



## **ANTH712 Internship Analysis**

**The Anthropology of Health Education:  
Developing, Implementing, and Evaluating  
a Culturally Appropriate Intervention**

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**Abstract**

Over the past year, I developed, implemented, and evaluated a culturally appropriate pilot health education intervention at a community health clinic. My methods included identifying potential clients with indicators of high cholesterol, hypertension, and/or diabetes, developing curricula, and offering both individual counseling sessions and group workshops. Through eliciting the clients' explanatory models of their chronic diseases and their typical diet and physical activity behaviors, the counseling sessions and workshops aimed to improve participants' dietary, physical activity, and cardiovascular/diabetes self-care behaviors. A very small percentage of targeted clients attended the workshops, so a process evaluation was performed to assess clients' actual and providers' perceived barriers to accessing the workshops. Clients reported that structural barriers prevented them from attending, while providers perceived the clients' barriers as sociocultural and structural. The evaluation provides evidence supporting the continuation of the workshops, as well as several recommendations for removing barriers to accessing them.

## **I. Anthropology in Health Education: A Case Study**

### *A. Purpose*

The original goal of my internship was to contribute to improving Latina health through two objectives: learning how Latinas diagnosed with gestational diabetes mellitus (GDM) view their condition and how that affects their health care and treatment, and developing a culturally relevant intervention that builds awareness about preventing GDM and type 2 diabetes. Shortly after the internship began, the scope of these objectives expanded to include hypercholesterolemia and hypertension.

Although research on explanatory models and cardiovascular and diabetes education interventions focus mainly on Mexicans, Mexican Americans, and African Americans, the Pregnancy Aid Center (PAC), a community-based clinic in College Park, Maryland, provides health services to Latinas of various nationalities, including Salvadorans, Guatemalans, Mexicans, Bolivians, and Peruvians. A smaller portion of the clinic's clients come from Africa, the Caribbean, the Middle East, South Asia, and the Pacific Islands. Research gathered through participant observation and interviews during this internship will add to the anthropological and public health knowledge of diverse immigrant populations in Prince George's County, Maryland.

Engaging clients with hypercholesterolemia, hypertension, and diabetes in a discussion of their explanatory models related to diabetes and cardiovascular health facilitated the development of realistic and appropriate strategies for improving their health, specifically decreasing their and their children's likelihood of developing type 2 diabetes and cardiovascular disease. In addition, assessing both these explanatory models and the clients' nutrition and physical activity awareness and behavior was necessary to developing an effective, culturally appropriate health education intervention. Finally, evaluating clients' actual barriers to accessing the health education intervention, as well as providers' perception of client barriers, provides useful recommendations for removing these barriers, enabling the implementation of a culturally relevant health education intervention as part of PAC's prevention and treatment plan to reduce its significant number of clients

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The Anthropology of Health Education: Developing, Implementing, and Evaluating a Culturally Appropriate Intervention with hypercholesterolemia, hypertension, and diabetes.

## *B. Chronic Disease Epidemics*

Nationwide, cardiovascular disease,<sup>1</sup> cerebrovascular disease (stroke), diabetes, and hypertension accounted for 36 percent of all deaths in 2004 (Miniño, et al. 2007). In Prince George's County, where PAC is located and where the majority of its clients reside, these chronic diseases accounted for 40 percent of women's deaths in 2003 (Prince George's County 2004).

### **The Diabetes Epidemic**

As of 2005, the Centers for Disease Control and Prevention estimate that 20.8 million Americans—seven percent of the population—have diabetes,<sup>2</sup> a 12.5 percent increase from 18.2 million in 2003. Nearly a third of these Americans are undiagnosed (Office of Minority Health 2005).

Diabetes is a growing epidemic for all Americans, but especially Latinos.<sup>3</sup> In 2001, diabetes was listed as the fifth leading cause of death among the U.S. Latino population (Anderson and Smith 2002). Findings from the latest report show that nearly ten percent of Mexican Americans age 20 and older have diabetes (Office of Minority Health 2005). Mexican Americans and Puerto Ricans, the largest Latino groups in the U.S., are nearly twice as likely to have diabetes than Anglo Americans.

Within the Latino population, diabetes is more prevalent in women than in men. Latinas with diabetes are nearly eight times more likely to develop peripheral vascular disease than non-diabetic women, and nearly four times more likely to be diagnosed with heart disease or stroke (Office of Minority Health 2005). In

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<sup>1</sup> In the U.S., cardiovascular disease has been the leading cause of death in every year since 1900, with the exception of 1918, when the worldwide influenza pandemic caused the most deaths (Miniño, et al. 2007).

<sup>2</sup> The full name for diabetes, diabetes mellitus, comes from the New Latin for "honey sweet diabetes." First coined by the Greek physician Aretaeus of Cappadocia in the first century AD, the term diabetes was first recorded in English in a medical text written around 1425. In 1675, English doctor and Royal Society founder Thomas Willis added the word *mellitus*, from the Latin meaning honey, which referred to the sweet taste of a diabetic's urine. Apparently, tasting urine is not a new cultural phenomenon, as ancient Greeks, Chinese, Egyptians, East Indians, and Pima Indians have all made similar observations about diabetics' urine (Patlak 2002).

