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I am submitting herewith a thesis written by Katherine D. Gattis entitled "Effect of the Nutrition Labeling and Education Act of 1990 on Independent Restaurants in Tennessee." I have examined the final copy of this thesis for form and content and recommend that it be accepted in partial fulfillment of the requirements for the degree of Master of Science, with a major in Food Service and Lodging Administration.

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Effect of the Nutrition Labeling and Education Act of 1990 on Independent Tennessee Restaurants

A Thesis
Presented for the
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Katherine D. Gattis
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DEDICATION

This thesis is dedicated to my parents

Mrs. Helen Frassarand Gattis

and

Mr. Wilford Gattis

April 15, 1928 - October 19, 1994

Who taught me the meaning of determination and accomplishment.

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ABSTRACT

The purpose of this research was to investigate what effect current and proposed regulations of the Nutrition Labeling and Education Act of 1990 would have on independent restaurant operations in the state of Tennessee. A rule proposed in June of 1993 will expand the NLEA to include restaurant menus.

The sample was identified and selected from the population of independent restaurateurs in the state of Tennessee who were members or were eligible for membership in the Tennessee Restaurant Association (TRA) and operated ten units or less. Cities with populations greater than 25,000 were used to stratify the sample due to research suggesting that consumer demand for nutritionally oriented items is greater in urban areas than in rural settings (Huss & Gilmore, 1995). Questionnaires were sent to either the owner or general manager. Analyses were performed to describe the demographic profile of the respondents; current practices regarding the provision of nutrition information; awareness, effect and knowledge of the current and proposed regulations; the potential method of compliance; and estimated compliance costs. Also five research hypotheses were investigated. A 25% response rate was realized, all returned surveys were used for data analysis.

Seventy-eight percent of the respondents reported total food sales from items identified with nutrition information between 0% - 10%. This may reflect that sales data are not monitored according to this classification. A large proportion of the sample (72%) reported that they do not use nutrition information to "promote" food items, yet over 50% of those responding negatively to this went on to indicate that one or more of the nutrition

terms listed on the survey were used in the restaurant. A majority (83%) of the respondents also reported that they were not aware of the current NLEA regulations or the menu proposal prior to the survey. A corresponding proportion (87%) reported experiencing no effect from the NLEA, and exhibited a low knowledge level regarding details of the regulations (≥93%). The most common sources of nutrition information to base nutrition claims on were suppliers and food labels. Information provided by the service staff was the most common location for nutrition statements. Five percent reported that they were already in compliance, 31% indicated they would comply by either substantiating existing claims, or revising menus to include claims, 40% indicated that they would comply by not making nutrient content or health claims in their establishment, and 2% stated they would include nutrient values without making any claims. Sixty-six percent reported being unable to estimate the total costs of compliance with this legislation, while 16% estimated it would be less than $250 dollars.

The high level of negative responses regarding use of nutrition information in the sample indicate that this issue is not a great concern, or is not in great demand by the patrons of these establishments. It is further indicated that the current regulations and proposal to include restaurant menus into the Act will not have a substantial impact on the responding establishments as long as compliance can be achieved by refraining from making nutrient content or health claims. Further research is needed to determine the consumer demand for nutritionally oriented items, the staff training regarding nutrition issues, and the practice of monitoring sales according to nutrition labeling in these establishments.

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CHAPTER I

INTRODUCTION

In 1990 Congress passed the Nutrition Labeling and Education Act (NLEA). The NLEA amended the Federal Food, Drug and Cosmetic Act of 1938 which protects the public from false or misleading statements on foods and food labeling (21 USC §301,331 [1988]; as cited in Termini, 1991). The result of the NLEA is that virtually every food, offered for human consumption at the retail level, is required to be labeled with specific information regarding the nutrient content in a uniform format. The February 1993 regulations, which implement the Act, differ significantly from the initial food labeling regulations published in 1973. Originally, only foods packaged for home consumption, with added nutrients or those making a claim were required to bear nutrition labeling (McNamara, 1994). The 1993 regulations require that restaurants making nutrient content and \ or health claims on non-menu food labeling (i.e. posters, placards, signs, etc.) must be substantiated by a "reasonable basis" for making the claim and that the information be provided to the consumer upon request. A rule proposed on June 15,1993 by the Food and Drug Administration (FDA) will alter the current regulation to include restaurant menus under the same provisions as non-menu labeling (Food Labeling, 1993).

Originally included in the Act, restaurant menus were granted an exemption by President Bush at the last minute due to concerns regarding excessive government regulation (DiDomenico, 1993) and political conflict between the secretaries of the FDA and the USDA (Sugarman, 1993 June). The exclusion of menus, once upheld by FDA

commissioner David Kessler (DiDomenico, 1993), is now in danger of reversal.

The FDA cites several reasons for the proposed rule change. Consistency in the law is one reason, section 5(a) of the NLEA prohibits exemptions (Food Labeling, 1993). That has been one of the main arguments in the legal action brought against the FDA by consumer advocacy groups. The importance of restaurants in our nation's food supply is another point. The National Restaurant Association (NRA) reports that the average American over the age of eight years old eats at a foodservice establishment approximately 3.8 times per week, and the proportion of the food dollar being spent in foodservice establishments is expected to rise to 44% in 1995 (NRA, 1994). The FDA feels the provision of uniform information to the public is an important consideration that may be violated by excluding menus but not other forms of restaurant labeling from the legislation. The fact that the FDA is being sued over the issue is yet another factor in the decision to reverse the menu exemption.

The attention restaurants are receiving in connection to the NLEA comes from many different sources. Public health initiatives have identified restaurants as significant food sources in our society (National Research Council [NRC], 1989; Porter, 1993). The 1988 Surgeon General's Report on Nutrition and Health identified that five of the ten leading causes of death in the United States are related to dietary excess and imbalance. The report further stated that, "Because a large proportion of the population takes meals in restaurants and convenience food facilities, improvements in the overall nutritional balance of the meals served in such places can be expected to contribute to health benefits" (United States Department of Health and Human Services [USDHHS], 1988 p.

19). The National Center for Health Statistics publication, *Healthy People 2000: National Health Promotion and Disease Prevention Objectives* also mentions restaurants as a source for the provision of foods that are low-calorie and low-fat. Restaurants are a favorite target of consumer advocate groups who are skilled in garnering media attention and alarming the public. The Center For Science in the Public Interest is one group that has received attention for reports on the nutritional content of restaurant foods with catchy titles such as "Heart Attack on a Plate", a recent analysis of Fettucine Alfredo (Cheney, 1994).

The NRA and other professional organizations have been lobbying against the regulations being applied to restaurant menus (Allen, 1993). Industry experts estimate that the economic impact of compliance to the restaurant industry will total over $500 million in recipe analysis and menu printing costs (Freeman, 1993). Another argument is that it is inappropriate for restaurateurs to be held to the same standards set for mass produced packaged foods (DiDomenico, 1993) because, "the nutritional contents of a dish can vary daily depending on the availability of ingredients and the whim of the chef" (Freeman, 1993). Some are worried over the future direction of regulations by the FDA, concerned that the current issue may indicate an increase of disclosure regulations for the restaurant industry (Freeman, 1993; McNamara, 1995). It has been speculated that rather than taking the time and trouble to comply with the law many operators will simply remove claims from their menus and signs, offering less information rather than more (Bell, 1993; Keegan , 1993).

Many restaurants have positioned themselves to respond to consumer demands for

nutrition. In 1992 the NRA identified that the number of menu items being identified as more nutritious had increased over the last five years by 179% (Webb, 1993). The results of another study by the NRA (1994c), *Nutrition and Restaurants: A Consumer Perspective* revealed that approximately one third of restaurant patrons (37%) are "committed" to eating nutritious meals when dining away from home. The remaining 66% are divided between being "unconcerned" with nutrition (32%) and "vacillating" between taste to nutrition concerns (31%). According to Sneed and Burkhalter, (1991) in 1989 sales of menu items labeled as nutritious constituted approximately 0% - 10% of total sales in a majority of the establishments surveyed. Research by Huss and Gilmore (1995) revealed that the frequency of nutrition related requests in the categories of rural, urban, independent or chain / franchise restaurants was lower than the incidence of accommodation of those requests.

Although the labeling regulations are currently in effect for non-menu claims, and a rule to include menus has been proposed, neither the foodservice industry nor the FDA has conducted research to determine what is effective and what is not effective in restaurants (Keegan, 1993; Warshaw, 1993). A 1993 survey of major U.S. restaurant chains found that 67% plan to "include more creative marketing of healthful menu items over the next two years" (Clay, Emenheiser, & Bruce 1995, p. 100). Independent restaurateurs often react to the actions of chain restaurants to stay competitive so it is likely that this may be an industry wide trend. Research on the best method of providing nutrition information on menus is inconclusive (Almanza, Mason, Widdows, & Girard, 1993; Albright, Flora, & Fortmann, 1990; Anderson, & Haas, 1990; Warshaw, 1993).

Successful nutrition marketing in the restaurant industry has focused on the quality, presentation, and value of a product (Ganem, 1990). The application of regulatory restrictions on a creative process such as the designing and marketing of restaurant foods could very well have a deleterious effect on the willingness of the restaurant industry to continue supplying nutrition information to the dining-out public.

PURPOSE OF STUDY

The purpose of this research is to investigate what effect the proposed expansion of the Nutrition Labeling and Education Act (NLEA) will have on independent restaurant operations in the state of Tennessee. A rule proposed in June of 1993 will expand the NLEA to include restaurant menus, in addition to the other forms of restaurant labeling already covered. Six factors have been selected to gauge the reaction of independent restaurant operators regarding this proposal. The first factor is the nutrition terminology currently being used and the location of these terms in the restaurant. The second factor is the sales contribution that items with nutritional identifiers make to the total sales. The source of nutrition information being used is the third factor. Awareness of the NLEA law and knowledge about current regulations are the fourth and fifth factors, respectively. The sixth factor will be the estimated costs of initial compliance. In addition, the study will investigate foodservice operator intentions to comply with the proposed law and the intended method of compliance.

RESEARCH QUESTIONS

1) What percentage of independent restaurateurs in Tennessee use nutrition terminology to promote items sold in their establishment ?
2) What percentage of independent restaurateurs in Tennessee are aware of the current and proposed nutrition labeling regulations for foodservice operations.
3) What percentage of independent restaurant operators in Tennessee are using the nutrition terms regulated by the NLEA ?
4) On what sources do independent restaurateurs base their nutrition information ?
5) Does the proposed regulation of nutrition terminology on restaurant menus affect the plans of independent restaurant operators in Tennessee to identify food items based on nutritional attributes ?
6) Is sales volume a factor in a restaurant's ability to access resources and provide nutrition information in accordance with the NLEA regulations ?
7) With what frequency do independent restauratuers change their menus?
8) What are the estimated initial costs of complying with the NLEA regulations ?
9) Do the amount of sales generated by items identified with nutrition information have an effect on an operator's intention to comply with the law ?
10) What level of knowledge do independent restaurant operators have in regard to the current nutrition labeling regulations for restaurants ?
11) What is the cost for independent restaurateurs to produce 100 menu copies ?

RESEARCH HYPOTHESIS

I) A majority of operators (>50%) will comply with the proposed NLEA law by removing nutrition claims and terminology from their menus.

II) The proposal to include restaurant menus under the NLEA will not result in more availability of nutrition information in independently operated restaurants in Tennessee.

III) Intention to comply with the proposed law, by using terminology in accordance with the regulations, is positively related to the percentage of sales generated by food items with nutrition information.

IV) Intention to comply with the proposed law, by providing nutrition information in accordance with the regulations, is inversely related to the cost of implementation.

V) The majority of independent restaurant operators in Tennessee (>50%) do not have adequate knowledge regarding the NLEA's provisions for restaurants.

RESEARCH LIMITATIONS

Circumstances associated with this type of research increase the margin for error and must be acknowledged. First are the day to day occurrences of restaurant operation that take precedence over filling out and returning surveys. Also, there is a difficulty in identifying the proper person to complete the survey as it varies among establishments. A desire may have been present among some of the respondents to provide the "right" answer resulting in an inaccurate description of the industry at this time. Concurrent to the proposed NLEA rule change were other issues being discussed that may have over shadowed the menu proposal such as: talks of a minimum wage increase, motions to reduce allowable business tax deductions, and legislation regarding increasing ASCAP royalty fees. All of these issues have an immediate effect on the bottom line of the restaurant industry and may have had more salience to operators surveyed than legislation regarding nutrition labeling.

Time of the year was another obstacle to high response rates. Surveys were sent out at the beginning of the holiday season, one of the busiest times of the year for restaurants. Additionally, the research method also may have impacted the sample's response rate. Variances may have occurred in the interpretation of the survey that were unforeseen. Collection and analysis of the restaurant's chosen menu format in conjunction with site visits may have yielded a greater volume of high quality data to assess.

Due to the low response rate and the fact that not all returned surveys were complete this data cannot be generalized to restaurants outside of the sample.

CHAPTER II

REVIEW OF LITERATURE

INTRODUCTION

There is an increased awareness in the connection between diet and chronic disease that has been recognized and reported on by government, private health agencies, and industry (NRC, 1989; USDHHS, 1988, 1993; Institute of Medicine [IOM], 1990; NRA, 1994c). While the role of diet in the development of chronic disease is still being studied (Shaw & Davis 1994); there is some controversy over the value of making broad based dietary recommendations for their prevention (Gallagher & Allred 1992; NRC, 1989; Senauer, Asp, & Kinsey, 1991).

There is also an increase in the number of Americans dining out due to a variety of factors (Ganem, 1990). Recent studies have targeted restaurants and other types of foodservice establishments as being influential in the diet of Americans and recommended increasing the amount of "healthy" foods provided by these outlets (IOM, 1991; NRC, 1989; USDHHS, 1988, 1993). Also in recent years the restaurant industry has been attacked by consumer advocate groups regarding the nutritional quality of food served despite the fact that often, these nutritionally deficient foods are very popular menu items (Oleck, 1994; Weiss, 1994). Steps have been taken by restaurant operators to improve the nutritional content of the foods they serve (Clay, et al., 1995; NRC, 1989; NRA, 1994b, 1994c, 1994d; Sneed & Burkhalter, 1991). A concern for some restaurant operators is that the level of government intervention and regulation will continue to

increase and become prohibitive to business success and growth (Allen, 1993; Hulse, 1995; Keegan, 1993; Mermelstein, 1993, 1993b; NRA, 1993, 1993b).

This literature review will discuss issues surrounding nutrition labeling in restaurants, and the decision by the FDA to reverse the exemption granted to restaurant menus, from the 1990 NLEA. Factors that will be addressed include (a) current knowledge of the relationship between nutrition and chronic diseases, and the impact of this knowledge on foodservice operations; (b) the changing lifestyles of consumers, their perceptions of, and demand for more nutrition items in restaurants; (c) the response by the restaurant industry to this demand, and it's position regarding nutrition and; (d) regulations and issues involved in determining nutrition labeling guidelines that are applicable and equitable to restaurant operations.

