region 4	Clatsop, Tillamook, Columbia, Yamhill and Lincoln
Region 5	Baker, Gilliam, Grant, Harney, Lake, Malheur, Morrow, Sherman, Umatilla, Union, Wallowa and Wheeler
Region 6	Hood River, Wasco, Jefferson, Deschutes and Crook
Region 7	Coos, Curry, Josephine, Jackson and Klamath

Appendix Table A Obstacles to Nutrition Labeling

REASON	NO Experience	PAST Experience
(1) FDA Regulations	"Too much red tape" "I don't know how to do the nutrient breakdown" "Menu items must meet numerous government ordained limitations to make a claim based on 'healthy' attributes. We would not encourage additional bureaucratic controls" "Too misunderstood" "Difficulty meeting FDA labeling requirements" "I think it's silly. Good food is by nature healthy. All my food is healthy" "We offer a healthier cooking style rather than individual healthy entrees"	"Items labeled didn't really qualify as healthy under the new regulations" "Uncertainty of the current and quickly changing laws" "Laws" "FDA criteria"
(2) Lack of Customer Interest	"Our customers are not really looking for that option" "Does not fit into our menu type" "99% of customers do not go out to eat healthy" "Lying to customers is not healthy" "We are not a low fat business and our customers have not asked for healthy items" "We serve fresh food, but healthy isn't the goal at the restaurant, good food is" "It's about taste" "Don't need to--everything is good" "Not needed" "Not satisfied with the quality"	"Healthy items don't sell well. High end restaurants serve people who are treating themselves" "Customers want but don't like healthy items. The customers are very picky about how they are prepared then complain and often won't pay. They leave unhappy and that's bad for business"

Appendix Table A, Continued



REASON	NO Experience	PAST Experience
(3) Menu Factors	"Too much text information on the menu. The customer should be able to tell what is healthy from the descriptions" "A fine dining establishment menu should not read like a textbook" "Need freedom to change ingredients when necessary" "Labeling could negatively affect other menu items"	"Items constantly change food sources thus changing the ingredients for listing" "Nutritionally correct portion sizes appear too small - customers complain"
(4) Customer Responsibility for Diet	"We assume our patrons are fully capable of deciding these issues for themselves" "Everything fresh and good - special requests are honored" "People have to be responsible according to their needs" "Customers have the choice to choose healthy themselves" "Labeling something healthy has no guarantees. I believe it's the customer's responsibility to know about what is or isn't healthy for them"	

Appendix Table B Impact of the New FDA Regulations

Impact of the New FDA Regulation
"Less inclined to offer healthy items - too much regulation" "I don't make any claims" "Because of the new requirements/restrictions - as a small restaurant owner it has become too time consuming to pursue the details of the new laws" **"We reviewed our menus to make sure we did not violate any claims. We also printed nutrition labels for several of our healthy products"** "We used to have a heart healthy menu that had been checked out by the local hospital. Because of the changes I dropped the menu." "I took the labels off" "Deleted labels."

*Comment in bold is the only positive remark

Appendix Table C Comments Regarding Benefits of Using Nutrition Labeling

Respondents Using Labeling	Respondents NOT Using Labeling
"One needs to offer healthy selections for those in need, however, my experience has shown the percentage of people who actually eat them is much lower. Not what the statistics show. People talk low fat but dine out differently." "All natural. Teach the customer everything in moderation. Low fat is not necessarily healthy. Learn to eat natural, fresh food not processed with chemicals." "Not sure what the benefits are - don't trust the industry"	"Helps bureaucrats justify their existence" "I don't want to deal with government red tape so I refuse to participate" "I believe that food should be healthy, but we have gone so far as to make people afraid to eat" "We make allowances for food sensitivities or dietary restrictions whenever possible. Responsibility for personal diet should be just that." "Good food is healthy" "Our customer is sophisticated to the extent that he's able to choose from our menu using personal descriptions to meet his requirements, if any" "Would like to find out more about it"

Appendix Table D General Comments Regarding Nutrition Labeling

Labeling Experience	Positive Comments	Negative Comments
Current Labelers:	"We have been making or updating our menu and adding notations to our healthier items because many of our customers are health conscious and we have stores near gyms in the area. We need to be more informed on the FDA regulations." "I would like to see information re: healthy entree recipes" "I'd like to be more informed and know where to get help" "FDA regulations are a good thing" "We've offered healthy items for almost 17 years...one advantage to being smaller is that we can be very flexible" "Great idea if FDA wants to enforce" "Can see the point but believe enforcement will be irregular" "I found I don't need a wide variety - just a few good items"	"FDA regulations discourages and creates more work for me" "FDA should stay out. People have to be taught to change their eating habits." "Take the time to eat and cook. Eat more natural foods and stay away from fast food, high fat foods and chemicals."

Appendix Table D, Continued

	Positive Comments	Negative Comments
Past Labelers:	"The healthy items are there, they're just not labeled healthy."	"Do not regulate owners' choice" "In general I feel the new regulations have discouraged us from labeling anything healthy, even the items that probably are healthy. Many customers complain that we don't offer healthy items - we have to encourage them to take a closer look." "For the smaller operations it's harder to accomplish" "Let the customer dictate what they want" "The regulations are impossible to stay current with" "If people have the brains to earn money to go out to eat, they have the brains to figure it out"
Never Labeled:	"I agree with the concept of the new regulations. I have little knowledge of their practical application. Customer is uninterested in healthy items." "The claims for healthy or lite should mean specific things" "We have few requests for healthy items" "There is a niche for it, but we fill other niches" "We like to serve good, fresh food. If someone has special dietary needs we do our best to comply, but labeling "healthy" items seems like alot of red tape."	"FDA regulations are/would be onerous and misleading" "Screw the healthy FDA regulations. I will do my very best as an individual to provide healthy nutritious food for my customers." "They don't sell well in this particular industry. In my experience they do much better in hotel restaurants." "More important for customers to be aware of the chemical components of food than its nutrition value." "Our customer drives our menu and at this time our customer is pleased with our menu." "I feel if I'm required to do this it would put me out of business. Each person should be aware of what they eat." "I think it's all bologna."

Appendix Table E Comments Regarding Responsibility for "Healthy" Eating

Experience with Use of Labels	**Comments:**
Current Labelers:	"FDA should stay out. People have to be taught to change their eating habits. More natural food. Take time to eat, cook and care. Stay away from fast food/high fat or chemicals." "Thirteen years managing and its never been an issue. People want good food."
Past Experience with Labeling:	"If people have the brains to earn money to go out to eat, they have the brains to figure it out"
Never Labeled:	"There should be more education for patrons to select on their own what is healthy for them. For the general public, well made, natural, mostly organic food is healthy." "Individual must take responsibility for themselves. Although we educate people's palates for food and wine, it is not our responsibility to test the chemical components of a meal." "The U.S. government should be improving our education system. If more consumers were educated about nutrition, healthy menu sales would dominate the market." "My clientele are above average in nutrition knowledge. We are able, with very little problem, to accommodate people on dietary restrictions or people who want to eat healthy." "People are on specific diets for so many different health issues that we feel each individual has to be responsible to make intelligent menu decisions according to his or her needs. It's ok with us if restaurants don't make health claims." "Probably won't do nutrition labeling. I give my customers credit for their own knowledge on picking healthy items from our menu description of the entree."