The Role of Supermarkets in Community Nutrition

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The Role of Supermarkets in Community Nutrition

Wright State University

Staci Gruber

11/21/2011
ROLE OF SUPERMARKETS IN COMMUNITY NUTRITION

Acknowledgments

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Abstract

Background: Chronic diseases related to nutrition are a serious threat to public health. Supermarkets offer an important and promising venue to improve diet quality and overall health. The purpose of this study is to evaluate the supermarkets’ community nutrition focus and interest in public health.

Methods: This study emphasis’s a triangulated qualitative study design. It employs various methods and taps various sources for data. Twenty face-to-face, semi-structured key informant interviews were conducted with five full service supermarket chains in Montgomery County, Ohio; Wal-Mart, Kroger, Meijer, Cub Foods, and Dorothy Lane Market. Qualitative sources of information collected include store observation and supermarket flyers.

Results: National, State, and Local involvement within the community was a theme for supermarkets throughout Montgomery County. Each individual supermarket chain has established their own unique strategies to provide nutritional information to consumers. Meijer is the only supermarket chain that provides a nutritional scoring system. Respondents from all five supermarket chains believe that their organizations advertisement services are meeting shoppers’ needs when it comes to assisting in purchasing healthy food.

Conclusion: Supermarkets are taking different roles in community nutrition through the types of programs and services they offer to consumers. There are public health benefits to understanding the role supermarkets can play in influencing food choices. The collaboration of community health organizations and supermarkets would provide the opportunity to educate the public about the connection between diet and disease.
Introduction

The choices we make in every aisle of the supermarket ultimately affect our health. Helping customers purchase and prepare nutritious foods, such as fresh fruits and vegetables, needs to be a key priority for many retailers, manufactures and health agencies. There is insufficient research about the role of supermarkets in community nutrition, and this is an area that has a great need for exploration. “Consumer demand for healthy products are growing and many manufacturers and retailers are starting to make the connection between healthy diets and healthy profits” (RWJF, 2011). This study seeks to evaluate the supermarkets community nutrition focus and interest in public health.

Chronic diseases related to nutrition are a serious threat to public health (Katz et al., 2010). Supermarkets offer an important and promising venue to improve diet quality and overall health (Katz et al., 2010). This study address the hurdles that make it difficult for many to consume healthy meals, as well as the supermarkets’ interest in services they might provide to help customers overcome these obstacles to healthful eating. Education is fundamental to choosing healthy foods, and shoppers are increasingly seeking guidance on how to make the best choices. Seventy-two percent of shoppers acknowledge that their local supermarket stocks a wide variety of healthful foods and beverages; yet just half feel the same store helps educate or promote healthy eating (Catalina Marketing Corporation, 2010).

The community as a whole would benefit from supermarkets recognizing the opportunity develop advocacy and increase usage of products that support healthy eating. Supermarkets have begun to experiment with a variety of tactics to provide consumers with helpful information (Catalina Marketing Corporation, 2010). Shelf signs, product labeling systems, brochures, extensive website content, recipes, nutrition counseling, and local health fairs are now provided
by many supermarket chains (Catalina Marketing Corporation, 2010). While products specifically formulated to help consumers manage or reduce the risk of developing nutrition-related conditions are increasingly available in the supermarket, communities would benefit from programs and services that help consumers learn about, purchase and integrate these products into their daily habits.

**Purpose Statement**

The purpose of this study is to evaluate the supermarkets’ community nutrition focus and interest in public health. Community nutrition focus is promoting health and lowering disease risk by improving nutritional status within a population (Morland, Diez Roux, & Wing, 2006). The World Health Organization (WHO, 2003) indicates that a “probable” cause of obesity in adults and children is the intake of more energy than is expended. WHO warns that heavy marketing of energy dense foods encourages more energy intake among consumers. Since diet-related chronic diseases such as heart disease, diabetes, stroke, and certain cancers are increasing. Throughout the world there is a need for programs and services to combat obesity. Supermarkets have the potential to design programs that make it easier for consumers to plan, shop for, and prepare healthy foods (Katz et al., 2010). This study examines the interest of supermarket operators and product marketers to help shoppers make positive choices in nutrition.

**Literature Review**

**Introduction**

Supermarkets have been in existence since the late 1800’s. It was not until the 1920’s that supermarket chains such as Kroger, American Stores, and National Tea started to become a dominant force in American food retailing (Gwynn, 2011). In 2008, there were approximately 59,300 supermarkets in the United States selling a wide range of traditional grocery items
including fresh meats, produce, canned and frozen foods, and dry goods such as flour and sugar (Bureau of Labor Statistics & U.S. Department of Labor, 2010-2011).

The supermarket is defined as a large corporate owned “chain” that sells food and other household goods, such as cleaning material and cooking utensils, and that is usually operated on a self-service basis (Morland et al., 2006). Supermarkets sell ninety-two percent of the volume of annual sales of all food and beverage stores in the United States (Morland et al., 2006). Supermarkets have a unique opportunity to help improve health and well-being when it comes to choices consumers make when purchasing food. Sam Kass, the White House Assistant Chef and Senior Policy Advisor for Healthy Food Initiatives stated, “If the supermarket can find healthy ways to harness the power of the store environment, it will go a long way toward showing consumers how to make healthy choices” (Catalina Marketing Corporation, 2010).

Public Health Benefits

“The ultimate goal of public health is to apply the art and science of preventing disease, prolonging life, and promoting health to the focused goal of saving and improving lives” (Nelson, Hesse, & Croyle, 2009). Understanding the role supermarkets can play in influencing food choices may provide substantial public health benefits. This understanding may provide a way to help fight the leading public health concern, obesity (Morland, Wing, & Diez Roux, 2002). Supermarkets are the dominant force in food sales. Public health professionals should make an effort to reach out to food retailers to improve health. For public health professionals, working with the supermarket industry is a way to get involved at an environmental level to educate people about the connection between diet and disease (Morland et al., 2006). By collaborating with supermarkets public health agencies can influence the local food environment and help facilitate healthier communities and reduce the burden of overweight and obesity.
Importance of Food

Evidence suggests healthy eating plays an essential role in good health and prevention of chronic disease. Consuming the recommended five or more servings of fruits and vegetables a day is essential to healthy nutrition, chronic disease prevention, and weight control (Glanz & Yaroch, 2004). There is clear evidence from randomized control trials that decreasing body fat and consuming more fruits and vegetables were essential to healthy nutrition, weight control and chronic disease prevention (Maubach, Hoek, & McCreanor, 2009; Glanz & Mullis, 1988).