IMPACT OF NUTRITION

"Nutrition is defined as the science and art that deals with human health as it is affected by food, nutrients, and related dietary factors" (Dodds & Kaufman, 1991, p. 1). In 1988, the USDHHS released the first *Surgeon General's Report on Nutrition and Health.* This report, which summarized more than 2,500 scientific articles and opinions of government and academic experts, (Ganem, 1990) concluded "For the majority of adults who do not smoke and do not drink excessively, what they eat is the most significant controllable risk factor affecting their long-term health" (USDHHS, 1993, p. 22). The Surgeon General's 1988 report was used in part to set objectives for *Healthy*

People 2000: National Health Promotion and Disease Prevention Objectives which is a statement of opportunities to improve the health of the nation and sets targets for reaching the goals set forth (USDHHS, 1990). Another landmark report is *Diet and Health: Implications for Reducing Chronic Disease Risk* (NRC, 1989). This work summarized most of the current research in the field of nutrition and indicated there are contributions that diet may have to the maintenance of good health and risk reduction for certain diseases. The IOM proposed mechanisms to implement the recommendations made in *Diet and Health.* Entitled *Improving America's Health: From Recommendations to Actions,* (1991) this report commented on the influence foodservice operations have on the American diet and urged restaurant operators to modify menu items to help customers meet the dietary guidelines.

Chronic Disease in America

Five of the ten leading causes of disease in the U.S. have been related to dietary excess, three of these: coronary heart disease, stroke, and some types of cancer top the list (Frazao, 1994; USDHHS, 1993, p.22). According to Gallagher and Allred (1992) these three diseases, which constitute 70% of all deaths, account for a major part of our nation's expanding health care costs. In 1991 over 1 million people died from these diseases and the estimated costs for health care and related expenses were in excess of $174 million (Frazao, 1994).

Nearly everyone in our society will be touched in some way by these diseases adding an emotional element to the problem of how to decrease the incidence of chronic

disease. In response to this dilemma health professionals and politicians have felt pressure to do something. The conclusive answer is not yet known, but the promotion of dietary changes in accordance with current knowledge is the solution of choice by politicians, public and private health organizations (Hegsted, 1985, p. 16 - 25 as cited by Gallagher and Allred, 1992). The new dietary guidelines reflect a shift in concern from preventing nutritional deficiency diseases to focusing on the benefits of nutrition in improving health, and risk reduction for the chronic diseases -- coronary heart disease, stroke, some cancers, non-insulin dependent diabetes, coronary artery disease, and obesity (Gallagher and Allred, 1992; Senauer, et al., 1991; USDHHS, 1993).

The correlations between diet and disease are controversial (Gallagher and Allred, 1992). The strength of conclusions vary for different diseases and different studies, and it is difficult to make recommendations to individuals from information collected on populations (NRC, 1989). Although the connection between diet and chronic diseases has been documented over the past 20 years, (Senauer, et al., 1991) and is widely acknowledged and accepted, there is no actual evidence only indications from the research regarding the value of diet in preventing chronic disease (Gallagher and Allred, 1992; NRC, 1989). In all literature reviewed diet is considered a risk factor along with genetics, lifestyle, and environment. This is clearly recognized in *Healthy People 2000* where nutrition is an important, but not exclusive, variable in the goal of "providing strategies to significantly reduce preventable death and disability, to enhance quality of life, and to reduce disparities in health status between various population groups within our society " (USDHHS, 1992, p. 5). There are scientists that believe there is enough

evidence to recommend everyone alter their eating habits; though some in the scientific community believe that for many Americans the current claims of benefits are empty promises (Gallagher and Allred, 1992). Regardless, the conclusions drawn by these summary studies are strong enough for government and private health organizations to announce initiatives such as the Dietary Guidelines for Americans published by the USDHHS, and intervention strategies like the American Heart Association's Eat Smart Program aimed at improving public health.

The Role of Foodservice in Disease Prevention

The Surgeon General's 1988 report, NRC's 1989 *Diet and Health: Implications for Reducing Chronic Disease Risk, Improving America's Diet and Health: From Recommendations to Actions* by IOM (1991), and the 1990 *Healthy People 2000* objectives all mentioned the collaborative efforts of policy makers, the media, the food industry, nutritionists and health professionals that are necessary to reach the nutritional goals that have been set for our nation. These reports also acknowledged the influence and impact restaurants and foodservice operations have on the diet of Americans.

The Surgeon General's report offered provisions for implementation of the seven dietary recommendations made. The seven dietary guidelines are:

1) Eat a variety of foods.

2) Maintain a desirable weight.

3) Avoid too much fat, saturated fat, and cholesterol.

4) Eat foods with adequate starch and fiber.

5) Avoid too much sugar.

6) Avoid too much sodium.

7) If you drink alcoholic beverages, do so in moderation. (USDHHS, 1988)

The recommendations, to implement these guidelines, for foodservice and restaurants are very general "wherever food is served...it should reflect the principles of good nutrition....and improvements in the overall nutritional balance of meals served..." should be made (USDHHS, 1988, p. 19).

The NRC (1989) report acknowledged the increasing variety of diet menu items in restaurants reported on by Burros in 1985, but emphasized the need for various segments of the food industry to work together to determine the best way to implement the nine dietary recommendations made in their report. The committee suggested a combination of technological advances, public education efforts, and legislation such as revised nutrition labeling as methods of implementation.

The IOM's Food and Nutrition Board was commissioned by the FDA and USDA, "to consider how food labels could be improved to help consumers adopt or adhere to healthy diets" (IOM, 1990, p. 2). Recommendations by IOM covered both foods sold in grocery stores and foods served in restaurants. This group supported government efforts to revise nutrition labeling and encouraged the private sector to make contributions to improve the ease of usage for the consumer. Also, for the private sector, they suggested

involvement in research to determine the best way to provide nutrition information, and using nutrition as a competitive advantage (IOM, 1991).

In *Healthy People 2000* (USDHHS, 1993) two objectives address foods sold in restaurants and other eating establishments. The first objective could be interpreted to include restaurants and other foodservice establishments. Objective 2.14 reads, "Achieve useful and informative nutrition labeling for virtually all processed foods and at least 40 percent of fresh meats, poultry, fish, fruits, vegetables, baked goods and **ready-to-eat carry-away foods**" [emphasis added] (p.28). The second objective (2.16) is to, "Increase to at least 90 percent the proportion of restaurants and institutional food service operations that offer identifiable low-fat, low-calorie food choices, consistent with the Dietary Guidelines for Americans" (p. 29).

CONSUMER LIFESTYLES AND THE DEMAND FOR NUTRITION

Household composition is the basis for demographic trends. The general trend in America is toward an older population with decreasing household sizes due to later marriage and declining birthrates (Ganem, 1990; Senauer, et al, 1991). Accompanying this trend is a shift in consumer spending patterns, traditional behaviors, and thinking as they relate to food (Balzer, 1993; Kardon, 1992).

Family Structure and Eating Out Activity

The country is getting older. By the year 2000 the median age will have increased to 36, and the baby boomers will be at their peak spending power (Townley, 1987). According to the U.S. Bureau of the Census non-family living arrangements and single parents will increase to 47% of the households by the year 2000, while married couple households will decrease to 53%, a 22% drop from 1960 (Person, 1993). Senauer et al, (1991) reported that in 1990 more than half of all households had less than three members which increased the demand for food away from home, convenient food, and smaller packaging.

"As two-family incomes and single parent families have changed the face of the working population, the foodservice industry has become an important factor in the way America eats" (Scanlon, 1990, p. xiii). Kardon reported in 1992 that 59% of all women age 18 and over are in the work force. Also in 1992, 33% of households with children under eighteen years of age were headed by a single parent, of this number, women headed 86% (Hayghe & Bianchi, 1994). The sharing of household duties has become more common place, but women are still responsible for 86% of food preparation (Balzer, 1993). This has had a major impact on the demand for convenient, nutritious foods (Ganem, 1991). Even with the number of nutritious convenient food items that have come into the market, family meals are declining (Fuller, 1994). According to Dr. Bill Luker with the U.S. Bureau of Statistics, two incomes are required now to maintain the standard of living that in the past could be maintained by one; some people are holding down up to four jobs and eat out because they do not have time to cook.

Increasingly demanding work schedules and extra curricular activities decrease the time available for meal preparation and clean-up. In order to get a decent balanced meal Americans are turning to restaurants (Seaberry, 1994).

In comparing restaurant usage among single and dual parent families Ahuja and Walker (1994) found that the type of restaurant, household income and the mother's employment status more predictive than household composition. An average of 73% of single mothers made away from home food purchases where 91% of married couples made these type of purchases (Lino, 1994). The NRA (1994c) identified married women as an important demographic characteristic in the portion of restaurant patrons that are committed to eating healthfully when dining out. Single women spend approximately $800 per year on meals out although this is not equally distributed among younger and older women. Single men spend in excess of $1500 per year on meals away from home (Braus, 1994).

Aging and Restaurant Patronage

Restaurant operators should be aware that as lifestyles change, eating out behavior and nutrition profiles are altered. According to a recent CREST survey young singles are reported to have the highest level of restaurant usage, and the one event that changes eating out behavior most is the birth of a first child. After children leave home the occurrence of eating out increased but never to the level of young couples and childless singles (Balzer, 1993).

Older Americans have more leisure time and disposable income than their

younger counter parts, (Senauer et al., 1991) but opinions vary on how an aging population will affect restaurant patronage. Some expect that an older population will create more demand for full-service restaurants (Seaberry, 1994). Others maintain that while restaurants do provide an opportunity for the slower paced social activity that older adults seek, the nutrition conscious older adult perceives nutritious meals are best found in the home (Senauer et al., 1991). According to the NRA's 1994 study *Tableservice Restaurant Trends,* as age increased for older Americans restaurant patronage decreased. Sixty-seven percent of Americans between the ages of 55 and 64 patronized tableservice restaurants at least once a week in 1993, while only 45% of Americans aged 65 and over did. The age segmentation among this group is important for restaurateurs; this is an era when healthy, active older Americans will seek foods that help them maintain good health (Gerber, 1989 as cited in Senauer et al., 1991). Ganem (1990) stated that women and the elderly are the most nutritionally concerned, and finding it increasingly desirable to dine out will request more healthful menu items. Considering that 46% of single women are elderly this may be an important market for restaurateurs in the years to come (Braus, 1993).

Along with the changing face of America we have seen a change in the proportion of the food dollar spent in foodservice operations. In 1950, 25% of the food dollar was spent in eating establishments (IOM, 1991). The NRA reported that in 1993 one half of all adults were foodservice patrons on a typical day and projected that in 1995, 44% of the food dollar will be spent in a foodservice operation of some type (NRA, 1994). *Supermarkets 2000: 45 'Insider' Predictions* reported results of a survey, conducted in

1990, which indicate food purchases away from home will equal foods purchased in supermarkets and groceries in the year 2000 (Person, 1993).

Social Aspect

There are factors other than age and taste affecting the importance of nutrition when dining out. NRA's Elmont has also stated that restaurant patrons view eating out "as a respite...and are a little less vigilant in the nutrition front" (Straus, 1994, p. 37). Restaurant patrons also are guilty of ordering based on taste rather than what they know (Straus, 1994), a fact that disappointed Center for Science in the Public Interest's (CSPI) Michael Jacobson who described the changes in the average American diet as very small (Griffith, 1995). The more educated a person is, the more likely they will make nutritious choices when dining out and eat more for future health than short term benefits (Senauer et al., 1991). Americans are "more apt to dine healthfully during a business or social obligation restaurant visit than during a non-routine meal for fun" (Sweet, 1989).

Consumers have schizophrenic tendencies that present a unique challenge in gauging the demand for more nutritious restaurant foods. Because people are eating lighter meals they indulge in more desserts (Howard, 1995). Brian Kardon, (1992) a marketing strategist, identified consumer schizophrenia as buyers showing mutually contradictory or antagonistic motives for a purchase decision. He identified four criteria that have contributed to this new purchasing behavior: (a) an explosion of information (b) getting older, smarter, and more sophisticated, (c) working women and (d) time

impoverishment. It seems some of the same factors that are sending more people to dine in restaurants are also reshaping the way they make menu selections.

Market Segmentation

There have been a number of efforts to classify and segment consumers according to nutrition attitudes. A 1992 Food Marketing Institute (FMI) survey of 1,004 adults responsible for household grocery shopping found that 68% think it is "easier to buy and cook healthy foods than it was three years ago," and that 65% strongly agree with the statement "I feel better when I eat foods that are good for me" (Farkas, 1992). Another FMI survey, in 1993 on consumer attitudes, revealed that concern about nutrition has dropped by ten percentage points, down to 54%, over the last year (Sugarman, 1993, May). A bi-yearly national nutrition attitude survey by the NRA (1994c), begun in 1986, showed that the percentage of patrons committed to nutrition has decreased to 37% in 1992, after peaking at 39% in 1989. While restaurant patrons classified as vacillating between nutrition and taste have continually increased to 31% in 1992. The survey reported the proportion of the population that was unconcerned with nutrition and eats what they want, when they want, has dropped from a high score of 38% in 1986 to plateau at 32%. In a NRA survey on Tableservice Restaurant Trends, (1994d) 67% expressed interest in having menu items available for the nutritious conscious. However, a survey by the American Dietetic Association found that although the number of Americans rating nutrition as moderately to very important increased, the number of

people that are doing all they can to eat a healthy diet decreased from 1991 to 1993 (Straus, 1994).

Media Coverage

This seemingly contradictory information may best be explained as confusion among consumers. "Fed up with confusing advice, consumers are relying more on themselves for nutrition information and less on the government, manufacturers and, supermarkets" (Sugarman, 1993 May). The media is partially responsible for the confusion due to: presentation of incomplete studies as complete works, over-simplification of complex issues, and over-emphasis on the most recent discoveries have fueled consumer misconceptions (Straus, 1994). Michael Jacobson, founder and president of the consumer watch dog group CSPI, is well known and controversial for generating mass media publicity on nutrition topics, including negative nutrition information regarding restaurants. He noted that while his negative press releases get vast media coverage, recent praise of seafood restaurants received very little media interest, and a release on good food products to take on a picnic was, virtually ignored. His lesson: "The media loves the worst" (Griffith, 1995). IOM noted in their 1991 report that media coverage of nutrition matters is, commendable but has been fragmented, inconsistent, and insufficient to promote large scale dietary change. The lack of a united nutrition message is not confined to the media, within the nutrition and medical communities there are a wide range of nutrition beliefs and attitudes.

Many in the industry feel they have been maligned when it comes to the press

coverage of nutrition in restaurants. Stephen Elmont, a past president of the NRA, thinks it inappropriate for restaurants to be considered nutritional guardians and emphasizes that any dish on a menu "is based on the marketing process of matching consumer desires with the appropriate menus and the examination of the entire process in the light of economic feasibility" (Weiss, 1994, p. 123).

