The Latino Way Food Group Guide for Latinos in the U.S.

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ABSTRACT

Theoretical Framework: In 2012, 17% of the U.S. population was of Latino/Hispanic origin and, by 2050 it is projected to rise to 30%. Latinos in the U.S. have different eating patterns from the Non-Latinos leaving food as their common ground. Overall, Latinos eat the same foods with different preparations and names. Studies show that a different food guide approach may be appropriate for ethnic groups with distinct and varying food preferences and needs. Universal dietary guidelines may not be effective for different ethnic groups. This article present the Latino Way Food Guide which reflect the nutritional needs, food preferences, culinary traditions and include the different food names and eating patterns of the multiple Latino groups in U.S. The Latino Way Food Guide was created based on field observations, public information and ecological data collected from Latino clients throughout 25 years. The significance and impact of this model among Latinos in the U.S. is being tested now with focus groups, interviews and surveys. The Latino Way Food Guide intends to fill the gap left by the limited food and nutritional educational materials available that address the variety of cultural foods used by Latinos in the U.S.

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Key words: *Food, Guide, Latino.*

INTRODUCTION.

Worldwide, the U.S. has the second largest Latino population after Mexico. In 2012, 17% of the U.S. population was of Latino/Hispanic origin, making it the nation's largest minority and second fastest growing group, after Asians (U. S. Census Bureau, 2013). By 2050, the U.S. Census Bureau projects a rise of the Latino population to 30% (U.S. Census Bureau, 2012). This growth in population has been fueled by both natural increase (births minus deaths) and an increase in new immigrants from Latin America and the Caribbean (Sanjur 1995; U.S. Department of Agriculture, 2013). The Latinos in the U.S. are a diverse group of individuals who differ in their country of origin, acculturation level, and geographic distribution within the U.S., among other variables (Centers for Disease Control and Prevention, 2014).

In 2011, the average age of the Latino population in the U.S. was 27 years old, making it a young and reproductive group. Among them, 65% were Mexican Americans; 16% were from the Caribbean (including 9.4% Puerto Rican, 3.6% Cuban, and 3% Dominican); 8.5% were non-Mexicans from Central America (with Salvadorians constituting 3.8% and Guatemalans 2.3%); and 5.6% were from South America (with most from Colombia, at 1.8%, and 1.1% each from Ecuador and Peru) (U.S. Census Bureau, 2012).

This article presents the newly created Latino Way Food Guide that considers the diversity in eating patterns of the Latinos in the U.S. This food guide reflects the nutritional needs, food preferences, culinary traditions, and include the different food names and eating patterns of the multiple Latino groups in the U.S. Studies show that Latinos in the U.S. have higher rates of some diet-related chronic diseases, such as

overweight/obesity and diabetes, than non-Hispanic whites e.g., (Fryar et al, 2010), 78.8% of Latinos are overweight or obese compared to 66.7% of whites (Flegal, 2012) and the risk of diagnosed diabetes was 66% higher among Latinos than non-Hispanic white adults, according to national survey data. Within the Latino group, the risk was highest for Mexican Americans (94%), followed by Puerto Ricans (87%). Adults with diabetes have a two-to-four-times higher heart disease death rate and risk for a stroke than those without diabetes (U.S. Department of Health and Human Services, 2011).

An overarching goal of both Healthy People 2010 and 2020 is to eliminate the health disparities among different population segments in the U.S. (Fryar et al, 2012; U.S. Department of Health and Human Services, 2010). As mentioned by Dr. Sanjur (1995), in her book on Hispanic food, nutrition and health, the two dominant issues regarding the Latino healthcare delivery system in the U.S. are limited access to medical services and limited health promotion efforts, because of the ineffectiveness of the monocultural/English model used by healthcare professionals. In 2012, 29% of Latinos in the U.S. lacked health insurance (down from 30% in 2011)—a factor that is considered one of the limitations for proper healthcare use (U.S. Census Bureau, 2012).