Four of the top ten leading causes of death (heart disease, cancer, stroke, and diabetes mellitus) have a direct connection to nutrition (U.S. Department of Health and Human Services, 2000). Several leading organizations concerned with prevention of these diseases, the American Dietetic association, the American Cancer Society, the American Academy of Pediatrics, the National Institute of Health, and the American Heart Association, recommend a healthy eating program based on the department of agriculture’s food guide plate (United States Department of Agriculture, 2011b). In June 2011, as part of a comprehensive nutrition initiative, the United States Department of Agriculture replaced the food guide pyramid with an easy-to-understand food guide plate. “Choose My Plate” is based on balancing calories, increasing fruits vegetables and whole grains, comparing food numbers and choosing the healthier option (United States Department of Agriculture, 2011a). Supermarkets can play a role in the intervention effort directed at communities to modify dietary behavior in order to reduce diet-related chronic disease.

The current trend toward over consumption of energy dense foods contributes to the fact that most Americans are not meeting recommended daily nutritional requirements. Over consumption is influenced by a range of factors including growing portion sizes and changes in
food production, marketing, and pricing (Katz et al., 2010). The calories provided by the United States food supply raised from 3,300 per capita in 1970 to 3,800 in the late 1990’s, an increase of 500 calories per day for the average person (Nestle, 2002).

The Current Influence of Supermarkets on Food Choices

Supermarkets were designed to sell food and make a profit, not help customers choose the healthiest food. Marketing strategies within food stores are designed for maximum temptation and maximum sales. Despite these marketing goals, supermarkets are in a unique position to provide health information and encourage consumers to purchase and consume healthy foods (Gittelsohn et al., 2010). There are many factors that influence what consumers purchase in the supermarket; these include store atmosphere, branding, in-store and out-of-store shopper marketing (e.g. coupons and advertisements). About 60 percent of purchase decisions are made in the store or are unplanned often times considered “impulse buys”. This creates an opportunity for supermarkets to educate and influence consumer behavior at the time of purchase (RWJF, 2011).

Supermarket strategies can help guide consumer purchases in a healthier direction. These strategies could help move consumers toward less calories and encourage purchasing more nourishing foods (Catalina Marketing Corporation, 2010). The “four P’s” of marketing; product, placement, price, and promotion, describe factors related to nutrition composition, location of products, price differentials, and promotion and educational programs that sway customer purchasing behavior (RWJF, 2011).

Robert Wood Johnson Foundation & The Food Trust, (2011) report that customers want programs that help them shop for healthy products, reward them for purchasing healthy options, and provide them with ideas for easy to prepare healthy meals. Customers said they preferred
that information be conveyed in simple, easy-to-understand formats delivered to them directly, or clearly displayed in the store. Supermarkets use a variety of tactics to provide consumers with helpful nutrition information. Posters, educational displays, shelf-labels, nutrition counseling, extensive website content, coupons, brochures, and recipe cards are offered by many supermarket chains to provide nutritional information (Glanz & Yaroch, 2004).

Environmental approaches, such as point-of-purchase nutrition information, can reach a large segment of shoppers at a reasonably low cost, and at the same time, have great potential for health promotion (Cotugna & Vickery, 1992; Kelly et al., 2009). Recent point-of-purchase nutrition interventions in supermarkets have shown success in emphasizing the stores’ focus on health and wellness (Gittelsohn et al., 2010).

**Nutrition Labeling Tools Designed to Improve Dietary Habits**

Typically, nutrition information panels (NIP) are placed on the back or side of food packages and are often difficult for the average consumer to accurately interpret and select healthier foods (Kelly et al., 2009). Nutrition information panels are complex. Product manufacturers assume all consumers have the mathematical skills and nutrition knowledge to interpret NIP (Maubach et al., 2009). In 2010 the Federal Drug Administration recommended front-of-package labeling for all food products (Robert Wood Johnson Foundation & The Food Trust, 2011). The FDA recognized the need to establish a more credible and reliable front-of-package nutrition labeling system. The purpose of the system is to reduce the knowledge burden on consumers and allow nutrition information to be easily understood.

Nutrition rating systems developed by food manufacturing companies are intended to help guide consumers toward healthier options when shopping at the supermarket (Lupton et al., 2010). Companies have introduced food-rating systems that are based on easy to understand
numbers or symbols displayed on front of food packaging, or displayed on shelf signs (Tuttle, 2008). Nutrition information displayed on front of food packages has been viewed as a simple and reliable method for consumers. This is because the information is clearly displayed in lay terms so the average consumer is able to depend on this information to make sound nutrition choices (Kelly et al., 2009).

The Traffic Light system, developed by the United Kingdom Food Standard Agency, was one of the first successful nutrition labeling systems (Kelly et al., 2009). The Traffic Light system ranks nutrient levels of total fat, saturated fat, sugar and sodium as either high (red) medium (amber) or low (green) (Kelly et al., 2009). In a study completed in the Australian grocery market, consumers using the Traffic Light system were five times more likely to identify healthier foods than consumers not using the system (Kelly et al., 2009). The results of this study show strong evidence that this consistent, easy-to-interpret, Traffic Light system effectively allows consumers to make more nutritious food choices.