THE RESTAURANT INDUSTRY

"The American food service industry ... is earnestly involved in implementing sound nutrition choices ... for it's customers.... Still there is a growing sense that the foodservice industry is somehow fatally failing it's customers in nutrition matters" (Weiss, 1994, p. 123). According to recent research by the NRA on menus (1994c), and tableservice restaurants, (1994d) more foods are being grilled, seared, and stir-fried. Over 90% of responding establishments would alter preparation methods upon request to increase the nutritional value of their menu offerings. Surveys of chain establishments in the U.S. have revealed positive attitudes toward nutrition and plans to increase the nutritional quality of their menu items (Clay et al., 1995; Cross & Wright, 1991; Sneed & Burkhalter, 1991; Weisbrod, Pirie, Mullis & Snyder, 1991). Research on consumer selections (Weisbrod, et al., 1991), and nutritional requests versus accommodation (Huss & Gilmore, 1995) suggest that restaurants are not restricting their patrons nutritional choices, rather patrons are not making these healthier menu choices. Yet the activities of consumer advocate groups persist in presenting restaurant and foodservice fare in a much

less than favorable light. The president of one consumer group recently admitted that improvements have been made, but they do not intend to cease in their efforts for nutrition disclosure in the restaurant industry (Cheney, 1994; DiDomenico, 1993 February; Griffith, 1995; Oleck, 1994).

Provision of Nutrition in Restaurants

The 1994 NRA survey *Tableservice Restaurant Trends* looked at operations with different levels of check averages to identify major trends. The range of check averages used was under $8.00; from $8.00 to $14.99; $15.00 to $24.99; and over $25.00. No less than 90% of all participating restaurants responded that they would alter preparation methods upon request. Also this survey found that at least 90% of restaurant operators will serve sauce or salad dressing on the side, prepare food in vegetable oil, and broil or bake rather than fry. Cooking without salt, and skinning chicken before preparation also scored at least 90% for all check average categories except the under $8.00 category. The more extensively processed food items that are often used in establishments with smaller check averages may prohibit their accommodation of these requests. The most common "nutritional" offerings despite check size were (a) diet beverages, (b) sugar substitutes, (c) caffeine-free beverages, (d) margarine, and (e) vegetarian entrees. The percentage of restaurants promoting menu items as nutritious or healthy showed a 15% decrease from 1990, when greater than 50% of all operations engaged in this type of marketing. In 1993, only 50% of restaurants with check averages of $8.00 to $14.99 employed this practice, all other groups had lower figures.

The NRA Menu Analysis, (1994b) found that over a five year period, menus featuring meatless entrees, especially pasta dishes, had increased by 23% and the number of establishments offering choices in portion sizes increased by 12%. Low-calorie, low-fat, and reduced-fat salad dressings, and poultry dishes, including grilled chicken breast sandwiches also are increasing in availability. According to the NRA both the number of menu items marketed based on nutritional attributes, and the number of menus with statements offering to make modifications based on dietary restrictions increased since 1988 by 12% and 7%, respectively. Nutritious items in demand by consumers that are not being offered by chain restaurants include salt-substitutes, broiled vegetables, steamed entrees, egg substitutes and low-calorie desserts. Broiled menu items and egg substitutes also were mentioned as needed in the NRA's *Nutrition and Restaurants: A Consumer Perspective* (1994c).

Industry Attitudes

In 1991, Sneed and Burkhalter surveyed restaurant companies to determine attitudes toward nutrition and practices regarding marketing items as "nutritious". The attitude assessment revealed that although respondents agreed recipes should be developed without adding fat and salt they did not feel it was their responsibility to improve the health of their customers. Over half of the seventy participants reported marketing nutrition and having plans to add nutritious menu items. Clay, et al., (1995) conducted a similar study finding that, "What chains plan to offer are consistent with the preferences of committed patrons as described in the NRA nutrition (sic) study" (p. 98).

Sixty-seven percent of the responding companies stated they plan to be more creative in marketing these items in the future.

Supply and Demand

Menus and customer satisfaction ratings would be different if operators made menu decisions on what Americans say they want, rather than on what they actually purchase. Warshaw (1993) made the observation, "Americans talk about eating healthy, yet despite the fact that they eat out four times a week, it's still treated as a special occasion and a time to blow the diet" (p. 20). The social component to eating out seems to be often overlooked by menu labeling proponents, who look at restaurant foods in isolation from the rest of the diet, presenting the purpose of the restaurant industry out of context (Weiss, 1994). Frequently when consumers eat out, the meals are being consumed in a social circumstance. We know consumers are concerned about nutrition, but it is very difficult to gauge how deep the concerns are when examined from this perspective (Fuller, 1994). Rick Bayless, a Chicago restaurateur, commented on the apparent fact that Americans do not distinguish between eating for sustenance which occurs daily, and feasting, a more infrequent occurrence (Somerville, 1994). The IOM (1991) also acknowledged the inability of consumers "to translate the recommendations into food choices or to assess the suitability and composition of their diets in comparison with the recommendations" (p. 4). Weisbrod et al. (1991) discovered in a survey of Midwestern restaurants that healthy menu items were available and identified as such, but unhealthy items outsold the healthy items by 20%. Glanz, Hewitt, and Rudd (1992)

conducted an integrative review on the subject of nutrition education and reiterated conclusions very similar to those of the IOM stating, "many consumers want nutrition information but that they often do not employ it because it is hard to use, not readily available, or not perceived as useful or new" (p. 267). This indicates that questions raised, by Carlson and Tabachi in 1986 and addressed by Anderson et al. in 1990, have yet to be answered conclusively regarding the labeling of menu items as nutritious. Although "restaurant menus are being developed that specifically identify items that are 'health' and 'wellness' related" (Scanlon, 1991, p. 255). Taste is the factor that is consistently rated number one by consumers (Albright, et al., 1990; Howard, 1995).

Restaurateur Concerns

Concerns of operators regarding the push to label nutritional offerings in restaurants include the lack of research on what is effective, and what is not (Keegan, 1993; Warshaw, 1993); the hostility and questionable tactics of some nutrition labeling supporters (Cheney, 1994; DiDomenico, 1993 February; Griffith, 1995; Oleck, 1993); issues of government authority versus individual rights; and controversy surrounding the public health policy (Weiss, 1994). Another concern regarding nutrition labeling and the controversy over nutrition in restaurants is the fact that dietary guidelines are meant to be applied to several days of food intake and not just one food or one meal (Straus, 1994). While many people do eat out several times a week the impact of restaurants may be over-emphasized. The NRA's Elmont presented the issue as one of choice, best addressed through the provision of a nutritional range of flavorful menu items to help Americans'

meet the dietary guidelines (Straus, 1994). A study by Weisbrod et al. (1991), that focused on institutional variables and changes, concluded that restaurants were not restricting choice by not offering healthy menu items, rather patrons are resistant to making healthy choices when eating away from home. Huss and Gilmore (1995) discovered in their research that the frequency of nutritional requests when dining out was consistently lower than the accommodation of those requests across a wide range of restaurant classifications.

Research on the labeling of supermarket foods lasted over ten years. Research conducted on restaurant labeling has focused predominantly on the affect of nutrition education programs on patron menu selection and knowledge (Albright et al., 1990; Glanz et al., 1992; Okeiyi & Postel, 1992; Paul, Ganem, & Wimme, 1989; Weisbrod et al., 1991) rather than on operator concerns. Paul et. al. stated there was a very little assessment data about these programs, and identified needs in the area as (a) program promotion and increasing awareness, (b) assisting restaurateurs with identifying appropriate menu items and communicating attributes, and (c) increasing the nutrition knowledge of restaurant personnel and patrons.

According to the 1986 book, *A Nutrition Guide for the Restauranteur*, published by the NRA, consumers are not interested in detailed quantitative information on the menu. Information on ingredients, portion size, preparation method, calorie level, and the reassurance that the food meets any criteria mentioned (i.e., low cholesterol, fat-free) is more desired. To assist operators with the new guidelines the NRA will publish an updated book as soon as the guidelines for restaurants are finished (NRA, 1994).

Healthy foods are not successful in all restaurant markets because they fail to fit with consumer expectations (Ganem, 1990). This is a fact that CSPI would rather ignore. "CSPI is a 23 year old non-profit watchdog organization that is dedicated to forcing food manufacturers and restaurants to lower fat, sodium, and sugar levels and abandon harmful additives in their foods" (Oleck, 1994, p. 46). They have become a nagging pain to the foodservice industry (DiDomenico, 1993 December). Although Michael Jacobson, founder of CSPI says they are not interested in hurting the restaurant industry, (Cheney, 1994) widely publicized reports on the fat content of Italian and Chinese restaurant foods resulted in sales declining from 15%-30% for many of these restaurants (DiDomenico, 1993 December).

NRA executive Jeff Prince, President of the American Council on Science and Health Dr. E. Whelan, the American Dietetic Association and others in the foodservice and nutrition industries are critics of CSPI (DiDomenico, 1993 February; Griffith, 1995; Oleck, 1994). Accusations of anti-business bias, data manipulation, and questionable methodologies have been made against CSPI (DiDomenico, 1993 February; Oleck, 1994). For example, the fat analysis studies on Italian and Chinese restaurants used portion sizes that one person would not normally eat resulting data that was unrealistic and blatantly misleading. It appears CSPI ignored the popular options of sharing entrees, or taking a portion home for later consumption. Nevertheless, consumers listen to CSPI, and industry groups recognize they are a force to be reckoned with. In many cases where CSPI has raised allegations, government policies were changed to accommodate their

charges, as in the 1987 ban on sulfites, and the Nutrition Labeling and Education Act of 1990 (Oleck, 1993).

"Operators recognize that attractive nutritional offerings are only a part of a healthy operations equation" (Weiss, 1994, p. 126), but are skeptical about promoting the newest fad in nutrition because of changing information and past inconsistencies. It's not that restaurateurs are against providing nutritious menu items or in providing data on these items, but the feeling that government is trying to legislate behavior angers some (Weiss). Also, operators are tired of governmental mandates. The laws which cover restaurants have increased, since the 1970's, from several pages to volumes of regulations on virtually every aspect of the business (Hulse, 1995).

THE NUTRITION LABELING AND EDUCATION ACT OF 1990

The 1990 NLEA represents a culmination of effort, that began over 20 years ago, to provide nutrition information to consumers (Mermelstein, 1994). In 1994, the commissioner of the FDA stated, "The new food label represents nothing less than an enormous public health opportunity that comes along only rarely" (Preimesberger, 1994). IOM was commissioned by the FDA and the USDA to study the nutrition component of food labeling. From this study came the recommendation to include: fresh produce, meats, poultry, seafood, restaurants and institutions into the scope of nutrition information provision (Porter, 1993). Under the auspices of the NLEA, the FDA established criteria and acceptable synonyms for nutrient content descriptors, identified

eight health claims that are allowable on food labels and established definitions for serving sizes, meals, and main dishes (Mermelstein, 1993a, 1994; USDHHS, 1994; Wilkening, 1993). NLEA objectives were to (a) reduce consumer confusion regarding food labels, (b) assist consumers in selecting a healthy diet, and (c) provide processors with an incentive to improve the nutritional quality and quantity of the foods they produce (Wilkening, 1993). The result is that virtually every packaged food sold for human consumption is required to bear a standardized nutrition label (NRA, 1993b).

Controversy of the NLEA and Restaurants

"While NLEA exempted restaurants from providing nutrient profile information at the point of purchase, FDA determined that restaurants should meet the same standards for nutrient content claims to ensure consumer's confidence in the menu items they were selecting" (Porter, 1993, p.11). Because of the correlation between diet and various disease states, consumer concern with nutrition, and the number of Americans who eat out regularly, "the FDA believes it is important for foodservice establishments to provide nutrition information to help their customers maintain healthy dietary practices" (Mermelstein, 1993b, p. 65). Initially, menus were exempt from the NLEA, but other forms of restaurant labeling were not, such as posters, table-tents, and other non-menu point-of-purchase labeling. However, due to policy considerations and legal action taken against the FDA over the matter, a rule has been proposed to remove the menu exemption (Food Labeling, 1993). As with any governmental regulation, controversy has surrounded the issue of whether restaurants should be included in the scope of the NLEA, to what

extent, and the cost of implementing the proposed regulations (Bell, 1993; Burros, 1993; DiDomenico, 1993 February; Freeman, 1993; Keegan, 1993; Sugarman, 1993 June 10; Webb, 1993). Also, there is concern over what future regulations may be indicated by the passage of this act (Bell, 1993; Freeman, 1993; McNamara, 1994).

Originally the FDA wanted to include restaurants into the NLEA (Burros, 1993; Sugarman, 1993 June 10). Because of conflicts between the secretaries of the FDA and the Department of Agriculture, President Bush settled one dispute (Porter, 1993) by exempting restaurant menus but not other forms of restaurant labeling. The exclusion was based in concerns over expanding the FDA's regulatory authority, and a reluctance by the Department of Agriculture to have the FDA share in the regulation of meats and poultry (Burros, 1993). In addition there were some concerns over the possibility that the NLEA regulations would deter restaurants from providing useful information since nutrition labeling in restaurants is only required when a nutrient content or health claim is made about an item (Food Labeling, 1993).

In June of 1993 the FDA issued a proposed rule that would reverse the exemption granted to restaurant menus. As stated in the Federal Register of June 15, 1993 the FDA claimed the menu exemption is not consistent with Congressional intent on the following grounds, for FDA to be effective in policy objectives it is pertinent to assure that restaurants are in compliance, the Secretary does not have the authority to promulgate regulations exempting food from the labeling requirements of the Act, and the legislative history suggests that Congress intended to include menus in the coverage (Food Labeling, 1993). In March of 1993, the FDA was sued by consumer groups insisting that restaurant

menus with nutrient content or health claims be included in the NLEA. The groups charge that "Exempting restaurant menus from the labeling act ... means consumers will be unable to make informed nutrition and health choices when they eat out" (Keegan, 1993 p. 1), and that by doing so restaurant customers were being denied nutrition information guaranteed by law (Allen, 1993).

Complications in Writing Regulations for Restaurants

When the FDA examined what constitutes a menu they found, that because of a wide diversity in formats, it was impossible to distinguish menus from other forms of labeling thereby complicating the formulation of regulations. (Food Labeling, 1993). Although final regulations are not yet complete, plans are to allow more latitude in labeling where foodservice operations are concerned (Burros, 1993). The law will subject restaurant menus to the same criteria for nutrient content and health claims as packaged foods with three notable exceptions: (a) Only food items accompanied by nutrition claims are required to provide nutrition information, and then only information specific to the claim made must be disclosed; (b) there is no set format for labeling menus that have food items identified with nutrient content or health claims; (c) operators have to provide reasonable substantiation for the claim based on a recognized source of nutrition information upon request from a customer, or enforcement official (NRA, 1993b). These exceptions are based on the recognition, by both Congress and FDA, that restaurant foods and packaged foods differ significantly (Food Labeling, 1993).