The eating patterns of Latinos in the U.S. are different from those of the general non-Hispanic U. S. population (Briefel and Johnson 2004). Although Latinos are very diverse among themselves—since they come from many different countries—their common ground resides in the Spanish language and the foods they eat. Narrowing their food intake patterns to Mexican or "Tex-Mex," therefore, represents a general misunderstanding (Sanjur, 1995). For example, among Latinos, Mexican Americans eat more tortillas and taco shells than non-Mexican Latinos (about twice as many) while the

latter group eats three times more rice (U.S. Department of Agriculture, 2013). In general, Latinos eat similar foods but prepare them in different ways and give them different names. Consider beans, for example: Mexican Americans often prepare pinto beans as a paste, eat them with tortillas, and call them "frijoles refritos," while individuals from the Caribbean prepare red kidney beans with sofrito as a stew (calling them "habichuelas colora"), eat them either with rice or cook them together with the rice, (calling it "moro" in the Dominican Republic or "congri" in Cuba), and consume them almost daily, sometimes twice a day. Furthermore, Latinos from the Dominican Republic eat their beans with rice on a daily basis but also prepare kidney beans with sugar and coconut milk (calling it "habichuelas dulces" or "sweet beans"), and eat them for dessert. Adding to the diversity, Central Americans are different from other non-Mexican Latinos since they boil the beans and eat them daily with cheese or cream sauce either for breakfast or lunch.

In the U.S., compared to no-Hispanic White (NHW) Latinos consume more whole milk than low fat milk and eat more legumes, beans, nuts, citrus fruits, tomatoes, beef, organ meat and eggs. Their intake of grains and starchy foods is mainly from rice, corn, and starchy vegetables, such as green bananas, green and yellow plantains, roots, and tubers, including yucca, potato and sweet potato. Thus, they have a lower intake of dry cereals, pasta, luncheon meats, and oils from salad dressing than NHW. Latinos' intake of whole grains and green vegetables is low—similar to that of the general U.S. population. Their intake of fiber, however, is higher, mostly due to their high intake of beans and legumes (U.S. Department of Agriculture, 1999). According to the National Eating Trends study, lunchtime is the largest meal of the day for many Latinos, and most of the time it includes stovetop-cooked rice and bowls of richly flavored soup.

The study shows that rice dishes are usually homemade or partly homemade and prepared using oils and spices rather than being "heat-and-eat" or pre-flavored offerings (National Purchase Diary, 2012).

As with many other immigrant groups in the United States, acculturation (adopting mainstream U.S. culture) affects Latinos' health behaviors and eating patterns (Lara et al, 2005). The effect of acculturation on the Latino diet tends to be related to both their country of origin and adopted neighborhood characteristics.

Much of the data used in acculturation studies of Latinos comes from the National Health and Nutrition Examination Survey (NHANES) (U.S. Department of Agriculture, 2013). Even though it is an extensive database, it is limited when used for Latinos in general because the data are mostly from Mexican Americans. In addition, there is limited data on dietary patterns for the Latino population published in the scientific literature. Some acculturation studies of Latinos in the U.S. describe them as mainly having a sedentary lifestyle and adapting negative changes in their eating patterns, such as a higher consumption of fat, saturated fat, and cholesterol (Sanjur, 1995). Other studies, however, show that Latinos who continue to use Spanish as their primary language eat a somewhat more healthful diet than those who use English as a primary language, and that foreign-born Latinos consume more traditional Latino foods than U.S.-born Latinos (Montez and Eschbach, 2008; Ayala et al, 2008). According to data from the U.S. Census Bureau, in 2011, 74% of Latinos spoke Spanish at home and 36% were foreign-born (U.S. Census Bureau, 2014). A study by Davis et al. (2013) showed that many of the Latino participants from New York City followed a Caribbean starch pattern diet, which included rice, pinto beans, and yucca. This pattern was

identified by a nutritional analysis as relatively high in fiber and vegetables and relatively low in saturated and trans-fats, making it consistent with a reasonably healthy dietary pattern. The researchers also found that those who both lived in the U.S. longer and spoke English had less healthy dietary patterns. They therefore suggested that as dietary interventions are developed to target Latinos in the U.S., one aspect of dietary education might be to encourage and provide strategies for the maintenance of healthy aspects of traditional diets.

Some healthcare professionals have recognized the importance of educational materials for Latinos to be culturally adapted and not merely translated from English into Spanish. It is especially vital, as mentioned above, to consider the vast diversity in food patterns among Latinos in the U.S. due to their country of origin, and to avoid the common assumption that all Latinos follow the same food patterns (Nangel et al, 2013; Mier, 2010; Ayala et al, 2008). There are some excellent educational materials on food-related issues for specific segments of the U. S. Latino population, but their general use is limited because of their restricted discussion of food diversity, use, preparation, and names, i.e., Spanish words for specific foods, as previously mentioned, vary in different Latin American countries.