Overall Nutrition Quality Index (ONQI) was developed by a multidisciplinary group of nutrition and public health scientists. This system is marketed under the name NuVal in supermarkets (Katz et al., 2010). The NuVal nutrition scoring system helps consumers see the nutrition value of the food they purchase at a glance (NuVal nutritional scoring system 2011). The ONQI algorithm takes into consideration 30-plus nutrients and nutrition factors such as (pure compared to processed); the good nutrients (protein, calcium, vitamins), the bad nutrients (sugar, sodium, cholesterol), fortified (milk, cereals), or intrinsically rich in nutrients (B-12 supplementation), when assigning food products a number. Even though the algorithm is a complex measure of dietary quality, the output offers simplicity: on a scale of 0 to 100, the higher the number the more nutritious the food product (Katz et al., 2010). NuVal scores are
placed on shelf tags and allow consumers to easily assess the nutritional quality of the product they are purchasing (*NuVal nutritional scoring system*, 2011). One of the first studies conducted to address the performance quality of the NuVal system showed consumer purchases shifted from lower to higher-scoring items after NuVal numbers were displayed on shelf tags (Katz et al., 2010). Today, some of the country’s leading supermarkets Giant Eagle Tops and Raley’s, have introduced the NuVal rating system into their stores (*NuVal nutritional scoring system*, 2011). The introduction of NuVal to supermarkets has helped shoppers navigate through food isles more reliably and easily to the more beneficial option available to them (Katz et al., 2010).

**Local Food Environment**

Despite efforts to create a single reliable way to help consumers explore healthy foods within the supermarket, there are still concerns about the nutrition environment. According to a 2009 report by the US Department of Agriculture, a small percentage of Americans are limited in their ability to access affordable nutritious foods. These consumers live in food deserts, areas that lack access to affordable fruits, vegetables, whole grains, low-fat milk, and other food necessary for a healthy diet (CDC, 2010). Within the United States, food environments are important contributors to racial and income differences in food intake (Franco, Diex Roux, Glass, Caballero, & Bronancati, 2008). One important factor in healthy food availability was accessibility of supermarkets. Corner stores and convenience stores, local non-corporate owned food stores that sell snack and drinks, are more accessible in lower-income neighborhoods than larger supermarket chains. If communities are not able to access nutritious foods offered in supermarkets, they are less likely to consume them (Krukowski, West, Harvey-Berino, & Prewitt, 2010).
Understanding nutrition environments have helped explain some socioeconomic disparities in nutrition and health outcomes. For example, in lower income neighborhoods fast-food restaurant chains are more readily available than supermarkets. This makes processed food-on-the-go easier to access than fresh food (Glanz & Yaroch, 2004). Franco, Diez Roux, Glass, Caballero, and Bronancati (2008) revealed that predominately black and lower-income neighborhoods had significantly lower access to recommended foods such as fresh fruits and vegetables, skim milk, and whole wheat bread, than predominately white and higher-income neighborhoods.

The cost of food has also been documented as a factor that influences people’s diet. Foods recommended by health authorities are often times more expensive than processed food making it harder for low-income families to meet their dietary recommendations (Morland et al., 2006). Supermarkets, particularly in higher income neighborhoods usually have a more favorable price for fresh products, compared to the grocery or convenience stores often seen in low-income neighborhoods (Krukowski, West, Harvey-Berino, & Prewitt, 2010).

Over the past two decades, there has been an increasing trend toward dining out in the United States (Glanz & Yaroch, 2004). The increasing appeal of eating out has resulted in increased amounts of food being consumed away-from-home. The high fat low fiber quality of away-from-home foods makes it hard for consumers to receive the dietary quality that usually comes from meals prepared at home (Glanz & Yaroch, 2004). The highest selling food service chain is McDonald’s; its 12,804 stores brought in $19.6 Billion in sales for the year 2000, more than twice as much as its nearest competitor (Nelson, 2002). When food or money is scarce, people do not have the luxury of choice. The main concern for consumers in low-income
neighborhoods is getting enough food to meet their nutritional needs and more times than not this mean “fast food”.

**Examples of Supermarket Community Engagement**

Community engagement is defined as “the process of working collaboratively with groups of people who are affiliated by geographical proximity, special interest, or similar situations with respect to issues affecting their wellbeing” (Department of Health and Human Services, 2011). The overall purpose of community engagement is to establish trust, form new measures and allies, create better communication, and improve overall health outcomes within a population (Department of Health and Human Services, 2011). Supermarkets are beginning to collaborate with community members to improve nutrition focus and improve public health. By engaging with the community, supermarkets are able to assess different perspectives and understandings of nutrition related issues among diverse populations.

Marsh Supermarket, a regional food retailer in the Midwest, paired with a celebrity sponsor to encourage healthy eating among kids. “Project 18 Approved,” a community involvement initiative developed by the Peyton Manning, Children’s Hospital at St. Vincent, Ball State University and Marsh Supermarkets, provides shelf tags to identify nutritious products for youth, in order to tackle childhood obesity. Certain criteria related to fat, sugar, sodium, and fiber have to be met in order for a food product to be “Project 18 Approved” (Marsh Supermarkets, 2010). Since the implementation of the new project, Marsh Supermarkets are selling up to twenty-five percent more approved items. Project 18 also includes a healthy eating curriculum, based on a well balanced diet, followed by supermarket tours focusing on healthy food options (Sorensen, 2009).
The Fresh Grocer, an independent supermarket chain in the Philadelphia area, is creating ways to work with the community to encourage healthy eating. The supermarket created the “Kids Corner! Smart snacks for healthy kids,” inspired by First Lady Michelle Obama’s initiative to reduce childhood obesity. The Corner promotes healthy eating by dedicating a section of the store to kid-friendly signs and healthy snacks, such as fruits, vegetables, granola, and a healthy box lunch. The Fresh Grocer sells about five hundred healthy lunch boxes per store per week, compared with approximately five of the old unhealthy lunch boxes. The Fresh Grocer also holds interactive supermarket tours where clinical dietitians and nutritionists lead free tours of the supermarket and educate consumers on how to shop smart, try new healthy foods, choose healthier options and make healthy meals. Consumers who participate in the tour received bottled water, gift cards and a healthy snack, and in return, The Fresh Grocer has seen an increase in healthier purchases from the store (Spross, 2011).