"NLEA gave the FDA explicit authority to require nutrition on the labels of most

foods even when a claim is not made" (Porter, 1994, p. 10). This has caused concern that restaurants and other foodservice operations will be subject to the same terminology and substantiation regulations as grocery store items (Boger, 1995; Keegan, 1993). Unlike foods packaged for home consumption restaurant food items will not be required to bear full nutrition labeling (Allen, 1993), nor did the FDA ever intend for restaurants to meet this level of compliance because of concerns over the withdrawal of nutrition information (Food Labeling, 1993; Mermelstein, 1993b). What will be expected of operators is, whenever a nutrient content claim or a health claim is made the terminology used must be compatible with the FDA established definitions and supported by evidence from a recognized source of nutrition information which is available to consumers (Bell, 1993).

Standardized Serving Sizes

"The NLEA required the FDA to adopt regulations that establish standards to define serving sizes" (Wilkening, 1994, p. 14). Using data from household food surveys, and working with the USDA, serving sizes were developed that represent the amount of food a person would normally consume (Wilkening, 1994). "The FDA has set some 139 reference serving sizes based on what is believed to be an amount commonly consumed at any single time" (Potter & Hotchkiss, pg. 571). The purchase unit of a food item in a grocery store normally contains multiple servings with nutrition information based on the FDA established portion size. Unlike foods sold for in home preparation restaurants frequently use the size of portions served, as an element of the marketing strategy, to create value and attract the value conscious consumer (DiDomenico, 1994). Boger (1995)

opined "despite a long history of portion control in some segments, the restaurant industry is mostly at a disadvantage in determining guests portions because employees and guests ultimately determine portions of most food items" (p. 69). The FDA has decided that restaurants will need to choose the appropriate reference food for individual items while meals and main dishes must meet the following requirements.

> "'Meals' weigh at least ten ounces. They must contain at least three different foods (each in an amount of at least 40 grams, or about 1.4 ounces) that come from at least two of the four food groups... 'Main dishes' weigh at least six ounces. They must contain at least 40 grams (about 1.4 ounces) each of two foods from different food groups. This would not include beverages and desserts since these are not commonly thought of as main dishes." (NRA, 1993b)

C. A. Boger, (1995) and the NRA, (Bell, 1993) feel this is an impractical method for measurement. The FDA addressed this in a September 1995 document regarding questions and answers about the law as it pertains to foodservices. Their answer to the question on serving size and reference foods indicated that the portion served does not have to be equal to the reference amount customarily consumed, nor does the serving size used in labeling have to be the same. The definition for any nutrient content or health claim made must "meet the definition for the claim based on the amount of the subject nutrient in an amount of the food equal to it's reference amount" (Guide to Food Labeling, 1995).There is also confusion about how to apply these regulations. According

to Boger because lunch portions are smaller than dinner portions, claims made on the lunch menu may not be applicable to the dinner menu also; it will be a penalty for restaurants that use large portions as part of their marketing strategy. The FDA has countered that the regulations may be more workable than the restaurant industry believes as they will accept a reasonable and an honest attempt to meet our standards (Bell, 1993). In May of 1994 the FDA promulgated a less stringent definition of meal or main dish items served in restaurants. This regulation requires claims be made on a 100 gram composite sample of the item bearing the statement (Food Labeling, 1994, pg. 24237). The change was made in response to comments received by the FDA, and to protect against the practice of adjusting portion size in order to present a more favorable nutrition profile (common in food manufacturing) (Porter, 1993).

Reasonable Basis Rule

Endeavoring to not place undue burden on the restaurant industry, the FDA decided that nutrient content and health claims could be made on food items as long as there was, "a reasonable basis for believing that the food contained the requisite level of the nutrient in question" (Food Labeling, 1993, pg. 33055). Reasonable basis may be shown by several different methods such as; using a recipe from a reliable cookbook that provides nutrition information; computer analysis of a recipe; using a recognized nutrient data base; calculation of nutrient content using recognized food value tables, then factoring in preparations methods; alliance with a nutritionist, or a health professional organization such as the American Heart Association; or laboratory analysis

(Mermelstein, 1993; Somerville, 1993, 1995). According to a FDA spokesman the reasonable basis rule will not change nor will some of the terms with clear, objective meanings like low-fat, but other terms such as light may have a degree of flexibility built into the definition for foodservice use (Bell, 1993). Mermelstein (1993) warned operators to be cautious with any spelling of the word light as it may require a further explanatory note in many cases. Another problem word for restaurateurs may be the term health' and all its variations as the FDA has decided that it is an implied health claim unless used in a clearly non-nutritional manner (Enforcement Policy, 1994). While the FDA considers reasonable basis a deliberately flexible term, (Somerville, 1993) critics are warning operators to use disclaimers as liability protection if using a basis for the claim other than laboratory analysis (Boger, 1995).

It is important to monitor the preparation of items with nutritional claims occasionally to insure they are being prepared according to specification. Adjustments in the nutrition information may be necessary if the portion size, ingredients, or preparation method of the item changes (Somerville, 1995). Additionally, whenever ingredient substitutions, by suppliers, or menu substitutions, by customers, are made the nutrition analysis is compromised (Boger, 1995). Multiple suppliers can also confound the development of nutritional analysis.

Classification of Claims

Categories of nutrition information for food labeling as defined by the FDA are: Nutrient content claims, health claims, and dietary guidance (NRA, 1993b). A nutrient

content claim characterizes the level of a nutrient in a food. The FDA has defined the following descriptor terms to be used in nutrient content claims: Free, Low, Light [any spelling], Reduced, Less, High, Good Source, More, Healthy, Fresh, Lean, Extra Lean (NRA, 1993b). In doing so operators are restricted to these meanings and can no longer use dictionary definitions, or their own definitions for those words and phrases (Boger, 1995). There is disagreement concerning the flexibility of these terms. Bell (1993) quoted FDA spokesperson, Brad Stone, on the issue: "They [descriptors] don't necessarily have to fit the definition so long as you explain somewhere on the menu what it does mean" (p. 29).

Health claims have two components. First, the level of a nutrient is characterized; second, a relationship between that substance and a health related condition or disease is stated. Additionally part of the claim must note that other factors play a part in disease prevention (NRA, 1993b). Only the following eight health claims are authorized by legislation and can legally be used.

1) Calcium & osteoporosis.
2) Sodium & hypertension.
3) Fat & cancer.
4) Saturated fat, cholesterol & coronary heart disease.
5) Fiber containing grain products, fruits, and vegetables & cancer.
6) Fruits, vegetables, and grain products that contain fiber & risk of coronary heart disease.

7) Fruits and vegetables & cancer.

8) Folic acid & neural tube defects. (USDHHS, 1994).

The FDA has developed sample claims that will serve as the standard for evaluating any claims made. They may be used verbatim or as a guideline for claims written by the operator, as along as all of the components of the example claim are present (NRA, 1993b). As scientific agreement, based on well-designed studies that represent the totality of publicly available scientific evidence, builds the FDA will evaluate allowing other health claims to be made (Wilkening, 1993).

According to the NRA Nutrition Labeling Summary (1993b), dietary guidance is a special provision for foodservice operations. The use of a statement, or symbol on a menu or other labeling to indicate a menu item is consistent with the dietary recommendations of a recognized health professional group will be considered dietary guidance as long as the level of any nutrient is not characterized (Mermelstein, 1993). If the level of a nutrient is characterized in the dietary guidance statement then the statement may be classified as either of the aforementioned claims. The symbol must be accompanied by an explanatory statement regardless of whether it is dietary guidance, a nutrient content, or a health claim (NRA, 1993b).

Restaurant Industry Complaints

One of the chief complaints from the restaurant industry is that rules and terminology used by the FDA were developed with processed, manufactured foods in

mind; not the needs of the restaurant industry (Keegan, 1993). Two major areas of contention over applying regulations meant for packaged foods to foodservice items are reference foods used in comparative claims, and portion sizes (Foodservice Operators, 1993). Claims, such as reduced, less, and more require the selection of an appropriate reference food as a standard for comparison. The argument over reference foods according to Jeff Prince of the NRA, is that chefs do not reformulate a food to be lower or higher in certain dietary constituents instead they create a totally new item (Bell, 1993; Burros, 1993; Keegan, 1993). Therefore comparison claims as written for grocery store type items are not optimal standards for restaurant usage (FDA' s Approach, June 21, 1993; Keegan, 1993; Sugarman, 1993). Instead the NRA proposes comparative claims be allowed "from within menu categories, or with an identified food from a credible nutrition data base, a reliable cookbook, or another foodservice operation" (Foodservice Operators, 1993, pg. 24). According to New York restaurant consultant, Clark Wolf, "The problem is, most restaurants have menus that are the basis, not the chemical absolute, of what's produced every day" (Webb, 1993).

Compliance dates were at one point a controversial aspect of the NLEA restaurant regulations. Four different compliance dates had been set based on the type of claim, and the restaurant organization size (Ganem, 1993). The rational backing this decision lied in the relative complexity of health claims as compared to nutrient content claims, thus more time was allowed for compliance (Food Labeling, 1993). The NRA felt that the FDA was "ignoring the real costs and problems faced by operators" (Ganem, 1993) by differentiating according to size of the restaurant organization (NRA Press Release,

1993). According to an NRA press release (1993) the FDA made a regulatory distinction because, "small restaurants generally do not have the established nutrition support component that larger restaurant chains have," and they might have greater difficulty accessing necessary resources than large restaurant organizations (Allen, 1993).

The Regulatory Flexibility Act requires examination of laws for alternatives to reduce any undue burdens placed on small businesses. Upon reconsideration of the restaurant exemption FDA decided the NLEA law, as it pertains to restaurants, is not a major one as defined by Executive Order 12291 and repealed any differences in compliance dates (Food Labeling, 1993, 33058). According to the proposed rule of June 15, 1993 there will be only two compliance deadlines, both based upon the publication date of the final rule. The compliance date for nutrient claims will be twelve months after publication date, and the deadline for health claims will be four months after the publication date. Although the health claim criterion is much more detailed than nutrient claim criterion the number of health claims made in restaurants is very small, therefore the shorter compliance period (Burros, 1993).

Regulations for restaurants were originally expected to be finished during 1994 (Personal communication, Michelle Smith, FDA/CFSAN 1994). But at this time the regulations have been sent to the Committee on Business and Finance and are not expected to be finalized before mid-1996 (Personal Communication, Sandy Baxter, FDA, July, 1995).

Compliance Costs

The experiences of the packaged food industry demonstrated that compliance with the food labeling regulations is costly (Freeman, 1993). Over 500,000 labels of existing food products have been redesigned (Mermelstein, 1994), and costs may increase up to $2.3 million over the next twenty years (The New Food Label, 1995). Implementation cost estimates for the restaurant industry, by the FDA and the NRA, have a variance in the millions. The NRA estimates costs will exceed $500 million (Keegan, 1993; Sugarman, 1993 June 10). Original cost estimates by the FDA fell at about $17 million dollars, but since then the FDA has revised this figure and projects costs between $1 and $13.5 million. (Food Labeling, 1993)

In determining costs both groups used data from the NRA great menu contest in which 89% of the entries had at least one item on the menu with an accompanying health term (Food Labeling, 1993; Freeman, 1993). The FDA excluded 75% of an estimated 406,000 menus based on the assumption that menu revisions would have taken place during the compliance period regardless of legislative mandates, yielding zero compliance costs for this population. They then calculated their figures using $500 as the cost for a simple revision and $1,700 for complex changes. FDA estimates only 12,000 of 547,000 restaurants will be forced to justify menu claims resulting in compliance costs calculated to be approximately $13.5 million (Freeman, 1993). Additionally they stated that if 90% of large and medium sized restaurants have substantiation already then they incur costs of less than $1 million dollars (Food Labeling, 1993, 33058).

The NRA arrived at their figure on the basis that 89% of the menus entered into

the annual menu contest have at least one item with an accompanying health or nutrition claim that would require substantiation under the NLEA (Freeman, 1993). Also the NRA estimates included the assumption that 75% of all restaurants are small operations with less than ten units (Sugarman, 1993 June 10), which indicated that the majority of restaurants may be disadvantaged in terms of the resources available (Webb, 1993).

In 1993 there were approximately 547,000 restaurants in the United States (Freeman, 1993). There are now 600,000 restaurants and institutional food service establishments in the United States (US FDA and CFSAN, 1995). Some restaurateurs are already reworking their menus to comply with current FDA guidelines (Somerville, 1995).

Costs of compliance will vary according to region of the country and the extent of revisions (Somerville, 1995). A simple, typed menu revision may cost $200 for duplication alone; menu redesign, with recipe analysis, may start at $3,000; analysis by a nutritionist may cost from $35 to $100 (Freeman, 1993); and laboratory analysis may cost from $550 - $700 per sample (Somerville, 1995). While in the Dallas area one company sells a nutrition labeling package for $950 initial cost with additional yearly fees of $275, plus $75 for each unit in a chain operation (Bell, 1993). The cost of a computer software program range from $50 to over $5,000 with programs designed specifically for foodservice operations being the most expensive (Somerville, 1995).

Enforcement

> "The top five violations likely to result in an enforcement action...during the initial phase of enforcement as: (1) Failure to bear nutrition labeling unless exempt, (2) Use of unauthorized health claims or nutrient content claims, (3) Failure to bear newly required information, (4) Use of approved claims without qualifying for them, and (5) Use of nutrition labeling with major format deviations." (Mermelstein, 1994)

Clearly some of these violations will not apply to restaurants as the regulations now stand. While the NLEA is preemptive to any state promulgated labeling law, it is at the state level that this law will be enforced.

Concern Regarding Future Regulations

An effort has been underway since the 1940's to provide labeling on the nutrient content of foods sold (McNamara, 1994). "There has been very limited information about the success of consumers using nutrition labeling in the past and it remains to be seen if the information...[will be] useful to consumers in selecting more healthful diets in the future" (Porter, 1993, p. 12). Concern with this legislation is not restricted to those in the restaurant industry; Dr. F. Stare (1993), founder of the Harvard Department of Nutrition, holds negative views of increasing the amount and content of nutrition labeling. He maintains that labeling might be unnecessary if proper emphasis were placed on education. Dr. Stare also questions the pursuit of this issue by the FDA when "there is no

sound evidence, in fact, not even an indication that it will result in an improvement in the health of most of us" (p. 37). Gourlie (1995), in a paper on internationalization of food labels presented the food label paradox: "The more information about fat and nutrients appearing on the label, the *less* likely that information is to influence actual food consumption patterns" (p. 104).

As mentioned earlier, the research on what is effective in the foodservice industry regarding format of nutrition information is limited (Almanza, et. al. 1993, 1995; Ganem, 1990; Keegan, 1993). "Recent FDA research confirms that consumers make food choice decisions based on negative nutrients" (Cronin, F. J., Achterberg, C., Sims, L., 1994, pg. 36). Although, "the most successful approach to marketing nutrition in restaurants"...has placed "the emphasis on quality, presentation, and perceived value. Now, it seems that to promote health, operators will have to return to technical definitions" (Ganem, 1993). "If regulations that are difficult to understand, and implement are promulgated, then it is the consumer who will be shortchanged" (McVicker, 1994, p. 38).