Literature reviews have found that many "culturally adjusted" interventions targeting Latinos appear minimally guided by a cultural framework (Mier, 2010). For example, a "culturally tailored" intervention Diabetes Prevention Program (DPP) used "choclo"—a uniquely Argentinian term for corn—in the Spanish version of the food guide; this term, however, was confusing to participants of Mexican origin, for whom "choclo" is a thick-soled shoe, and corn is called "maize" or "elote." (Diabetes

Prevention Program Research Group, 2002). Evidently, because multifaceted eating patterns among Latinos vary according to their different ethnic backgrounds, both diversity and inclusion must be identified and acknowledged for this group to be able to best satisfy their health and nutritional needs.

The varied food and eating patterns among Latinos are consistent, of course, with the fact that in different cultures throughout the world the inhabitants have different food preferences, cultural definitions of foods, and dietary patterns (U.S. Department of Agriculture, 2013). Reflecting this fact, some studies confirm that "universal" dietary guidelines have limited utility for different ethnic groups with particular diet-related health needs and food preferences, and that, therefore, efficacious dietary guidelines need to include the unique and particular dietary characteristics of the specific group in question (Simopoulos et al, 1998; Briefel and Johnson 2004).

METHOD.

Given the differences in food intake of U.S. Latinos compared to NHW and the diversity within the Latino population—including their food culture and terminology—there is clearly a need for a more culturally competent Latino food guide than what currently exists for this population group. Most generally, the intent of such a guide, which the writer created and calls the "Latino Way Food Group Guide," is to reduce the existing gap in cultural and linguistically competent nutritional education materials designed for the fast growing Latino population in the U.S. More specifically, the purpose of the guide is to raise awareness of the different eating patterns for the various Latino cultures, and to present a more inclusive food groups that incorporate their culinary traditions, food preferences, eating patterns, and nutritional needs.

The Latino Way Food Group Guide, while reflecting nutritional needs and food preferences of Latinos in the U.S., follows the major characteristics of the 2010 United States Department of Agriculture Food Patterns, presented on the choosemyplate.gov website (U.S. Department of Agriculture and U.S. Department of Health and Human Services, 2010). It sorts foods into different groups, provides recommendations for each group, includes guidance on adequate portion sizes for consumers to follow for optimal health and weight, and it helps Latinos to better identify and classify their traditional foods and dishes.

To create the "Latino version" of the U.S.D.A. Food Patterns, the writer—a dietitian and a nutrition professor at Hostos Community College in New York City—conducted field observations and utilized public information and ecological data. The observation-based data were obtained from her nutrition course students, who were mostly Latinos (56%) and African American/black (22%). The students were asked to keep four-days food journal and sort their food intake into groups using the U.S.D.A. Food Patterns. After ten years of reviewing the students' food journals (about 2,450 students), common practices were noticed regarding how they sorted food into groups. The students with Latino backgrounds more often included the starchy vegetables, legumes, beans, roots, and tubers in the vegetable group, as designated by U.S.D.A. Food Patterns.

In their final term paper analysis of their food intake, the majority of the students stated having an adequate intake of vegetables, since they had a high intake of the starchy ones, in particular beans, corn, potatoes, yucca, and plantains. Also, it was noticed that they had a frequent intake of rice, usually eaten together with the starchy vegetables, resulting in a high intake of starch, but not much of other vegetables. An

example of a common mixture of food in one meal was rice, beans, plantains (either green or yellow), and meat. The U.S.D.A. Food Patterns assignment of the starchy vegetables in the same group as the non-starchy ones apparently created a confusion or a false belief of eating an appropriate amount of vegetables.

RESULTS.

Food Grouping: The U.S.D.A. Food Patterns and Latino Way Food Group Guides

A study by Davis et al. (2013) showed that the Latino participants' high intake of pinto beans and yucca was identified by a nutritional analysis as having a high fiber and vegetables content. Beans and yucca (as well as other starchy vegetables) are classified as vegetables, but they are higher in starch and calories than other vegetables. This classification may not be of major importance for a population that has a low intake of these foods, but it may be inappropriate for Latinos, due to their high and frequent intake of them and their high prevalence of diabetes and obesity. The dietary food patterns used by most Latin American countries (Panama, Costa Rica, Mexico, Puerto Rico, and others) classify starchy vegetables, roots, and tubers with the grain/starch group and the beans and legumes with the protein group, according to their nutrient density and the key nutrients they provide. Thus, the writer considered the criteria used by most Latin American country dietary food guides, along with the U.S.D.A. Food Patterns, in the creation of The Latino Food Group Guide.