Hannaford Supermarkets, which operates over 170 stores throughout Northern New England and New York, wanted to provide consumers with a program that simplified shopping for nutritious foods (Greene, 2011). Hannaford Supermarkets formed a scientific advisory board, which evaluated every item in the store and created Guiding Stars to label nutritious products as good (one star), better (two stars), and best (three stars). Food products are scored for trans fat, saturated fat, cholesterol, added sodium and added sugar. It is credited for vitamins, minerals, dietary fiber and whole grain. The Guiding Star labels are placed on shelf tags where they are easy to see. Of the 81 percent of consumers who are aware of Guiding Stars, at least 49 percent used the program “fairly often” to identify nutritious foods (Greene, 2011). Hannaford Supermarkets have seen an increase in consumer sales since the store has implemented the program. The community feels the supermarket makes it easier for them to buy healthy foods.
In 2008, The Kroger Company, headquartered in Cincinnati Ohio, implemented a companywide program that reaches out to communities in need of food. The Neighbor to Neighbor initiative enables stores across the Kroger family to reach out and donate meat, produce, bakery items, and dairy products to food banks. In 2009 the program provided thirty-six million pounds of highly nutritious food to local food banks and hunger agencies to feed local families. Kroger also reaches out to the online community. The supermarkets website offers an extensive healthy living section. The website allows the online community to have quick and easy access to educational nutrition information (Kroger Company, 2011).

With more than 140 million customer’s visits each week, Wal-Mart is uniquely positioned to make a difference by making food healthier and more affordable to everyone. The large corporation is committed to working with suppliers, government, and non-government organizations to provide solutions to help Americans eat healthier and live a better life. On January 20, 2011 in Washington, D.C., Wal-Mart joined First Lady Michelle Obama to outline five key elements of their major initiative: reformulate thousands of everyday packaged food items by 2015, make healthier choices more affordable, develop strong criteria for a simple front-of-package seal, provide solutions to address food deserts by building stores, and increasing charitable support for nutrition programs. This program shows how Wal-Mart is committed to working with the community to make healthier food options a top priority (Wal-Mart Corporate, 2011).

Research Question

This research study looks at the role of Montgomery County supermarkets in community nutrition, based on the types of nutrition programs and services offered. The study identifies:

- Supermarkets’ involvement with community organizations.
- Supermarkets’ collaboration with organizations that have missions to improve community nutrition.
- How supermarket chains provide nutrition information to consumers.
- Supermarket wellness programs or services designed to help customers make healthy food choices.
- How effective supermarket chains feel they are meeting consumer’s nutritional needs.

**Methods**

**Study Design**

This study puts and emphasis on a triangulated qualitative study design employing various methods and tapping various sources for data (see figure 1).

Figure 1. Triangulation by Method

Following approval by the Institutional Review Board (IRB), face-to-face, semi-structured key informant interviews were conducted in September and October 2011 with supermarket executives, store managers, nutrition specialist, and community liaisons of five full service supermarket chains in Montgomery County, Ohio; Wal-Mart, Kroger, Meijer, Cub Foods, and Dorothy Lane Market.

Supermarkets chains were identified as large retail markets that sell food and other household goods and operate on a self-service basis. Twenty-five supermarket stores were
selected to ensure that store locations represented different income levels and geographic areas throughout Montgomery County. A total of twenty key informant interviews were completed. The purpose of each interview was to learn about the role supermarkets play in community nutrition. Store managers and community liaisons were also asked how their specific store worked with the surrounding community. Interviews were audio recorded upon permission and lasted between 20 and 30 minutes. See Appendix 1 for a copy of the interview script.

Qualitative sources of information collected include store observation and supermarket flyers. This study takes into account observations the researcher made while visiting each store location. Observations were conducted documenting the socioeconomic environment in which stores were located, educational signs encouraging healthy eating or providing nutritional information, availability of organic foods, fresh produce, healthy recipes, and store flyers such as: educational handouts, coupons, and other resources available to consumers throughout each store.

**Materials**

The key informant interview guide was designed to learn what supermarkets are doing to help consumers purchase healthy food items. Supermarket employees were interviewed to learn about programs and services their supermarket provides to consumers that are designed to help customers’ select healthier foods and have healthier diets as well as the supermarkets involvement within the community. Interview questions were designed to introduce a topic. Probes assist the interviewer in soliciting more detailed responses about each topic and/or redirect discussion to help keep the interviewee focused on the question. See Appendix 2 for a copy of the key informant interview guide.
Analysis

Each interview was transcribed by the interviewer and verified with the audio recording for accuracy. Each transcript was coded using thematic analysis. The study followed guidelines established by Braun and Clarke (2006). Thematic analysis was used “… as a method for identifying, analyzing, and reporting patterns (themes) within data” (Braun & Clarke, 2006, p.79). Thematic analysis was used to explore participants’ views and experiences. Themes were identified as “something important about the data in relation to the research question and represents some level of patterned response or meaning within the data set” (Braun & Clarke, 2006, p.82). This study used an inductive approach that builds on previous findings and theoretical considerations. This exploratory strategy builds on the small body of literature available regarding supermarket involvement in community nutrition.

The researcher transcribed results from the key informant interviews. Following data familiarization, the data were coded into themes. Coding involved applying brief verbal descriptions to small groups of similar statements. Coding categories included: supermarket activity in the community (AIC), supermarkets roles in decreasing obesity and improving nutrition (DOIN), supermarket program and policies (P&P), marketing tools (MT), and how stores are meeting shoppers’ needs (MSN). On the basis of the coding, the researcher identified several themes featuring the role of supermarkets on consumer food purchases. The researcher then identified examples of each theme to illustrate what the analysis has achieved.

Results

Supermarkets’ involvement with community

Involvement within the community was a theme for supermarkets throughout Montgomery County. Twenty out of twenty supermarkets interviewed reported some type of
role of supermarkets in community nutrition. Montgomery County supermarkets work at a national level to support the U.S. military, disaster relief organizations, fight hunger, and increase awareness about breast cancer, heart health, and colorectal cancer. Interviews were conducted in the month of October; this resulted in several supermarkets emphasizing their supermarket’s partnership with The Breast Cancer Awareness Foundation. A nutrition specialist from one Kroger store said, “We are currently partnered with “Giving Hope a Hand.” Our supermarket displays special pink tags on specific store items. When customers purchase these special items a portion of the proceeds goes to breast cancer awareness and research.”