The amount of regulations placed on the foodservice industry have increased dramatically over the past 20 years (Hulse, 1995). Bell (1993) reported "many restaurateurs chafe at the prospect of new legislation," while some operators feel it is "a burden that need not involve the restaurateur," and yet others feel it is "onerous legislation." However, not all operators oppose the legislation. The food and beverage director of Dallas' Doubletree Inn believes "if an establishment is serving the public and advertises an item as heart-healthy....You need to back up what you say" (Bell, 1993, p. 28). While the NRA prediction is that restaurants will drop nutrition statements from their

menus, others predict that public demand will override any financial concerns (Freeman, 1993).

Regardless of the day-to-day challenges the current law and proposed rule raise, opponents are concerned over the changes in FDA policy this legislation brings. The purpose of the Federal Food, Drug and Cosmetic Act, of which the NLEA is an amendment, "included the promotion of the economic regulation of food and the prohibition of any false or misleading statement on food labels and labeling" (Termini, 1991, p. 80). "The NLEA also mandated that the FDA undertake a consumer education effort to educate consumers about the new food label and the importance of diet to health....the requirements set forth in the FDA's regulations have a broader purpose than preventing false and misleading claims in food labeling" (Enforcement Policy, 1993, p. 28388). According to McNamara (1994), in the past, the role of the FDA was to police the practices of the industry. Under the NLEA regulations, the FDA was given power to determine what can be said and how it can be said. In doing so, we see a shift toward pre-clearance of industry practices where the operator must bear the burden of proof and can only make the FDA approved claims. This broadening of FDA regulatory authority was among the concerns of the Bush administration when restaurant menus were exempted (Burros, 1993).

"A concern for every restaurateur is that these guidelines for making nutrient and health claims are only the beginning" (Boger, 1995, p. 70). S. McNamara (1994), former FDA lawyer, published an article in which he indicated possible directions this new law could indicate such as requiring negative label statements on unfavorable attributes (i.e.,

high - fat) and restricting or banning bad food components, and suppression of label statements other than those with government bestowed approval. While, "proposals that the government issue positive laws or regulations warning against over-consumption of certain foods such as sugar, salt, eggs, and meat have been rejected (Schlossberg, 1978, p. 331), there is still concern about the future (Allen, 1993; Freeman, 1993). There is important regulatory reversal in the NLEA: Information which was once prohibited is now required, as in the case of cholesterol content. Additionally there are restrictions in the language that can be used, in essence the NLEA inhibits freedom of speech (McNamara, 1994).

There is alarm that the government is telling operators how to prepare their food (Bell, 1994). A recent New York Times editorial even proposed, "taxing low nutrition foods or banning commercials for snacks targeted at children" (Sampson, 1995). According to a lawyer for Public Citizen, "restaurant menus are not being regulated as no nutritional information is being required" (Keegan, 1993). "The agency does, however encourage the voluntary provision of full nutrient information for restaurant foods, even when claims are not made" (Mermelstein, 1993, p. 66). In the proposed rule the FDA acknowledged that,"small restaurants can be in full compliance by simply refraining from making claims (Although this may not be a desirable outcome)" (Food Labeling, 1993, pg. 33057). Even the American Dietetic Association is opposed to making nutrition labeling in restaurants mandatory although they encourage the voluntary provision of nutrition information within the regulation's parameters (Gatty & Blaylock, May 1992).

One may look to the solution promulgated for fresh fruits, and vegetables as

another indicator of possible future directions. There was a question over the FDA's authority to require nutrition labeling of fresh fruits and vegetables (Porter, 1993). The resulting regulation for this group is a 'voluntary' program in which at least 60% of surveyed grocery stores must provide nutrition information for 90% of the twenty most popular raw fruits, vegetables, and seafood. If less than 60% provide this information then nutrition labeling becomes mandatory for all grocery stores (Mermelstein, 1994).

In this literature review contradiction and confusion are obvious. Scientific evidence has determined there are links between diet and disease but the extent of this link has not yet been fully revealed. The general public is fed up and confused with nutrition news and initiatives that require disregarding the aesthetic and sensual qualities of food in favor of nutritive content, and health promoting qualities. The restaurant industry has been caught amidst nutrition opinion polls, actual consumer behavior, and governmental regulation without benefit of investigative research to indicate strategies that will best serve the nutrition information needs of the public while preserving the intangible qualities and creative freedoms that are not only valued by consumers, but essential in an extremely competitive industry. Millions have been spent developing the NLEA in the hope it will increase nutrition awareness, knowledge and ultimately the health of Americans, yet there is no conclusive evidence that the mere presence of the information is enough to fulfill this hope.

CHAPTER III

METHODOLOGY

POPULATION AND SAMPLE

The population chosen for this research project were independent quick service, table or full service restaurants, cafeterias and caterers that were either current or prospective members of the Tennessee Restaurant Association (TRA). The sample selected from this population were those restaurants operating in Tennessee cities with populations greater than 25,000. Reasons for selecting this segment of the population include state-wide representation, identifiability, and indications from other research that consumer demand and interest in the nutritional content of restaurant meals may be greater in metropolitan areas (NRA, 1994c; Huss & Gilmore, 1995). Therefore it was reasoned that this segment might experience a greater impact from the NLEA than their rural counterparts.

Current and prospective members of the TRA were identified through a listing provided by that organization. Prospective members were identified using a list of foodservice permits issued by the Tennessee Department of Health. The TRA obtains this information every two years and eliminates foodservice operations located in prisons; elementary, intermediate and high schools; sports concessions and mobile vending operations; hospitals and extended care facilities. The size of the population is approximately 660, based upon information from the TRA. For this study an independent

restaurant was defined according to the Food and Drug Administration's designation of 10 units or less (Food Labeling, 1993) with no parent company or corporate involvement.

Sample Selection

A stratified sample was randomly selected from cities in the state of Tennessee having populations greater than 25,000 people. These cities were chosen to achieve a sample with statewide representation. Appendix A details the cities, their population according to the 1990 census (H. M. Gorsha Co.,1995), the number of restaurants in each city according to TRA membership and prospective membership lists, and the proportion of the sample represented. Based on a population of 660 this is estimated to be 243, given a sampling error and confidence limit of 5% ($p = .05$) (Wunsch, 1986).

The sample was selected from the TRA lists based on the city stated on the restaurant's mailing address. Operators that chose to list a town contained within a larger city as their mailing address were excluded due to a lack information for all cities (for example Antioch, TN is located within and adjacent to Nashville, TN). Four cities had less than ten restaurants, bordered larger cities and were considered part of the metropolitan statistical area, in these instances the cities were combined with the larger city in the region. The following merges were performed: Germantown and Bartlett with Memphis, Oak Ridge with Knoxville, and Hendersonville with Nashville.

Selection of a random sample was accomplished via blind draw. The sample was stratified according to the proportion of restaurants per city, or area as in the case of Knoxville, Nashville and Memphis. All establishments in the population were checked

for viability through telephone information services. Establishments without working phone numbers were removed from the sample as no longer in operation.

Since this research required human subjects, review and approval by the Human Subjects Research Review Committee was obtained prior to data collection (Appendix B)

Sample Identification

Eligibility of the sample group will be further limited according to "site" or place of employment. Since this research was concerned with the activities of the restaurant in regard to the identification of food items based on nutritional content, and the impact of the NLEA it was not desired to survey two or more persons employed at the same location, or two or more identical restaurants owned by the same person(s). The desired contact person was the owner or general manager of each location. In cases where the contact person was not known, efforts were made via telephone to identify the appropriate person in order to increase the response rate (Paxson, 1995).

PILOT TESTING

A pilot test was conducted with independent restaurateurs in the city of Knoxville that were not in the sample. Additional reviews of the instrument were provided by three professors in the Hotel and Restaurant Administration Program, Department of Nutrition, and statisticians from the University of Tennessee Computing Center. Feedback was

provided regarding clarity, layout, and reliability. Revisions were made based on the results of the pilot test and the other reviews.

INSTRUMENT

The research instrument is provided in Appendix C. The survey layout was a six page booklet with four pages of content. The questionnaire was administered by mail and completed without researcher assistance, although directions were provided. The survey consisted of five sections:

SECTION 1 A cover letter requesting participation, explaining the research purpose, uses of the data, and how to obtain a copy of the results along with a guarantee of confidentiality and anonymity of response.

SECTION 2 Addressed demographic information regarding establishment type.

SECTION 3 Established current practices, terminology and sources of information used in Tennessee foodservice operations to identify menu items based on nutritional content.

SECTION 4 Gauged operator awareness and knowledge of the proposed law.

SECTION 5 Investigated plans for compliance with the proposed legislation and estimated initial costs of compliance.

CONFIDENTIALITY

Each member of the sample was assigned a number to be used in the identification of non-respondents for follow-up. The number appeared on the front left hand corner of the reply envelope which was destroyed immediately upon verification of receipt. Verification of receipt was accomplished via check-off sheets, listing numbers only, thereby eliminating the possibility of matching responses to respondents. A list generated for result requests was kept separate from the completed surveys and check-off sheets. The master list of names, addresses, phone numbers and assigned numbers was stored in a locked file in the division of Hotel and Restaurant Administration offices. Access to the research sample information was limited to the principal investigator and the Thesis Committee.

CONTROLLING FOR NON-RESPONSE ERROR

Ten percent of non-respondents were contacted and responses obtained by phone interview (n = 17). Establishments were randomly selected from the check-off sheets by choosing every tenth number prior to beginning the phone survey. In the event that contact could not be made the process of choosing every tenth number from the check off list was repeated until 10% of non-respondents were contacted. Efforts were made to maintain the stratification ratios used initially, however due to time availability and schedule conflicts this was not possible.

The interview consisted of a request to speak to the owner or manager on duty, an

explanation of the purpose of the call, request for participation and a guarantee of anonymity and confidentiality of responses. The survey was then read verbatim and responses to each item were recorded on unmarked survey instruments. Responses were used to determine if differences exist between the responding group and the non-responding group.

SCORING

The survey was scored using a numerical scale. Items in Section I and IV requesting one choice be made were assigned consecutive numbers for each item option. Items requiring a yes / no response throughout the survey were given one for yes and two for no. In Section II where multiple selections were requested for each item a score of one was used to indicate non-selection and two was assigned to indicate selection. Knowledge questions in Section III were assigned a one if correct and a two if incorrect. Additionally in the event of a partially correct answer for the three part response item a score of three was used. Responses to "other" options throughout the survey were logged and grouped according to commonality of response.

DATA COLLECTION

Dillman's Total Design Method for mail and telephone surveys (as cited in Paxson, 1995) was used as a model for the survey design. Data collection occurred during

the months of November, December and the first week of January. The initial mailing included a cover letter (Appendix D) stating the purpose of the survey, guaranteeing confidentiality and anonymity, and emphasizing participation, the survey (Appendix C), and a self-addressed, postage-paid return envelope.

Twelve days after mailing the questionnaire a follow-up postcard (Appendix E), emphasizing the importance of participation and encouraging response, was sent to all respondents that had not replied as indicated by the check-sheets. The initial plan called to mail the postcard ten days after the initial survey had been sent, because this day fell during Thanksgiving weekend it was postponed until the following Monday.

Ten days after the post-card mailing a second questionnaire, reply envelope, and follow-up letter with a slightly more insistent tone, (Appendix F) was sent to participants whose responses had not been received. It had been planned that ten days after the second survey mailing the survey period would be closed and 10% of the non-respondents would be contacted and surveyed by telephone. Because of the low response rate, the possibilities of responses being delayed in the holiday mail, and some respondents not having the opportunity to respond during the holidays, it was decided to wait until after January 2, 1996 to begin the call back. Call back contacts were made to establishments between January 3, 1996 and January 10, 1996. Calls were made between the hours of 8:00 a.m. to 11:00 a.m., 2:00 p.m. to 5:00 p.m. and 7:00 to 11:00 p.m. Eastern Standard Time to avoid peak service times. One survey arrived after the data collection period was closed. It was not included in the data analysis.

Efforts made to increase response rates included a) personalization of mailed

materials; b) postage paid return envelopes; c) endorsement from a professional organization, use of university letterhead, and original signatures on all letters; d) follow-up mailings; e) assurance of anonymity and confidentiality; f) statement of importance of research; and g) an offer to share results.

STATISTICAL TESTING

Data was analyzed using the Statistical Analysis System (SAS) version 6.0 on the University of Tennessee's UNIX mainframe computer. Assistance was provided by the Department of Computing and Administrative Systems .

Analyses consisted of frequency and percentage for all questions, to determine the typical responding establishment and common practices regarding the provision of nutrition information by responding restaurants.

Hypothesis testing was planned to be conducted using Chi-square analysis. Due to the low response rate and incompleteness of some surveys this was not a viable method of data analysis. As an alternate statistical procedure contingency - tables were constructed to investigate suspected relationships.

CHAPTER IV

RESULTS

Two hundred forty-three surveys were sent to participants as detailed in Chapter III. Fourteen were returned undeliverable, and four establishments responded without returning the survey stating they did not feel qualified. The response rate for the initial mailing was 17%, after sending the follow-up post card the rate increased slightly to 18%. The dispatch of the second survey resulted in a response rate of 24%. The delay in the call back period allowed four more restaurateurs to respond bringing the final response rate to 25%. One survey arrived after the data collection period had closed and was not included in the sample.

Due to the low response rate, all returned surveys were used for statistical analysis. Excluding the knowledge questions, in which blank items were considered incorrect answers, 19 (33%) of the returned survey contained one or more unanswered items. Because of the two prior conditions the Chi-square analysis planned for Hypotheses II, III, and IV was not a valid test. As an alternative statistical procedure contingency-tables were constructed to establish suspected relationships.

The call back period consisted of obtaining the desired information from 10% of the non-respondents (n = 174). Methods described in Chapter III were followed to identify the restaurants to be called. Approximately 40 telephone calls were made to

obtain 17 completed surveys. Reasons for not responding during the mail period and/or not participating during the call back period were not solicited.

The typical responding establishment as determined by frequency distribution and percent response was a single unit tableservice restaurant with menu revisions made on an annual basis, at a production cost of less than $50 for 100 copies. Annual food sales for the typical respondent ranged from $100,000 - $499,999 and food sales resulting from items with nutrition information generate between 0% - 10% of total food sales. The demographic data of respondents is detailed in Tables 1 and 2.

Comparative analysis of the responding and non-responding groups revealed only minor differences in frequency distributions for all variables. However, the very low response rate increased the survey's margin of error to an undeterminable amount. Additionally, the interaction between the interviewer and non-response group may have biased their responses.

The data for the sample is not representative of the population. The results and discussion presented are valid for the sample only and may not be generalized to any restaurants outside of this group.