The U.S.D.A.'s Dietary Guidelines for Americans 2010 are recommendations based on the U.S.D.A.'s scientific research on the type of food Americans consume,

including its nutrient composition and relation to individual needs (U.S. Department of Agriculture and U.S. Department of Health and Human Services, 2010). Based on these guidelines, the U.S.D.A. Food Patterns were developed to relate nutrition theory to food groups. This resulted in five main groups, sorted according to their nutrient density and the key nutrients provided within them. The U.S.D.A. Food Patterns assortment of foods, including the groups and subdivisions within groups, placed starchy vegetables, legumes, beans, roots, and tubers in the vegetable group.

The Latino Way Food Group Guide, in contrast, divides the Latino foods into more detailed subdivisions, according to their nutrient, calorie, starch, and fat content. It also provides instructions for appropriate food portion sizes, just as the U.S.D.A. Food Patterns does. The main differences between the two guidelines are the inclusion of cheese, beans, and legumes exclusively in the Protein Group, and the tubers, roots, and starchy vegetables in the Grain/Starch Group. Also provided in the Latino Way Food Group Guide are separate categories for water; spices and condiments; good and bad oils; sweets; and alcoholic beverages. In addition, the Latino Way Food Group Guide includes different names used in Spanish for the same food item and considers the meal patterns of the diverse Latino groups in the U.S.

The U.S.D.A. Food Patterns shown in "MyPlate" (Figure 1) includes the five food groups said to build a healthy meal, using the familiar image of a plate as the setting to help consumers make better choices and remind them to eat healthier. Although the "MyPlate" image does not provide detailed information about the foods included in the groups, it does offer a reference to the website www.choosemyplate.org for more information.

Figure 1: The Latino Plate
Sources: Doctoriris.com, 2014

The Latino Way Food Group Guide also uses a plate image (shown in Figure 1), similar to the U.S.D.A. Food Patterns MyPlate (shown in Figure 2), to help consumers understand the recommendations. In contrast to the U.S.D.A. MyPlate, however, the Latino Plate (a) encourages drinking water instead of milk; (b) allocates half of the plate for vegetables, excluding the fruits; (c) contains an image of fruit and yogurt outside the plate, as a snack or dessert option; and (d) adds the image of a small bottle of oil and a recommendation to choose the "good" (unsaturated) oils. In addition, the Latino Plate depicts two plate sizes—8" and 10"—and recommends the use of the smaller plate to reduce food portion size.

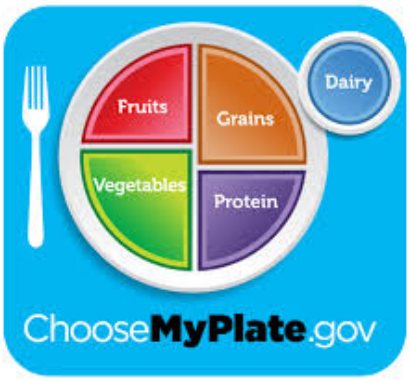

Figure 2: The U.S.D.A. MyPlate
Sources: The United State Department of Agriculture

DISCUSSION

The following sections discuss in further detail the differences and similarities between the Latino Way Food Groups and the Latino Plate image and the U.S.D.A. Food Patterns and MyPlate image.

Grains and Starch Group

The Latino Way Food Groups divides the "Grains and Starch Group" into three subgroups—whole grains, enriched/refined grains, and roots/tubers and starchy vegetables— while the U.S.D.A. Food Patterns uses only two subgroups—whole grains and enriched/refined grains. The U.S.D.A. Food Patterns doesn't consider roots, tubers, and starchy vegetables as part of this group, even though they are high in complex carbohydrates-starch (as much as grains). Instead, they are included in the Vegetable Group, as a starchy vegetables subdivision. The roots/tubers/starchy vegetables are eaten frequently by Latinos and prepared in many different ways as a side dish. Some examples of foods in this subgroup are potatoes (including sweet potatoes), green bananas, green and yellow plantains, corn, yams, and yuccas.