The most salient factor to community involvement was corporate management of activities. Corporate involvement within the community seemed to be a part of a larger corporate strategy. Decisions were made at the corporate rather than at the state or local level. Evidence presented on supermarket websites suggested it was the “corporate social responsibility” of supermarket chains to ensure a positive environment providing activities in communities. Managers of nine stores indicated they had little knowledge or involvement in decisions regarding the supermarkets partnership with community organizations. One Cub Foods store manager said, “We are very micro-managed. Everything we do in the store comes from corporate. They monitor and asses every aspect of this store...at a corporate level our stores are very active in community organizations.” Respondents were able to identify at least one organization in the community with which their supermarket partnered.

At a local level, all twenty Montgomery County supermarkets visited actively provide opportunities for customers to donate to food banks throughout the Dayton area. Donations are made in store, by using “club cards,” participating in fundraisers, or by simply placing food items in bins provided by the supermarket. Each supermarket takes responsibility for the delivery
of donations to local food banks. The manager of one Meijer store indicated, “Our supermarket has made a commitment to “Simply Give” which donates bags of food to local food pantries. We are very proud of our loyal customers, who enthusiastically support this program and help feed so many hungry people in their communities.” The Foodbank, Inc. provides the infrastructure for nearly 100 member programs in Montgomery County that serve as the charitable food relief network in the area. The Foodbank strives to provide healthy, nutritious meals to all individuals they serve. When Montgomery County supermarkets donate to the Foodbank they are providing hunger relief to local communities through the acquisition and distribution of food to the hungry throughout the County (The Foodbank, Inc., 2011).

**Nutrition Information**

Each individual supermarket chain in Montgomery County has established their own unique way to provide nutritional information to consumers. Whether the store is displaying signs encouraging five servings of fruits and vegetables a day or “IdealMeal” cards for healthy recipes, they are making an effort to reach out to consumer to encourage healthy lifestyles (see table 1).

The use of coupons was a common marketing tool used by all supermarket chains in Montgomery County. All twenty respondents observed the increasing popularity of “couponing”. Since healthy items are usually more expensive, by providing coupons for these items stores are able to make prices more competitive. This makes it possible for consumers to afford more nutritious food. Healthy produce was highlighted in the “savings paper” distributed by four of the five supermarket chains. Only one national supermarket chain did not highlight healthy items or produce in their savings flyer. The regional supermarket chain Cub Foods took their coupon flyer to another level and incorporated general nutritional information for certain food items
underneath the advertised saving. This idea was established to encourage sales of healthy items to consumers while educating them on the health benefits. For example the coupon flyer highlight “Idaho Potatoes” and listed that they are “high in vitamin C and fiber,” as well as “Green Asparagus” and how they are a “low sodium low calorie food and good source of vitamin C and B6.”

Over the last decade Internet services have exploded. All five Montgomery County supermarkets are discovering new ways to meet shoppers’ needs using the Internet. From online recipes to interactive chats, consumers can explore healthy living in a new way. Online resources from all five supermarket chains interviewed allow consumers to educate themselves on nutritional content, meal ideas, vitamins, MyPlate, food safety, and exercises to boost calorie burn. The regional supermarket chain Meijer has gone above and beyond other supermarket chains in Montgomery County and will put consumers together with a registered dietitian online to talk about specific nutrition questions and diet needs.

All three Dorothy Lane Market stores as well as three Kroger and three Meijer store locations chose to distribute informational booklets as something consumers can take home and use as an educational tool. The booklet “Health Talk” a monthly publication is distributed in two Kroger stores highlights seasonal flu tips along with five reasons to pack your lunch. The publication encourages consumers who read it to: “Pack a healthy lunch so you can control exactly what goes into the food you eat, and prevent the temptation to hit up the vending machine or cafeteria line.” Meijer supermarket stores provide complementary “Healthy Living, Staying Strong” and “Healthy Living Naturally” resource guides conveniently located throughout the store aisles. The booklets contain topics on understanding breast cancer risk, recipes for ultimate health, screening test every woman should have, bone health, heart health,
and top immunity-boosting foods. The booklets are something consumers can take home with them and read in their free time.

Point of purchase nutrition information is another strategy designed to assist consumers in making nutritional decisions. Meijer is the only supermarket chain in Montgomery County that provides a nutritional scoring system. Meijer uses the NuVal system to help educate consumers at the point of purchase in their four stores located throughout the county. Their promotional materials say, “We understand our customers want to make better food choices, but it can be confusing and time consuming for many, so our supermarket introduced NuVal to help educate shoppers.” This chain also incorporates the USDA MyPlate symbol to help bring portion control into the spotlight: “We hope consumers will use the NuVal score to pick the most nutritious foods, and then use MyPlate to help them make wise choices about portions.” This regional supermarket chain is working to reach customers in the store at the time of purchase. Meijer the only supermarket chain in Montgomery County that has a store policy to provide several strategies to present nutritional information and help consumers make healthy choices.

Table 1. Nutrition Information

<table>
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<th>Supermarket Chain</th>
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<th>Informational Booklets</th>
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Store Observations

Table 2 is a summary of store observations. Observations in communities made it clear that depending on the location and size of the supermarket chain store determined the amount of space and resources designated to healthy living. Four Kroger stores located in lower income
neighborhoods (below median household income for Ohio in 2000, West Dayton, East Dayton, Springfield) had less isles and shelf space for healthy amenities. The same supermarket chain located in higher income areas provided added services such as educational signs, handouts, recipes, and/or organics.