DEMOGRAPHIC DATA

Organizational Size

A majority of the sample (88%) indicated they were single unit operations. Eleven percent selected the multiple-unit option to describe the size of the organization. The

TABLE 1. DEMOGRAPHIC DATA FOR RESPONDING RESTAURANTS

	Frequency	Percentage
Organizational Size		
Single Unit	49	88%
Multiple Units	6	11%
Other	1	2%
Type of Establishment		
Quick Service Restaurants	6	11%
Table Service Restaurants	40	71%
Cafeteria	4	7%
Other	6	11%
Frequency of Menu Changes		
Weekly	4	7%
Monthly	4	7%
Quarterly	3	5%
Biannually	10	18%
Annually	19	34%
Other	16	29%
Cost of Producing 100 Menu Copies		
Less than $50	18	33%
$50 - $99	6	11%
$100 - $149	3	13%
$150 - $199	5	9%
$200 - $249	2	4%
$250 - $299	6	11%
$300 - $349	2	4%
$350 & Over	8	15%

TABLE 2. ANNUAL SALES VOLUME DATA FOR RESPONDING RESTAURANTS

	Frequency	Percentage
Annual Food Sales Per Restaurant		
Under $100,000	7	12%
$100,000 - $499,999	21	37%
$500,000 - $999,999	14	25%
$1,000,000 - $1,499,999	6	11%
$1,500,000 - $1,999,999	3	5%
$2,000,000 - $2,499,999	4	7%
$2,500,000 - $2,999,999	0	0%
$3,000,000 & Over	2	4%
Estimated Annual Percent of Sales From Food Items with Nutrition Information		
0% - 10%	42	78%
11% - 20%	5	9%
21% - 30%	1	2%
31% - 40%	1	2%
41% - 50%	0	0%
51% - 60%	0	0%
61% - 70%	0	0%
71% - 80%	0	0%
81% - 90%	2	4%
91% - 100%	3	6%

largest responding organization operated five units, followed by two organizations with three restaurants, and three restaurateurs reported having two sites. One respondent stated they were a public company, but did not indicate the number of restaurants in operation.

Establishment Type

Four options were presented for respondents to identify their operations by service type. Table service restaurants constituted 71% of all respondents for this variable; 11% of the sample indicated they were quick service restaurants. This relatively low percentage is not surprising considering the predominance of chain establishments in this segment of the market. Cafeterias also represented a small proportion of the sample (7.1%). Respondents choosing the "other" option (11%) described their restaurants as follows: two used the term bar, or bar and grill; one buffet; one reported a combination of dine-in, take-out, and catering in the proportions of 50%, 35%, and 15% respectively; and one establishment was reported to be a deli.

Frequency of Menu Changes

Thirty-four percent of restaurateurs in the sample reported changing menus annually (Table 1). Twenty-nine percent of operators surveyed chose the "other" option. These responses were grouped into four categories: Daily, Varies, Infrequently, and Never. Five restaurateurs indicated changing at least one menu item daily, two of the five also indicated making changes in their menu according to another option. Six respondents gave imprecise answers that were classified under the "varies" frequency of menu

changes. The "varies" response classification reported changes being based on: fluctuations in wholesale prices, "as needed," "only when necessary," "random but seldom," "only when new items are added," and "change when needed." The four responses classified as infrequently were: "Every three years," "every two years," "every two or three years," and "every 1 - 1.5 years," and three restaurateurs reported "never" changing their menus. Eighteen percent reported making menu changes twice per year, while 11% of the sample were divided almost equally among the quarterly, monthly, and weekly categories.

Costs of Menu Production

The survey presented eight options for operators to describe the cost of producing 100 menu copies. Thirty-three percent of the sample reported costs of less than $50 dollars, the next largest category (15%) was $350 and over. One operator responding to this option added that $350 was one third of the cost. Thirteen percent reported menu production costs between $100 - $149. The categories of $50 - $99 and $250 - $299 were both selected by 11% of the sample. One respondent reported having a menu board and selected no specific category.

Annual Food Sales

Annual total food sales and sales from items identified with nutrition information are shown in Table 2. Responses to the annual food sales per restaurant item show 74% of the responding establishments had sales less than $1,000,000 with the largest group

(37%) receiving revenues between $100,00 - $499,999 from food. The second largest category (25%) was composed of establishments with food sales between $500,000 and $999,999. Twelve percent of the respondents reported sales of less than $100,000. Establishments with annual food sales between $1 million and $2 million represent 16% of the sample, while 7% of the sample reported food sales between $2 and $3 million. Restaurants experiencing annual sales equal to or in excess of $3,000,000 constituted 4% of the sample.

The majority of operators (78%) reported sales of food items identified with nutrition information to be in the 0% - 10% range (Table 2). Ten percent of the sample reported having sales from items with nutrition information in excess of 80% of total sales. Nine percent reported nutritionally identified items generated between 11% - 20%, while 2% reported sales in both the 21% - 30% and the 31% - 40% classes.

NUTRITION INFORMATION IN RESTAURANTS

To determine the prevalence of nutrient content and health claims in independently operated Tennessee restaurants, items were included to investigate the use of nutrition statements and terms as a promotional technique. Specifically, the location of these terms, the terminology in use, and the information sources for basing nutrient content and health claims were of interest. Respondents may have chosen more than one option for the items addressing location of nutrition information in the establishment, sources used for basing claims, and the terminology in use. This, in part, explained

discrepancies between response rate percentage for provision of nutrition information as compared to the percentage distribution for location, sources, and terminology of nutrition information.

When asked if nutrition information was used to promote any food items sold in the restaurant nearly three quarters of the sample (72%) responded negatively (Table 3). Over 50% of the subjects stating nutrition information was not used to promote food items also checked one or more of the nutrition terms in the questionnaire. This discrepancy may have been due to respondent interpretations of the word promote or use of the terms in a non-nutritional manner.

Location of Nutrition Information in the Restaurant

The item regarding location of nutrition information in the restaurant received a total of 53 responses for five possible options (Table 3). The most prevalent location or method of providing nutrition information inside the restaurant was by the service staff (37%). The "other" option received the second highest number of responses (32%) however, 88% of this group stated that nutrition information was not provided or displayed. The remaining 12% that chose this option stated that nutrition information was displayed on labels on the product, on packaged goods, and on the menu board. The information on menu option was selected by 16% of the sample with one operator indicating that they utilized a special section on the menu for nutritionally oriented items. Nine percent of the operators indicated using point of sale materials for nutrition information. No operators reported using a separate menu.

TABLE 3. PROVISION OF NUTRITION INFORMATION

	Frequency	Percentage
Nutrition Information Used to Promote Food Items		
Yes	16	28%
No	41	72%
Location of Nutrition Information†		
Point of Sale	5	9%
Information on Menu	9	16%
Information Provided by Service Staff	21	37%
Separate Menu	0	0%
Other	18	32%
Sources for Nutrition Information†		
Health Organization	3	5%
Suppliers	17	30%
Nutrition Consultants	1	2%
Cookbooks / Recipes	7	12%
Chef	8	14%
Food Labels	16	28%
Government Information	0	0%
Other sources	11	19%

† Respondents may have chosen more than one option.

Sources of Nutrition Information

Responses to the survey item addressing sources of nutrition information showed that the survey group utilized information from suppliers most often (30%), followed by information from food labels (28%), "other" sources (19%), chef / cook (14%), cookbooks or recipes (12%), health organizations (5%) and nutrition consultants (2%) (Table 3). None of the sample reported using government information such as Handbook 8, the Food Guide Pyramid, or the Dietary Guidelines. Explanations provided for the "other" option included seven who stated "none" or N/A, one restaurateur reported conducting a "personal study", two utilized the services of St. Mary's Hospital "Eat Hearty" Program, and one operator stated: "We make no claims about the health or nutritional benefits of our food - Just that it's good."

Nutrition Terminology

Respondents were presented with a list of twenty-three nutrition terms that are commonly used in restaurants, and / or regulated by the NLEA. Instructions requested all terms used in the operation be indicated, and any terms not listed be added. A total of eighteen terms were reported to be in use by restaurants in the sample group. Table 4 lists the terms reported to be in current use. The most commonly appearing term in restaurants was fresh, selected by 35%. Seventy percent of the respondents that chose this option stated in a previous question that nutrition information was not used to promote food items in their establishment. While fresh is neither a nutrient content or health claim the FDA has placed restrictions on it's usage.

TABLE 4. NUTRITION TERMINOLOGY CURRENTLY IN USE †

	Frequency	Percentage
Terminology in Use		
Spa cuisine	1	2%
Low-fat	14	25%
Low-calorie	11	19%
Fat-free	17	30%
Light	10	18%
Lean	5	9%
Healthy	8	14%
Fresh	20	35%
Low-sodium	4	7%
Reduced	2	4%
Low-cholesterol	5	8%
Heart-healthy	5	9%
Cholesterol Free	5	9%
Sugar-free	6	11%
Sodium-free	4	7%
Extra Lean	7	12%
Good source	2	4%
Symbols	3	5%
Other Terminology	10	18%

† More than one response may have been chosen.

Fat-free and low-fat were selected by 30% and 25% of the sample group respectively, making these the second and third most commonly used terms by restaurant operators responding to this survey. The "other" option and the term light were each selected by 18%. Statements made to describe the "other" option included: six operators remarked that none of the terms were used; two used the terms vegetarian; one meatless; one stated that fat-free was used for salad dressings only; and one owner / manager stated, "There is practically no information on nutrition values." Most of the terms selected as being in use were nutrient content claims, only two terms that are considered health claims were chosen, healthy (14%), and heart-healthy (9%). Healthy is only considered a health claim in certain circumstances.

AWARENESS AND KNOWLEDGE OF THE NLEA

As a part of assessing potential compliance with the restaurant labeling proposal restaurateurs were queried about their awareness and knowledge of current and proposed NLEA regulations, for restaurants. Eighty-three percent of the sample reported having no knowledge of this legislative work prior to the survey (Table 5). It was not surprising that, 87% of the sample reported experiencing no affect from the proposal to include restaurant menus into the Act.

Five open-ended questions were included on the survey to gauge operator knowledge of the law (Table 6). The questions were taken from a NRA publication summarizing the NLEA as it pertains to restaurants (NRA, 1993). This summary was

TABLE 5. AWARENESS, EFFECT, PLANS AND ESTIMATED COSTS FOR THE NLEA OF 1990 AND PROPOSAL

	Frequency	Percentage
Awareness of Current and Proposed NLEA Regulations		
Aware Prior to Survey	10	18%
Unaware Prior to Survey	47	83%
Effect of Proposal to Include Restaurant Menus		
Has had an effect	7	13%
Has had no effect	48	87%
Plans for Compliance With Menu Proposal		
Already in Compliance	2	5%
Will substantiate current claims w/o menu revisions	7	17%
Will revise menu to include substantiated claims	6	14%
Will revise menu by removing claims	6	14%
Will include nutrient values w/o making any claims	1	2%
Will make no changes	12	29%
Other	8	19%
Estimated Total Compliance Costs		
> $250	8	16%
$250 - $499	2	4%
$500 - $999	3	6%
$1,000 - $1,499	1	2%
$1,500 - $1,999	0	0%
$2,000 & Up	3	6%
Have no basis to estimate	33	66%

TABLE 6. NLEA KNOWLEDGE QUESTIONS AND CORRECT RESPONSE

	Frequency	Percentage
QUESTION 1		
Which food items in a restaurant are required to have nutrition information available for the customer or regulating agency?		
Items which have a nutrient content or health claim made on non-menu item labeling.		
Correct Response	2	4%
Incorrect Response	55	97%
QUESTION 2		
The FDA's definition for a main dish is ?		
6 oz. weight, w/ at least 40 g (about 1.4 oz) each of the four food groups.		
Correct Response	1	2%
Incorrect Response	56	98%
QUESTION 3		
When symbols are used to highlight food items based on nutritional attributes what else is required to be present ? *An explanatory statement*		
Correct Response	4	7%
Incorrect Response	53	93%
QUESTION 4		
What is the maximum level of fat allowed in a food item labeled "low -fat"?		
Less than or equal to 3 g per reference amount		
Correct Response	2	4%
Incorrect Response	55	97%
QUESTION 5		
Please list the three categories of nutritional claims for use in restaurants as identified by the FDA? *Nutrient content claims, Health claims, Dietary guidance*		
Correct Response	1	2%
Incorrect Response	56	98%

released in 1993 and made available to restauratuers nation-wide. It is available in Tennessee through the TRA. An overwhelming majority of the sample (≥93%) did not answer the questions correctly. The question receiving the most correct responses (7%) was question 3 -- When symbols are used to highlight food items based on nutritional attributes what else is required to be present. Four of the 57 respondents knew that an explanatory statement is required. Appendix G lists the incorrect responses received for each of the five knowledge questions.

COMPLIANCE PLANS AND ESTIMATED COSTS

A paragraph providing an overview of the Act and highlighting special provisions for restaurants was included in the survey. After reading the paragraph operators were asked to select an option that would best describe the method of compliance their establishment would take. Forty-two (74%) of the returned surveys responded to this question, 29% of those stated they would make no changes to comply with the law (Table 5). Nineteen percent chose the "other" option. Individual responses to this are found in Appendix H. Seventeen percent indicated that they will obtain documentation for any claims made without revising the menu. The options of revising the menu to include substantiated claims, and revising the menu by removing any claims, were each selected by 14% of those responding.

Calculations for the item of estimated total compliance expenses (Table 5)

showed that 66% considered they had no basis upon which to estimate this cost. Sixteen percent indicated that compliance expenses would be less than $250.

TESTS OF RESEARCH HYPOTHESIS

Five research hypotheses were examined to determine intentions to comply with the NLEA, and the proposal to amend it, and factors effecting the intention to comply. Due to the low response rate conclusive statements regarding the acceptance or rejection of the following hypotheses were not possible. However, statements were made to summarize each of the hypotheses.

Hypothesis I: A majority of operators (>50%) will comply with the NLEA law by removing nutrition claims and terminology from their menus.

Respondent choices for method of NLEA compliance reveal that 14% will remove nutrient content and / or health claims from their menu as a method of compliance.

Hypothesis II: The proposal to include restaurant menus under the NLEA will not result in more availability of nutrition information in independently operated restaurants.

Eighty-eight percent of the responding operators reported experiencing no effect from the menu proposal (Table 7). Of those 88%, 17% indicated they would remove any nutrient or health claims from their menus, and 25% indicated they would make no changes to comply with the law. Sixty percent of the sample that reported they had experienced an effect indicated they would make no changes to comply with the law.

Table 7. Table for Hypothesis II: Effect of NLEA by Compliance Option

Effect	Compliance Option*							
Frequency Percent Row Percent Col Percent	1	2	3	4	5	6	7	Total
Effect	0 0.00 0.00 0.00	2 4.88 40.00 33.33	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	3 7.32 60.00 25.00	0 0.00 0.00 0.00	5 12.20
No Effect	2 4.88 5.56 100.00	4 9.76 11.11 66.67	6 14.63 16.67 100.00	6 14.63 16.67 100.00	1 2.44 2.78 100.00	9 21.95 25.00 75.00	8 19.51 22.22 100.00	36 87.8
Total	2 4.88	6 14.63	6 14.63	6 14.63	1 2.44	12 29.27	8 19.51	41 100.00

* Codes for Compliance Option

1= Already in compliance
2= Will substantiate current claims w/o menu revisions
3= Will revise menu to include substantiated claims
4= Will revise menu by removing claims
5= Will include nutrient values w/o making claims
6= Will make no changes
7= Other

Hypothesis III: Intention to comply with the proposed law, by using terminology in accordance with the regulations, is positively related to the percentage of sales generated by food items with nutrition information.