The recommendations for both guides are similar: to choose at least half of the daily intake as whole grains (e.g., 100% whole wheat, quinoa, brown rice, and whole stone-ground cornmeal and oats) in their traditional preparations (e.g., tortillas, arepas, bread, cooked rice), rather than choose enriched refined grains (e.g., white bread, rice, flour tortilla). Also, both guides recommend limiting the intake of foods with a high

content of solid fats and/or added sugar. The Latino Way Food Groups recommends eating roots/tubers/starchy vegetables as part of the Grain/Starch Group intake of the day, but not in addition to other starches in the same meal (to prevent overconsumption of one group). For example, the Latino Way Food Groups recommends that one should avoid eating rice, "tostones" (or "maduros," "arepas," or tortillas), bread, and corn in one meal, as many Latinos are accustomed to doing. This recommendation is particularly important for those individuals trying to control their weight, and for those with a diabetes diagnosis, in order to control blood sugar levels.

Protein Group

The U.S.D.A. Food Patterns includes in the Protein Group seafood, meat, poultry, eggs, nuts and seeds, beans and peas, and processed soy products. Beans and peas are also included in the Vegetable group. The Latino Way Food Groups, however, divides the protein group in two, namely, proteins from animal and proteins from vegetable sources. It further subdivides them by fat content, from very low to very high. The protein from animal sources includes meat, poultry, eggs, cheese, seafood, and animal organs, and the protein from vegetable sources includes beans and legumes, nuts and seeds, and processed soy products. Cheese is included under protein from animal sources due to its high protein content, saturated (solid) fat, and cholesterol; and animal organs are included because of their frequent use by Latinos. Both guides recommend that individuals should choose a variety of protein foods, have fish in place of meat or poultry at least twice a week, and eat lean meat and poultry, as it is low in

fat. A list of foods to eat in limited amounts, due to their high content of solid fats, is also included in both guides.

The Latino Way Food Groups further recommends that individuals should consume protein from vegetable sources (e.g., beans and nuts) in place of animal sources at least once a week, limit red meat to no more than four times a week, substitute natural cheese for meat and poultry, and consume processed meat and organ meats in moderation. These recommendations are made to reduce the intake of saturated fat and cholesterol and increase the intake of Omega 3 and soluble fiber, which can reduce the risk of cardiovascular diseases, cancers, and diabetes, as well as help with weight management. Both the Latino Plate and the U.S.D.A. MyPlate images allocate about one-quarter of the plate to protein food sources, and neither of them distinguishes different kinds of protein food sources.

Vegetables Group

The Latino Way Food Groups divides the "Vegetables Group" into three subgroups based on color: dark green (e.g., broccoli, leafy green vegetables such as romaine lettuce), red and orange (e.g., tomatoes, carrots, pumpkin), and other colored vegetables (e.g., eggplant, jicama, green peppers). It is recommended that individuals eat a variety from all subgroups on a daily basis, and to limit the ones with added fat. The U.S.D.A. Food Patterns organizes the vegetables into five subgroups, based on their nutrient content: dark green (e.g., leafy green, broccoli), red and orange (e.g., sweet

potatoes, carrots), starchy vegetables (e.g., potatoes, corn), beans and peas (e.g., kidney, pinto, navy beans), and other vegetables (e.g., zucchini, cauliflower). They recommend that individuals should consume a variety of vegetables every day, and from all five subgroups, several times a week, and to limit the ones that have solid fat and added sugar. Both guides recommend eating vegetables raw or cooked; fresh, frozen or canned; and whole, cut-off, or mashed.

The Vegetables Group, as per the U.S.D.A. Food Patterns, is low in calories and starch except for the beans and the starchy vegetables subgroups, which are higher in starch and calories. For Latinos, this classification can be problematic, because of their high and regular intake of starchy vegetables.

The U.S.D.A. MyPlate image does not distinguish between the vegetable subgroups, and vegetables represent about one-third of the plate. In contrast, in the Latino Plate vegetables occupy one-half of the plate.

Fruits Group

For the Fruits Group there are no major differences between both guides in terms of group divisions or recommendations. The Latino Way Food Groups includes the fruits most popular among Latinos, which can be easily found fresh, frozen, or canned in the U.S. The U.S.D.A. MyPlate image allocates the fruits inside the plate and it occupies about one-quarter of the plate. In contrast, The Latino Plate presents the fruits outside of the plate, together with yogurt, and suggests the intake of one or the other as a dessert or snack.