Dorothy Lane Market, a local supermarket chain that serves only the wealthiest areas of Montgomery and Warren County (communities with above median household income for Ohio in 2000, Oakwood, Centerville, Springboro), (City-Data, 2011), creates educational displays appealing fresh produce and healthy gourmet recipes that attracts a very health conscious crowd. They even provide highly trained chefs whom consumers can join for a fee in cooking classes to learn about healthy cooking such as baking with whole grain and learn to prepare foods that can help with cancer prevention. The supermarket chain goes a step further and provides specialized product menus for consumers. The special menu offers an itemized list of foods acceptable for consumers who are following gluten free, wheat free or low sodium diets. Menus are available to consumers at the customer service desk or online.
Table 2. Store Observations

<table>
<thead>
<tr>
<th>Supermarket Chain</th>
<th>Educational Signs</th>
<th>Organic Section</th>
<th>Fresh Produce</th>
<th>Recipes</th>
<th>Educational Handouts</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Kroger-Springfield</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>2 Kroger-Englewood</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>3 Kroger-Kettering</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>4 Kroger-Dayton</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>5 Kroger-Dayton</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>6 Kroger-Vandalia</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>7 Kroger-Miamisburg</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>8 Kroger-Centerville</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>1 Wal-Mart-Kettering</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>2 Wal-Mart-Englewood</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>3 Wal-Mart-Dayton</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>1 Cub Foods-Kettering</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>2 Cub Foods-Dayton</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>3 Cub Foods-Miamisburg</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>1 Meijer-Fairborn</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>2 Meijer-Englewood</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>3 Meijer-Huber Heights</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>1 DLM-Oakwood</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>2 DLM-Centerville</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>3 DLM-Springboro</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>

Supermarket Partnerships

Seventeen of the twenty respondents mentioned store programs allowing partnerships with local farms to provide only the best quality produce, natural food, and organic food. Only Wal-Mart a National chain supermarket did not point out having a partnership with suppliers of locally grown produce. There are different levels of partnerships among each supermarket chain. The supermarket chain Dorothy Lane Market and Meijer partnered with local farms all year long, whereas Kroger and Cub Foods only partnered with farmers for seasonal items. Partnerships with local farmers not only depend on the supermarket, but also the availability of produce from local farms and whether or not the farm was able to insure the produce. Dorothy Lane Market has a store motto of “honestly local”. A healthy living director from the store noted, “We use local farms to support our local farming community, so fruits and vegetables can ripen naturally, to keep food miles to a minimum and so we know who is producing the food we
provide to our loyal customers.” Each of the seventeen stores provides signs or flyers to educate customers on which food items are produced within their community.

**Store Mission**

All five supermarket chains strive to be the leader in food distribution and merchandising. Respondents indicated that their stores mission was to be a food provider to their community. Among the five supermarket chains Dorothy Lane Market and Meijer have made it their mission and identified an obligation to educate consumers and help them choose healthy food items (see table 3). Both chains have specific programs to help customers choose healthy living as a lifestyle.

<table>
<thead>
<tr>
<th>Store ID Number</th>
<th>Leader In Food Distribution</th>
<th>Role/Obligation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kroger</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Wal-Mart</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Cub Foods</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Meijer</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>DLM</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>

While three of the five supermarket chains have not made educating customers about healthy food items part of their mission they are taking steps in that direction. Wal-Mart a National chain with locations in Montgomery County has launched a major initiative to make food healthier and healthier food more affordable. This chain is in a transitional period, they are working to reformulate thousands of everyday food items, and create a front-of-package nutritional labeling system by 2015. Helping consumers learn to eat better is the approach used by the supermarket chain Kroger. Kroger employs a nutrition specialist whose job is to be educated on herbs, vitamins and minerals, and items that improve nutrition. The nutrition
specialist role is to provide healthy tips in store flyers, to design educational signs for display in the stores, and manage store produce, natural foods, and organic foods.

Meeting consumer’s nutritional needs

Respondents from all five supermarket chains around Montgomery County feel their programs advertisement services are meeting shoppers’ needs when it comes to purchasing healthy food. Two supermarkets have developed new concepts in providing the freshest produce and education to consumers such as “The Fresh Fare” offered at Kroger and “NuVal” offered at Meijer, proving they value consumer needs. A local supermarket manager from Dorothy Lane Market stated, “We are really proactive, always looking for better ways to encourage healthy living and I think consumers are responding to our efforts.” A manager from Wal-Mart mentioned that he thought that it was their prices and the fact that they are a one-stop-shop that keeps their customers satisfied.

Discussion and Recommendations

Consumption of food has an important influence on people’s health status. This research explored the role supermarkets are taking to improve community nutrition and ultimately improve consumer health.

Community engagement is defined by the Department of Health and Human Services as working collaboratively with groups of people who are affiliated by geographical proximity with a purpose to improve overall health among populations (Department of Health and Human Services, 2011). Supermarket community engagement is present in all five supermarket chains that serve Montgomery County Kroger, Wal-Mart, Cub Foods, Meijer, and Dorothy Lane Market. Supermarkets are working hard to meet their “corporate social responsibility,” but not all community involvement is specifically geared towards improving nutrition. Supermarkets are
working with food banks and hunger relief organizations to help supply highly nutritious food to local families, but no collaboration with community organizations or members was identified with the goal of improving the focus on nutrition or to improve public health in the local communities served by these chains. Supermarket corporate committees could find a more effective way to collaborate and develop a community involvement initiative to encourage healthy eating similar to Marsh Supermarkets a regional food retailer in Indiana and the independent supermarket chain The Fresh Grocer, who created “Project 18 Approved,” and the “Kids Corner” (Marsh Supermarkets, 2010; Spross, 2011). Corporate committees could consider partnering with organizations like Public Health Dayton and Montgomery County’s GetUp program. GetUp Montgomery County is a community program aimed at helping kids and families make healthier lifestyle choices. Supermarket collaboration with GetUp partners could help drive the message of a healthier Montgomery County.