Seventy-eight percent of the respondents indicated that they received less than 10% of their total sales from items with nutrition information. Construction of a frequency table for this portion of the sample and the compliance option chosen reveals that 17% choose to comply by removing any nutrition terminology from their menu (Table 8). Those respondents stating they experienced sales of nutrition related items in the higher ranges revealed no distinguishable relationship.

Hypothesis IV: Intention to comply with the proposed law, by providing nutrition information in accordance with the law, is inversely related to the cost of implementation.

Cross tabulation of the chosen compliance option and estimated total compliance costs of the respondents revealed no pattern to support this hypothesis (Table 9). A majority (66%) of the operators who responded indicated that they had no basis to estimate the total costs of compliance.

Hypothesis V: The majority of independent restaurant operators in Tennessee (>50%) do not have adequate knowledge regarding the NLEA's provision for restaurants.

Responses to the five knowledge questions on the survey show that less than eight percent have knowledge regarding any of the items. None of the operators were able to answer all of the questions correctly.

Table 8. Table for Hypothesis III: Reported Sales Level of Items with Nutrition Information by Compliance Option

0% - 10% SALES LEVEL

			CUMULATIVE	
OPTION*	FREQUENCY	PERCENT	FREQUENCY	PERCENT
1	1	2.9	1	2.9
2	7	20.0	8	22.9
3	4	11.4	12	34.3
4	6	17.1	18	51.4
5	0	0	0	0
6	10	28.6	28	80.0
7	7	20.0	35	100.0

Frequency Missing = 7

* Codes for Compliance Option

1= Already in compliance

2= Will substantiate current claims w/o menu revisions

3= Will revise menu to include substantiated claims

4= Will revise menu by removing claims

5= Will include nutrient values w/o making any claims

6= Will make no changes

7= Other

Table 9. Table for Hypothesis IV: Compliance Option by Implementation Cost

Cost	Option*							
Frequency Percent Row Percent Col Percent	1	2	3	4	5	6	7	Total
< $250	1 2.38 12.50 50.00	3 7.14 37.50 42.86	2 4.76 25.00 33.33	1 2.38 12.50 16.67	0 0.00 0.00 0.00	0 0.00 0.00 0.00	1 2.38 12.50 12.50	8 19.08
$250 - $499	1 2.38 50.00 50.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	1 2.38 50.00 16.67	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	2 4.76
$500 - $999	0 0.00 0.00 0.00	0 0.00 0.00 0.00	1 2.38 33.33 16.67	0 0.00 0.00 0.00	0 0.00 0.00 0.00	1 2.38 33.33 8.33	1 2.38 33.33 12.50	3 7.14
$1000 - $1499	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	0 0.00 0.00 0.00	1 2.38 100.00 8.33	0 0.00 0.00 0.00	1 2.38
$2000 & Up	0 0.00 0.00 0.00	1 2.38 33.33 14.29	0 0.00 0.00 0.00	1 2.38 33.33 16.67	0 0.00 0.00 0.00	0 0.00 0.00 0.00	1 2.38 33.33 12.50	3 7.14
No Basis To Estimate	0 0.00 0.00 0.00	3 7.14 12.00 42.86	3 7.14 12.00 50.00	3 7.14 12.00 50.00	1 2.38 4.00 100.00	10 23.81 40.00 83.33	5 11.90 20.00 62.50	25 59.52
Total	2 4.76	7 16.67	6 14.29	6 14.29	1 2.38	12 28.57	8 19.05	42 100.00

* See Table 8 (p. 73) for Compliance Option coding.

CHAPTER V

DISCUSSION AND RECOMMENDATIONS

The existing regulations and proposals for the restaurant portion of the NLEA have been met with mixed response. Labeling proponents, while well intentioned, do not seem to have taken into full consideration the social and recreational functions provided by restaurants that can confound efforts to market meals that are nutritionally oriented (Weiss, 1994). Restaurateurs are loathe to have yet another aspect of their business regulated by government mandates; especially when information from a related, yet distinctly different, industry is used to formulate those regulations (Keegan, 1993; Warshaw, 1993). Independent restaurateurs in particular have had predictions and inferences made regarding the effect the NLEA menu proposal will have on their provision of nutrition information, without the benefit of research to support these conclusions (Paul, et al, 1991). The goal of this survey was to provide a basis on which to evaluate these predictions of compliance, to gain an understanding of the level of knowledge and awareness independent restaurateurs in Tennessee have on the current and proposed law, and the potential impact such a regulation may have.

Despite numerous articles in trade magazines, journals, and newspapers, along with press releases from various consumer interest and industry groups, a very large proportion of the sample (82%) was unaware of current and proposed NLEA requirements. An obvious relationship was revealed between the effect of this legislation and the percentage (87%) that commented the proposal had no effect on their operation's

provision of nutrition information. While articles published in the past several years indicate some restaurants are altering menus to provide nutrition information in accordance with the proposed law few (5%) have done this in the sample surveyed, and a considerable number (40%) have no intention of compliance through the provision of nutrition information in the form of nutrient content and health claims.

The compliance method of choice by the sample may cause consternation among FDA officials and other proponents of restaurant menu labeling. Analysis revealed that 29% of the sample will make no changes to comply with the law. This may indicate two possible routes these operators have taken. The first being changes have already been made in anticipation of the menu proposal and the operations are in compliance as the current regulations are understood. The other option is that these operators are not making nutrient content or health claims and do not intend to begin. In the proposed rule the FDA acknowledged that," small restaurants can be in full compliance by simply refraining from making claims (Although this may not be a desirable outcome)" (Food Labeling, 1993, pg. 33057). This parenthetical statement may be a basis of concern for opponents of nutrition labeling in restaurants. The intention of this remark may have been to caution operators to anticipate patron concerns, or it may portend further, more stringent regulations for the industry if operators do comply by refraining from making nutrition claims.

Several sources have made the statement that rather than expend the time and money to comply, independent restauranteurs will simply remove nutrition claims from their menus (Allen, 1993; Keegan, 1993; NRA, 1993, 1993b). This is true to an extent,

but more to the point is the fact that few independent operators, in the sample surveyed (28%), make any type of nutrition statements on their menu. Comments made by this sample show that claims are being made on items such as beverages, condiments (i.e. fat-free salad dressings), and prepackaged items.

Data from surveys of both independent and chain restaurants indicate similarly that the most common claims are made on diet beverages, sugar substitutes, caffeine-free beverages, margarine and vegetarian entrees (NRA, 1994d). This illustrates that an effort is being made on the part of restaurateurs to provide the nutritionally oriented foods consumers desire. Also, these items may be the easiest and most economically feasible for which to provide nutrition information. However the Surgeon General's 1988 request that "wherever food is served...it should reflect the principles of good nutrition....and improvements in the overall nutritional balance of meals served..." should be made (USDHHS, 1988) is not being filled. This may not be a part of the NLEA regulation's but it is one of the statements that preceded the Act and served as an impetus for it's enaction.

Improvements have been made as evidenced by the NRA research. However, it may not be enough for the consumer activist groups who call for measures that are perhaps more extreme than the American public is ready for in their dining experience (Griffith, 1995). Several of the operators in both the sample and in the call back group made statements to the effect that their clientele is not particularly interested in nutrition.

The lack of interest in providing nutrition information by the sample is further illustrated by the percent of sales generated by food items identified with such information. Seventy-eight percent of the respondents reported experiencing sales of

nutritionally identified items between 0% -10% of total food sales. This disinterest is also found in other segments of the industry and other regions of the nation. Sneed and Burkhalter (1991) found in their study of chain restaurants, that 66% reported sales of "nutritious items" within the same range. It should be noted that the low level of sales generated by items with nutrition information may be due to not of monitoring the sales of this classification of menu items. While the monitoring issue must be considered so must consumer demand. Research on consumer selections in Midwestern restaurants (Weisbrod, et al., 1991), and nutritional requests versus accommodation, in Iowan restaurants (Huss & Gilmore, 1995) suggest that restaurants are not restricting their patrons nutritional choices, rather patrons are not making these healthier menu choices. Like other businesses, restaurants must provide goods and services desired by their consumers in order to remain in operation.

Nutrition information was reported to be provided by the service staff in more than one third of the sample. The type of training provided was not the focus of this research but was investigated by Sneed and Burkhalter (1991) who found the most often utilized method of server training in chain restaurants was on the accommodation of special requests (49%), while 36% of respondents in their study offered no nutrition training programs to service staff. Comparisons between the two studies is mere speculation, but it is doubtful if independent restaurants would exceed these levels unless their position in the market was health oriented or vegetarian in nature. This method of information provision is regulated by the original NLEA regulations (Ganem, 1993). Operators should be aware of this and caution service staff not to make nutrition related

statements, that do not have prior management approval, in menu item descriptions.

Point of sale information, the provision method initially regulated, is not a prevalent method for this sample. It may be that independent resturateurs do not invest money in developing point of sale materials for their specific recipes or food items, relying instead on materials provided by food manufacturers and suppliers at a lesser cost. This assumption is upheld by the fact most of the nutrition information obtained by the sample came from "free" sources of information such as suppliers, food labels, chef, and recipes or cookbooks. However, research by Sneed and Burkhalter (1991) on chain restaurants found their sources of nutritional information also came predominantly from food distributors, and health professional organizations.

The knowledge level of NLEA regulations exhibited by owners and managers in the sample was very low, exceeding the number of operators who stated having no prior knowledge about the law itself. This is slightly surprising because logically those operators who stated they were making claims in accordance with the law would have the knowledge to evaluate their own claims for accuracy. The individual filling out the survey may not have had the responsibility for determining and analyzing nutrition statements for accuracy. In order to determine true knowledge open ended questions were used as opposed to multiple choice or true false statements in which the respondent could guess the right answer.

In examining costs to comply with the menu proposal the FDA used the term "redesign" in relation to "simple changes", and "complex changes (Food Labeling, 1993)." Also the statement was made that these were one time costs. This may be a

simplification of the processes involved in making a menu change, especially one that may require a majority of staff members learn new skills and terminology to prepare and market the new items. Adding nutritionally modified menu items to a menu is a complex change that impacts both front and back of the house operations and requires continuous monitoring to ensure the provided nutritional information is accurate for each serving sold. This was apparently considered part of normal operating costs and not an additional expense due to the NLEA by the FDA. The survey item inquiring about the total compliance costs included three factors to indicate to what type of issues should be considered for their establishment in estimation. Possibly due to the variable costs of these examples a majority stated they could not estimate this cost.

SUMMARY AND RECOMMENDATIONS

This research was intended to gauge current practices of providing nutrition information and the impact the expansion of the Nutrition Labeling and Education Act would have on these practices in independent restaurants in Tennessee. Results indicate that this sample will not experience a significant effect as long as compliance can be attained by refraining from making nutrient content or health claims. The majority of the sample may already be in compliance because few operators indicate making any type of nutrition related statements. It cannot be said that the NLEA proposal will increase the amount of nutrition information in this sample. While this is not stated overtly as a goal of the law, there are hints to this effect and it is one of the motivations behind the groups

that sued the FDA over the menu exemption (Allen, 1993; Keegan, 1993). These groups are skillful at garnering media attention and have influenced the FDA in several policy decisions affecting the industry (Oleck, 1994).

Restaurateurs need to become more aware regarding the NLEA and other legislation that affects the industry. Through awareness operators will have the opportunity to inform policy makers, in a timely manner, regarding the demand and importance placed on nutrition issues by patrons of their establishments. Also pertinent information about the advantages and disadvantages of various types of labeling schemes and formats can be shared thereby ensuring the formulation of practical and applicable regulations. Additionally awareness of legislative issues is another way of staying abreast of consumer concerns, and it provides an opportunity for proactive rather than reactive management.

FURTHER RESEARCH

This exploratory research has laid the ground work to further determine the state of nutrition in independently operated restaurants. Much of the research that has been done up to this point has been conducted with chain or franchise establishments because of the relative ease of identification. However, 75% of the restaurant establishments in America are estimated to be independently operated units yet there is little aggregate data about the customers who frequent these establishments and their nutrition concerns. Also, research needs to be conducted to determine the nutrition attitudes of the owners and / or

managers of this population. This research revealed that the nutrition terminology regulated by the NLEA is being used in these establishments but did not assess the accuracy of this usage. This is another area needing further research. Still another topic for research in this area is the training provided to service staff and kitchen personnel in regard to preparation and marketing of nutritionally related items. Finally the practice of monitoring the sales of items with nutrition statements or claims in independent restaurants is a topic for research to aid in determining if there is an unrealized demand in these establishments.

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APPENDICES

APPENDIX A

TENNESSEE CITIES AND POPULATIONS USED IN SAMPLE STRATIFICATION

APPENDIX A.

TENNESSEE CITIES WITH POPULATIONS GREATER THAN 25,000*

CITY	POPULATION	PERCENT OF SAMPLE
CHATTANOOGA	152,466	10.66 %
CLARKSVILLE	75,494	3.28 %
CLEVELAND	30,354	2.46 %
COLUMBIA	28,583	3.28 %
JACKSON	48,949	3.28 %
JOHNSON CITY	49,381	5.33 %
KINGSPORT	36,365	6.56 %
KNOXVILLE	192,431	23.77 %
MEMPHIS	670,219	20.08 %
MURFREESBORO	44,922	2.87 %
NASHVILLE	542,972	18.44 %

* SOURCE: H. M. Gousha Co. (1995). Tennessee Roadmap. P. O. Box 98 Comfort, Tx 78013.

APPENDIX B

CERTIFICATION OF EXEMTPION FROM REVIEW BY FULL COMMITTEE FOR RESEARCH INVOLVING HUMAN SUBJECTS

THE UNIVERSITY OF TENNESSEE
KNOXVILLE

Research Administration
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11/14/95

IRB # : 4889 A

Title : Effect of the Nutrition Labeling and Education Act of 1990 on Independent Restaurants in Tennessee

Gattis, Katherine
Nutrition
220 Jessie Harris Bldg.
Campus

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The project listed above has been reviewed and has been certified as EXEMPT from review by the Institutional Review Board.

Unless there are major changes in the experimental methods or project design, no further reporting to this office is required. The responsibility for oversight of this project becomes that of the Principal Investigator, Student Advisor (if any), and the Departmental Review Committee.

We wish you success in your research endeavors.