Milk Group

In the Latino Way Food Groups, the Milk Group includes milk and yogurt but not cheese. Instead, as mentioned, cheese is in the protein from animal sources group, due to its high content of saturated fat and cholesterol and Latinos' generally low compliance of choosing low-fat cheeses (Mercado et al, 2010). Both the U.S.D.A. Food Patterns and Latino Way Food Groups recommend that individuals consume fat free or low fat (1%) milk or yogurt, choose other calcium-rich foods if they don't consume milk, and limit their intake of listed foods with a high content of solid fats and sugar.

The Latino Way Plate presents yogurt outside of the plate, together with fruits, and suggests the intake of one or the other for a dessert or snack. In contrast, the U.S.D.A. MyPlate recommends dairy with the meal, indicated by including a glass of milk near the plate.

Oils Group

The Latino Way Food Groups divides oils/fats into two groups: good (unsaturated) and bad (saturated), while the U.S.D.A. Food Patterns doesn't consider oils as a food group but, rather, mentions them because they contribute vitamin E and essential fatty acids. The recommendation for oil intake is to use "good oils" (unsaturated) instead of "bad oils" (saturated fats and trans-fat). The Latino Way Plate presents a little bottle of good oil outside of the plate as a reminder for individuals to choose good oil, while the U.S.D.A. MyPlate is silent as regards oils and fats.

Others Group

In the Others Group, the Latino Way Food Groups includes all other foods, beverages, and edible ingredients that do not fit the definitions of the major food groups

but are consumed in significant amounts by Latinos. This group is subdivided based on each food's calories and unhealthy content, such as saturated fat. The items included in the "Others" category may or may not add calories to the diet but they influence the taste and palatability of food. Beverages and sweets that contain either mostly empty calories or calories from fats and sugars with no significant nutrients are included here. The Others Group divisions are as follow: (a) flavors, which include condiments, herbs, spices and sauces; (b) water, including plain water and flavored water with or without calories; (c) sweets, including candies and desserts, which are further subdivided into sweets with and without fat, and soft drinks, such as sodas, tarritos, and horchatas; and (d) alcoholic beverages, which are subdivided into plain and mixed drinks. The U.S.D.A. Food Patterns includes processed foods, sweets, and alcoholic beverages in the Others Group, but it does not mention water or condiments.

Plate Size

The Latino Plate, as mentioned, distinguishes between plate sizes (10" and 8") and recommends that individuals use a smaller plate, to help control food portion sizes and calories, to facilitate weight management, and to prevent overeating. The U.S.D.A. MyPlate is silent on plate size.

DISCUSSION AND RECOMMENDATIONS

The writer created the Latino Way Food Group Guide and the Latino Plate based on ecological data of how Latino college students classified their traditional foods and dishes. Using the U.S.D.A. Food Patterns, some common practices were identified, such as that the students' intake of starchy vegetables was high and that they held a false belief regarding an appropriate intake of vegetables, because in reality they were eating starches. Since the existing nutritional educational materials targeting Latinos in the U.S. were mostly translated into Spanish without considering their vast cultural and linguistic diversity, these materials were often not comprehended or utilized effectively.

The Latino Way Food Group Guide fills the existing gap in beneficial cultural and linguistically competent nutritional education and food classification material available to the Latino community in the U.S., by both properly classifying their intake of traditional foods and dishes and considering both their nutritional and caloric contributions.

Although both the Latino Way Food Group Guide and the Latino Plate were created following the U.S.D.A. Food Patterns, and with consideration of the traditional foods and cultures of Latinos, at this time it is unclear how the Latino population will interpret and use the guide and plate image, and their effectiveness is thus unknown. For these reasons, the writer plans to test the meaning that the Latino Way Food Group Guide has for the U.S. Latino community during the fall of 2014, using focus groups and surveys. It is expected that the data will be analyzed and the results of the study will be reported by February 2015.

Meanwhile, until definitive research results are obtained, it is hoped that the Latino Way Food Group Guide will fill the gap created by the limited food and nutritional educational materials available to U.S. Latinos. It is also hoped that the Guide will address important issues related to the variety of traditional foods and dishes used by Latinos in the U.S. As such, the Latino Way Food Group Guide may be a culturally competent way of addressing the existing health disparity in the U.S. Latino community.

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