Companies have introduced food-rating systems that can help guide consumers toward healthier options while shopping in supermarkets (Lupton et al., 2010). Meijer is the only supermarket chain in Montgomery County has adopted a nutritional rating system. Meijer’s NuVal system is designed to simplify consumer shopping for nutritious foods. The NuVal scoring system was implemented as a store policy to help consumers see the nutrition value of the food they purchase. This supermarket chain incorporates other nutritional tools to improve dietary habit such as weekly coupons, “Healthy Living” informational booklets, online resources, recipes, and product list for customers on special diets. This regional chain is the only supermarket in Montgomery County working to improve nutrition at the point of purchase. This suggests that the executives in this supermarket understand the need for nutritional information
to be conveyed in simple, easy-to-understand formats devised to them directly, or clearly displayed in the store.

Although interviews with store managers from other national, regional, and local supermarket chains reported providing nutritional information to consumers the information provided is not point-of-purchase information like NuVal, rather educational reading material such as flyers and incentives like coupons. A report from the Robert Wood Johnson Foundation & The Food Trust (2011) indicates that consumers want helpful nutrition information such as coupons that encourage purchasing healthy options and recipe ideas for easy to prepare healthy meals. Supermarkets might find it constructive to add point-of-purchase nutritional information like NuVal in their store. This is to promote education on the nutritional content of every food item they purchase not just items highlighted in store flyers or coupons. Point-of-purchase nutrition information could be incorporated into supermarkets by partnering with companies like Guiding Stars, Traffic Light, or NuVal. Incorporating several environmental approaches has the potential for health promotion to a large number of consumers (Kelley et al., 2009).

A limited number of nutrition education programs and services are available in Montgomery County supermarkets. Interview respondents reported their store mission above all was to be the leader in food distribution. While making a profit is a main element of supermarkets business store trends show an increase in employee education in areas of nutrition, organic foods, and healthy living to help better serve their customers (Catalina Marketing Corporation, 2010). With the implementation of programs that are “customer centered” supermarkets feel they are meeting shoppers’ nutritional needs. Perhaps educating store employees and providing informative reading material is an attempt at transitioning stores to encourage healthy food choices.
In the future supermarkets will be competing with new marketing trends like “Earth Fare” a new supermarket chain that recently opened in Montgomery County. Their store mission is “to feed and inspire the healthy person inside of their customers” (Earth Fare, Inc., 2011). The company identifies itself one of the largest natural food retailers in the nation. They make healthy eating more convenient and affordable. Earth Fare does not offer any products containing high fructose corn syrup, trans-fat, artificial colors and sweeteners, and synthetic growth hormones in meat and milk (Earth Fare, Inc., 2011). Earth Fare works to control factors related to food production, marketing, and pricing as an effort towards modifying dietary behavior of consumers. This strategy could help move consumers towards fewer calories and encourage purchasing more nourishing foods (Catalina Marketing Corporation, 2010).

**Limitations of this Study**

This is an exploratory study. More research is needed on the role of supermarket stores in community nutrition. Interviews were not conducted in all Montgomery County supermarkets. Only the five largest stores were interviewed for this study: Kroger, Wal-Mart, Cub Foods, Meijer, and Dorothy Lane Market. Smaller stores may play an important role in community nutrition. It is important that future studies consider the potential community and convenience stores have for improving nutritional status in the communities they serve. Efforts are being made to improve access to fresh fruits and vegetables (Morland et al., 2006). In some cases interview respondents held different positions within each supermarket often times limiting their knowledge to certain aspects of the store. Due to limited time only twenty of the twenty-five supermarket stores were interviewed.
Conclusion

Supermarkets in Montgomery County are taking different roles in community nutrition through the types of programs and services they offer to consumers. Only one regional supermarket chain Meijer has a store policy to provide point-of-purchase nutrition information for consumers. However, all supermarket chains serving Montgomery County are taking environmental approaches to help guide consumers to healthy items such as educational signs and healthy recipes. Most stores feel their mission is to be a leader in food distribution and merchandising but they are making steps towards bettering the health of consumers.

There are public health benefits to understanding the role supermarkets can play in influencing food choices. The collaboration of community health organizations and supermarkets would provide the opportunity to educate the public about the connection between diet and disease. Public health agencies should increase efforts to work with supermarkets and use their role in providing food to the community as the driving force for creating healthier communities and reducing the burden of overweight and obesity.
References


Catalina Marketing Corporation. (2010). *Helping shoppers overcome the barriers to choosing healthful foods*.


Glanz, K., & Yaroch, A. (2004). Strategies for increasing fruit and vegetable intake in grocery stores and communities: Policy, pricing, and environmental change. Preventive Medicine, 39, Suppl 2, S75-80.


Appendix 1:-Interview Script

Hello,

My name is Staci Gruber I am a graduate student in Wright State University’s Master’s of Public Health program. I am conducting a student research project on the role of supermarkets in community nutrition. Would you be willing to answer a few questions regarding <supermarket>? The interview will only last about 20-30 minutes. The final report will not mention your name or the specific store you work for.

If respondent says yes: Thank you. Proceed with the interview instrument.

If respondent says no: Thank you for your time. Have a great day!
### Appendix 2 – Interview Instrument

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
</table>
| 1. | Does <supermarket> have any involvement with community organizations?  
Probes: Are you involved with:  
- Local food banks or food pantries  
- Non-Profit Organizations  
- The Salvation Army |
| 2. | The Centers for Disease Control (CDC) states there is a growing epidemic of obesity in Montgomery County; does <supermarket> feel they have a role in decreasing obesity and improving community nutrition? |
| 3. | Describe any programs or policies related to improving nutrition that <supermarket> provides to the community.  
Probes: Do you:  
- Develop other retail outlets such as farmers markets, public markets, community supported agriculture programs  
- Increase stock of fresh fruits, vegetables, and other healthy foods  
- Attracting or developing supermarkets |
| 4. | What is <supermarket> doing to help customers purchase healthy food items (Do you provide any type of guidance in the store)?  
Probes: do you provide:  
- Healthy eating recipes?  
- Coupons for healthy items?  
- Internet services with nutritional information?  
- Plus cards, club cards, or some similar incentive for shopping with <supermarket>?  
- Wellness tours? |
| 6. | Does <supermarket> provide a nutritional rating systems for customers (such as NuVal, Guiding Stars, or Stop Light System)? |
| 7. | How well does <supermarket> feel their programs/services are meeting shopper’s needs when it comes to purchasing healthy food? |
Appendix 3 – IRB Approval

DATE: October 3, 2011
TO: Staci Gruber, P.I., Student
    Public Health
    Community Health
FROM: B. Laurel Elder, Chair
       WSU Institutional Review Board
SUBJECT: SC# 4602
     The Role of Supermarkets in Community Nutrition
At the recommendation of the IRB Chair, your study referenced above has been recommended for exemption. Please note that any change in the protocol must be approved by the IRB; otherwise approval is terminated.