Sincerely,

Steven B. Pulik
Coordinator of Compliances

cc: Dr. Michael Zemel

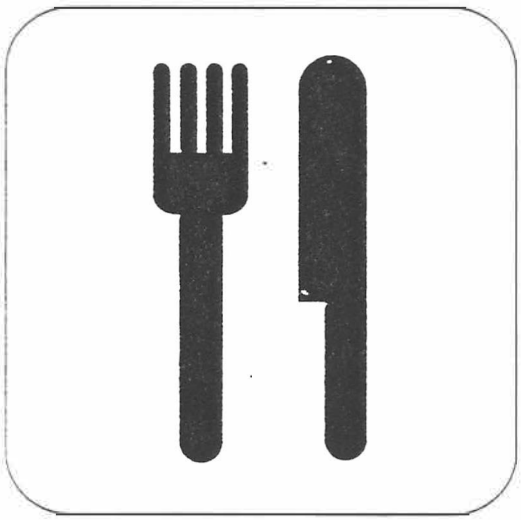
Attachment: Form A

APPENDIX C

RESEARCH INSTRUMENT

Confidential Survey

Nutrition Labeling In Restaurants



Conducted by Katherine Gattis & Dr. Mark M°Grath
through the University of Tennessee at Knoxville.
with assistance from the Tennessee Restaurant Association

NUTRITION LABELING IN RESTAURANTS: CONFIDENTIAL RESTAURANT SURVEY

Please complete this questionnaire regarding the current use of nutrition information, and the potential impact that regulation of nutrition claims in restaurants will have on your establishment. Follow the directions as you complete the survey. Please take a few minutes to complete the survey and return it in the postage paid envelope provided. Return of the completed survey constitutes consent to participate in this research. Thank you!!

SECTION I Establishment description. For each question in this section Check (✔) one choice that best describes your restaurant.

1) Establishment type:
- ____ Quick service restaurant
- ____ Table service restaurant
- ____ Cafeteria
- ____ Other (please describe) _____

2) Type ownership / organizational size:
- ____ Independent, single-unit operation
- ____ Independent, multi-unit -- number of units _____
- ____ Other (please describe) _____

3) Annual volume of food sales per restaurant:

____ Under $100,000	____ $1,000,000 - $1,499,999	____ $2,500,000 - $2,999,999
____ $100,000 - $499,999	____ $1,500,000 - $1,999,999	____ $3,000,000 & Over
____ $500,000 - $999,999	____ $2,000,000 - $2,499,999	

4) What percent of annual food sales results from items identified with nutrition information:

____ 0% - 10%	____ 21% - 30%	____ 41% - 50%	____ 61% - 70%	____ 81% - 90%
____ 11% - 20%	____ 31% - 40%	____ 51% - 60%	____ 71% - 80%	____ 91% - 100%

5) How often are menus changed:

____ Weekly	____ Monthly	____ Quarterly
____ Bi-annually	____ Annually	____ Other (Please describe) _____

6) What is the cost of producing 100 copies of your menu :

____ Less than $50	____ $100 - $149	____ $200 - $249	____ $300 - $349
____ $50 - $99	____ $150 - $199	____ $250 - $299	____ $350 & Over

SECTION II Please answer the following questions regarding the use of nutrition information in your establishment.

1) Do you use nutrition information to promote any food items sold in your restaurant?
___ YES ___ NO

2) Where in your establishment is nutrition information provided or displayed? Check all that apply.
___ Point of sale information (i.e. posters, table-tents, pamphlets)
___ Information on menu (i.e. descriptive copy, symbols, special section, nutrient values)
___ Information provided by service staff
___ Separate menu for items identified with nutrition terminology.
___ Other (Please describe) _____

3) Please check all of the words or phrases used to help patrons select food items based on nutritional attributes at your establishment. Please add any terms used that are not listed.

___ Spa cuisine/fare	___ Healthy	___ Cholesterol-free
___ Low-fat	___ Fresh	___ Sugar-free
___ Less	___ Low-sodium	___ Sodium-free
___ Low-calorie	___ More	___ High
___ Fat-free	___ Reduced	___ Extra lean
___ Light (any spelling)	___ Low-cholesterol	___ Good source of _____
___ Lean	___ Heart healthy	___ Calorie free

___ Symbols (i.e. hearts, apples, co. logo)
___ Other (Please specify)_____

4) What source(s) do you use as the basis for substantiating nutrition statements (i.e. words & phrases in question 3) for foods served in your establishment? Check all that apply.
___ Health organizations (i.e. American Heart Association, American Cancer Society)
___ Suppliers (i.e. Spec. sheets, Food Industry Groups, Grower Associations)
___ Independent laboratory analysis
___ Nutrition consultants (i.e. Registered / Licensed, Dietitian / Nutritionist)
___ Cookbook or recipes with nutrition content information
___ Chef / cook
___ Food Labels
___ Government information (i.e. Handbook 8, food guide pyramid, dietary guidelines)
___ Other (please describe) _____

SECTION III Please complete this section regarding your awareness and knowledge of the Nutrition Labeling and Education Act (NLEA) of 1990.

1) Prior to this survey were you aware of the current NLEA requirements for restaurants and the proposal to include restaurants menus?

____ YES ____ NO

2) Has the proposal to include restaurant menus into the NLEA labeling guidelines affected your operation's practice of providing nutrition information for food items (i.e. low-fat, low-sodium, heart healthy, etc).

____ YES ____ NO

3) Which food items in a restaurant are required to have nutrition information available for the customer or regulating agency? _____

_____

4) The FDA's weight and content definition for a main dish is ? _____

_____

5) When symbols are used to highlight food items based on nutritional attributes what else is required to be present ? _____

6) What is the maximum level of fat allowed, per reference amount, in a food item labeled "low -fat"?_____

_____

7) Please list the three classifications of nutritional claims for use in restaurants as identified by the FDA? (Not the terms in Section Question 3)

1) _____

2) _____

3) _____

SECTION IV Please read the following paragraph and then answer the questions addressing your operation's plan for compliance with the NLEA.

The NLEA provision for restaurants allows more liberty in nutrition labeling than foods produced for grocery store sales, but there are still complex regulations that restaurants must abide by if they make nutrient content or health claims on any of their food items. Currently only claims made on posters, placards, table-tents, and other non-menu labeling are included in the Act, but the FDA proposed a rule in June 1993 that would subject restaurant menus to the same standards required of non-menu claims. There are a few notable exceptions to the restaurant regulations as compared to packaged food regulations.

- Nutrition labeling is not required unless a nutrient content or health claim is made.
- Foodservice operators are not required to provide complete nutrition labeling, or provide exact nutrient values for the claims made.
- Laboratory analysis is not required, however operators must be able to demonstrate that there is a "reasonable basis" for the claim.
- Information on claims must be readily available, but does not have to be in a defined location.
- Nutrient content & health claims must meet FDA definitions and standards.

1) Choose one option that best describes how your establishment plans to comply with the NLEA regulations regarding nutrient content and health claims made on restaurant menus.

___ Already in compliance (Have based claims on accurate information, from a recognized source, which is available to customers upon request.)

____ Will obtain documentation for claims being made without menu revisions & will make the information available upon request.

____ Will revise menu to include nutrient content and/or health claims using a recognized source of nutrition information & will make the information available upon request.

___ Will revise menu by removing any nutrient content and/or health claims.

____ Will list nutrient values without making claims or comments about the values.

____ Will make no changes to comply with law.

___ Other (please describe.) _____

_____

2) Indicate the estimated total initial costs for compliance with the Nutrition Labeling and Education Act. (i.e. printing, consultation, staff training, and other costs.)

____ Less than $250
____ $250 - $499
____ $500 - $999
____ $1,000 - $1,499
____ $1,500 - $1,999
____ $2,000 & Over
____ Have no basis to estimate

THANK YOU FOR TAKING THE TIME TO COMPLETE THIS SURVEY!

TO REQUEST RESULTS, WRITE YOUR NAME AND ADDRESS ON THE BACK OF THE REPLY ENVELOPE.

APPENDIX D

COVER LETTER

THE UNIVERSITY OF TENNESSEE
KNOXVILLE

Hotel and Restaurant Administration
1215 West Cumberland Avenue, Room 229
Knoxville, TN 37996-1900
(615) 974-5357
FAX # (615) 974-3491

DATE

FIELD(FNAME) FIELD(LNAME)
FIELD(RESTAURANT)
FIELD(St. ADDRESS)
FIELD(CITY,STATE,ZIP)

Greetings :

As you are probably aware, the regulations issued by the FDA in February of 1993, exempted menus but not other forms of food labeling in restaurants from the Nutrition Labeling and Education Act (NLEA) of 1990. In June of 1993 a rule was proposed to include restaurant menus under the Act, the final regulation for this proposal is expected sometime in the next year. The enforcement of this law is under the jurisdiction of the states.

There has been little research on the topic of nutrition labeling in restaurants. It is not known just how the law will affect operators and customers. This survey is part of a research project directed toward determining the independent restaurant operator's practices, knowledge, and plans regarding the proposal to include restaurant menus into the NLEA.

Your operation has been randomly selected to participate in this survey, which is being conducted through the University of Tennessee. Your participation is very important to the success of this research! All responses will be anonymous and confidential. The information gathered by this study will be presented as group data only, identification of individual responses will not be made.

Please take a few minutes (right now if possible) to complete this short survey and return it in the postage-paid envelope provided within the next ten days. Results of this survey will be shared with the Tennessee Restaurant Association who may find it useful in lobbying our state legislature to ensure that reasonable enforcement mechanisms are put into place. If you would like a copy of the results simply print your name and address on the back of the return envelope. Thank you for taking the time from your busy schedule to complete this survey, the effort is greatly appreciated.

Sincerely,

Katherine D. Gattis
Graduate Teaching Assistant

Mark McGrath, Ph.D.
Director, Division of Hotel
Restaurant Administration

APPENDIX E

FOLLOW-UP POSTCARD

November 24, 1995

Greetings:

Last week you received a survey concerned with the Nutrition Labeling and Education Act and your restaurant's operations. If you have not yet completed and returned the survey, *please do so now.*
It is very difficult to collect data on a group as busy and diverse as restauranteurs, especially during such a busy season. It is very important that you return this survey so an accurate view of industry practices in regard to this issue can be obtained.
If you have already returned the survey, thank you very much.

Sincerely,

Katherine D. Gattis
Graduate Teaching Asistant

Mark M^cGrath, Ph.D.
Director, Division of Hotel
Restaurant Administration

APPENDIX F

FOLLOW-UP LETTER

THE UNIVERSITY OF TENNESSEE
KNOXVILLE

Hotel and Restaurant Administration
1215 West Cumberland Avenue, Room 229
Knoxville, TN 37996-1900
(615) 974-4357
FAX # (615) 974-3491

DATE

FIELD(FNAME) FIELD(LNAME)
FIELD(RESTAURANT)
FIELD(St. ADDRESS)
FIELD(CITY, STATE, ZIP)

Greetings:

Several weeks ago you received a survey directed toward determining the current practices, knowledge, and plans of independent Tennessee restaurant operators regarding the proposal to include restaurant menus into the Nutrition Labeling and Education Act of 1990. The expansion of this law could be a signal of legislation to come so it is very important that we gather data that represents the independent restaurateur as they are affected by governmental regulations. I have received quite a few surveys already, but a high number of completed, returned surveys is crucial to obtaining a truthful and realistic picture of this segment of the industry. Your operation may benefit by taking a few minutes to complete the enclosed survey. Also enclosed for your convenience, is an addressed, postage-paid envelope in which to return the survey.

All responses are confidential and will remain anonymous. Data will be presented in group form only, identification of individual responses will not be made.

If you have already completed and returned the survey (thank you) please disregard this mailing. If you have not had the chance to get around to it yet, please take the opportunity now to complete this brief questionnaire. Thank you very much for your time and cooperation!

Sincerely,

Katherine D. Gattis
Graduate Teaching Assistant

Mark M^{c} Grath, Ph.D.
Director, Division of Hotel
Restaurant Administration

APPENDIX G

NLEA KNOWLEDGE QUESTIONS -- INCORRECT RESPONSES

APPENDIX G. INCORRECT RESPONSES TO KNOWLEDGE QUESTIONS*†

QUESTION 1

Which food items in a restaurant are required to have nutrition information available for the customer or regulating agency?

Items which have a nutrient content or health claim made on non-menu item labeling.

1) In house product.
2) Packaged food.
3) Ones that came from outside purveyors.
4) Unaware
5) Alcohol
6) Chicken
7) Have no idea
8) None x2

QUESTION 2

The FDA's definition for a main dish is ?

6 oz. weight, w/ at least 40 g (about 1.4 oz) each of the four food groups.

1) 8 oz. or greater
2) List percent of weight of items on food from most to least.
3) 6 oz. less than one third calories from fat.
4) 6 oz. protein.
5) 1) Weight: The pre-cooked weight of the generic product (such as hamburger, steak catfish, etc). 2) Content: Unless specific additional claims were made such as - lean, USDA choice, farm raised. The operator only has the label on the product to identify contents or representations regarding lo-cal., no-fat, etc.

QUESTION 3

When symbols are used to highlight food items based on nutritional attributes what else is required to be present ? *An explanatory statement*

1) Calorie, fat grams, percent of calories by fat, protein, sodium, heart.
2) Same as 4 (List percent of weight of items on food from most to least).
3) None

QUESTION 4

What is the maximum level of fat allowed in a food item labeled "low -fat"?

Less than or equal to 3 g per reference amount

1) ? 5%.
2) Less than 30% of daily intake.
3) 21% or less.
4) none if labeled as low-fat.
5) Less than 1/3 the calories from fat.
6) 15%
7) 20%
8) one half of 1%

QUESTION 5

Please list the three categories of nutritional claims for use in restaurants as identified by the FDA? *Nutrient content claims, Health claims, Dietary guidance*

1) Low-fat, light

* correct answer in italics

† answers are verbatim

APPENDIX H

"OTHER" OPTION RESPONSES FOR NLEA COMPLIANCE PLANS

APPENDIX H.

"OTHER" OPTION RESPONSES FOR NLEA COMLPIANCE PLANS*

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1) Haven't studied enough to make a decision.
2) We make no claims regarding the nutritional value of any of our products & have no plans to begin.
3) Will not make claims but will train staff on which dishes reduce fat, salt, sugar.
4) We make no claims to nutritent values.
5) Not sure yet.
6) Will make NO health or nutrition claims in order to avoid any more government regulation.
7) Make no health claim or claim any nutrient content.
8) We have a set menu of three choices (sic).
9) No claims made.

*Verbatim responses

VITA

Katherine Delores Gattis was born in Nashville, TN. She graduated from John Overton High School in Nashville, TN in 1983. In September of the same year she attended the University of Tennessee at Martin where she graduated with a Bachelor of Science degree in General Nutrition in 1988. During college she held a number of food service and related positions in addition to completing a National Association of College and University Foodservice (NACUFS) Internship. In August of 1988 Katherine began work at the Vanderbilt University Medical Center, Department of Nutrition, as a Supervisor in the visitor / staff cafeteria, and as interim and relief catering supervisor.

Katherine began graduate course work in June of 1993. While fulfilling degree requirements she held a teaching assistantship within the Department of Nutrition and Hotel Restaurant Administration and completed a Dietetic Internship at the University of Tennessee.