This action will be referred to the Full Institutional Review Board for ratification at their next scheduled meeting.

NOTE: This approval will automatically terminate two (2) years after the above date unless you submit a "continuing review" request (see http://www.wright.edu/rsp/IRB/CR_sc.doc) to RSP. You will not receive a notice from the IRB Office.

If you have any questions or require additional information, please call Robyn Wilks, IRB Coordinator at 775-4462.

Thank you!

Enclosure
RESEARCH INVOLVING HUMAN SUBJECTS

SC# 4602

ACTION OF THE WRIGHT STATE UNIVERSITY
EXPEDITED REVIEW
Assurance Number: FWA00002427

Title: 'The Role of Supermarkets in Community Nutrition'

Principal Investigator: Staci Gruber, P.L., Student
Public Health
Community Health

The Institutional Review Board Chair has approved an exemption with regard to the use of human subjects on this proposed project.

REMININDER: Federal regulations require prompt reporting to the IRB of any changes in research activity [changes in approved research during the approval period may not be initiated without IRB review (submission of an amendment), except where necessary to eliminate apparent immediate hazards to subjects] and prompt reporting of any serious or on-going problems, including unanticipated adverse reactions to biologicals, drugs, radioisotope labeled drugs or medical devices.

Signed Chair, WSU-IRB
Approval Date: October 03, 2011
IRB Mtg. Date: October 17, 2011
## Appendix 4 – Public Health Competencies Met

<table>
<thead>
<tr>
<th>Specific Competencies</th>
<th>Domain #1: Analytic Assessment Skill</th>
</tr>
</thead>
<tbody>
<tr>
<td>Defines a problem</td>
<td></td>
</tr>
<tr>
<td>Determines appropriate uses and limitations of both quantitative and qualitative data</td>
<td></td>
</tr>
<tr>
<td>Identifies relevant and appropriate data and information sources</td>
<td></td>
</tr>
<tr>
<td>Evaluates the integrity and comparability of data and identifies gaps in data sources</td>
<td></td>
</tr>
<tr>
<td>Applies ethical principles to the collection, maintenance, use, and dissemination of data and information</td>
<td></td>
</tr>
<tr>
<td>Makes relevant inferences from quantitative and qualitative data</td>
<td></td>
</tr>
<tr>
<td>Obtains and interprets information regarding risks and benefits to the community</td>
<td></td>
</tr>
<tr>
<td>Applies data collection processes, information technology applications, and computer systems storage/retrieval strategies</td>
<td></td>
</tr>
<tr>
<td>Recognizes how the data illuminates ethical, political, scientific, economic, and overall public health issues</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Domain #2: Policy Development/Program Planning Skills</th>
</tr>
</thead>
<tbody>
<tr>
<td>Collects, summarizes, and interprets information relevant to an issue</td>
</tr>
<tr>
<td>States policy options and writes clear and concise policy statements</td>
</tr>
<tr>
<td>States the feasibility and expected outcomes of each policy option</td>
</tr>
<tr>
<td>Decides on the appropriate course of action</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Domain #3: Communication Skills</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communicates effectively both in writing and orally, or in other ways</td>
</tr>
<tr>
<td>Solicits input from individuals and organizations</td>
</tr>
<tr>
<td>Uses the media, advanced technologies, and community networks to communicate information</td>
</tr>
<tr>
<td>Effectively presents accurate demographic, statistical, programmatic, and scientific information for professional and lay audiences</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Attitudes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Listens to others in an unbiased manner, respects points of view of others, and promotes the expression of diverse opinions and perspectives</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Domain #4: Cultural Competency Skills</th>
</tr>
</thead>
<tbody>
<tr>
<td>Utilizes appropriate methods for interacting sensitively, effectively, and professionally with persons from diverse cultural, socioeconomic, educational, racial, ethnic and professional backgrounds, and persons of all ages and lifestyle preferences</td>
</tr>
<tr>
<td>Identifies the role of cultural, social, and behavioral factors in determining the delivery of public health services</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Attitudes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Understands the dynamic forces contributing to cultural diversity</td>
</tr>
<tr>
<td>Understands the importance of a diverse public health workforce</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Domain #5: Community Dimensions of Practice Skills</th>
</tr>
</thead>
<tbody>
<tr>
<td>Establishes and maintains linkages with key stakeholders</td>
</tr>
<tr>
<td>Collaborates with community partners to promote the health of the population</td>
</tr>
<tr>
<td>Identifies how public and private organizations operate within a community</td>
</tr>
<tr>
<td>Accomplishes effective community engagements</td>
</tr>
<tr>
<td>Identifies community assets and available resources</td>
</tr>
</tbody>
</table>
### Domain #6: Basic Public Health Sciences Skills

- Defines, assesses, and understands the health status of populations, determinants of health and illness, factors contributing to health promotion and disease prevention, and factors influencing the use of health services
- Understands the historical development, structure, and interaction of public health and health care systems
- Identifies and applies basic research methods used in public health
- Applies the basic public health sciences including behavioral and social sciences, biostatistics, epidemiology, environmental public health, and prevention of chronic and infectious diseases and injuries
- Identifies and retrieves current relevant scientific evidence
- Identifies the limitations of research and the importance of observations and interrelationships

**Attitudes**

- Develops a lifelong commitment to rigorous critical thinking

### Domain #7: Financial Planning and Management Skills

- Manages information systems for collection, retrieval, and use of data for decision-making

### Domain #8: Leadership and Systems Thinking Skills

- Identifies internal and external issues that may impact delivery of essential public health services (i.e. strategic planning)