<sup>3</sup> The U.S. government classifies Latinos as "Hispanics," a term that it uses to encompass "persons who trace their ancestry to Mexico, Puerto Rico, Cuba, Spain, the Spanish-speaking countries of Central or South America, the Dominican Republic or other Spanish cultures, regardless of race." The government's term "doesn't include people from Brazil, Guyana, Suriname, Trinidad, Belize and Portugal because Spanish is not the first language in those countries" (American Heart Association 2008c).

addition, diabetes, including type 2 and GDM, is more common in Latinas than in African American and Anglo American women (Office of Minority Health 2005), and Latinas are more likely than Anglo American women to be undiagnosed diabetics (American Heart Association 2008c). Risk factors seem to be more common among Latinas than Anglo Americans. These factors include a family history of diabetes, GDM, impaired glucose tolerance, obesity, and physical (National Diabetes Education Program 2002).

### *Gestational Diabetes*

Nationwide, GDM occurs in four to seven percent of all prenatal women, which accounts for approximately 135,000 to 200,000 diagnosed cases each year. The average prevalence rate of Latinas with GDM is five percent (Association 2007a; Fassett 2006; Umar 2002). However, in 2003, 12 percent of Latinas living in the District of Columbia were diagnosed (McClure and Jerger 2005). The research does not indicate why the rate of GDM in the District is more than twice as high as the nationwide rate for Latinas, although studies show that type 2 diabetes is associated with low socioeconomic status, obesity, inactivity, and stress (Reichenbach 2006; Schoenberg, et al. 2005).

Gestational diabetics are at heightened risk for strokes and heart attacks, and their fetuses and newborns are at risk for developing life-threatening heart defects, fetal growth problems, spina bifida, premature birth, low birth weight, respiratory distress syndrome, and other serious health issues (Kieffer 2006; Umar 2002). In addition, research shows that 50 to 70 percent of Latinas with GDM may develop type 2 diabetes within five to ten years after giving birth (Kjos, et al. 1995; Tucker 2003; Umar 2002). Children exposed to GDM are twice as likely to develop impaired glucose tolerance (or prediabetes) and type 2 diabetes than children not exposed (Carr, et al. 2006; Goran, et al. 2004; Kim, et al. 2002).

Risk factors for GDM, like type 2 diabetes, include obesity, high carbohydrate intake, high blood pressure, high cholesterol levels, lack of physical activity, and family history of diabetes (Gallivan and Kelly 2004). Also, women at risk for GDM may have given birth to at least one baby weighing nine pounds or more. Research shows that GDM and type 2 diabetes may be prevented through regular exercise, maintaining a healthy weight, reducing carbohydrate intake, and monitoring blood sugar levels (Rosal, et al. 2005).

## Cardiovascular Disease Epidemic

Cardiovascular disease is the most common and deadly complication of diabetes. Latinos with diabetes are two to four times more likely to develop cardiovascular disease than non-diabetics, and nearly 65 percent of Latino diabetics die from cardiovascular and cerebrovascular disease. About 70 percent of Latinos with diabetes also have hypertension (National Diabetes Education Program 2002), and Mexican Americans are less likely than Anglo or African Americans to control their hypertension (American Heart Association 2008c).

Latinas are at higher risk for developing cardiovascular disease than Latinos. Among Mexican American women, 34.4 percent have cardiovascular disease, compared to 31.6 percent of Mexican American men. Fifty percent of Mexican American women have cholesterol levels of 200 mg/dL or higher, which are considered borderline high to high risk (American Heart Association 2008c).

Risk factors for cardiovascular disease include both non-modifiable factors (e.g., heredity, age, sex) and modifiable factors (e.g., hypercholesterolemia, hypertension, obesity, sedentary lifestyle, diabetes) (American Heart Association 2008d). According to the National Institutes of Health (2008), women can lower their risk of cardiovascular disease up to 82 percent by leading a healthy lifestyle, e.g., following a heart-healthy eating plan, getting regular physical activity, maintaining a healthy weight, and not smoking.

### *The Obesity Epidemic*

Nearly 40 percent of adult Latinos are overweight or obese (body mass index, or BMI, of 25 kg/m<sup>2</sup> or higher)—a risk factor for both diabetes and cardiovascular disease. Of these, 27.5 percent are considered obese (BMI of 30 kg/m<sup>2</sup> and higher). Among Mexican Americans, men are more likely to be overweight than women, but women are more likely to be obese (American Heart Association 2008c). Lack of regular physical activity and poor nutrition are the primary modifiable risk factors for obesity. Only 22.6 percent of Latino adults report regular physical activity. Latinas typically consume 32.1 percent of their calories from fat, with less than a third (28.7 percent) of them consuming five or more servings of fruits and vegetables daily (American Heart Association 2008c).

## II. Methods

### A. Overview

Nearly 150 PAC clients were identified from an extensive medical chart review as having indicators for high cholesterol, hypertension, and/or diabetes. Through a mail marketing campaign and during visits to their health provider, these women were targeted for the cardiovascular and diabetes health education intervention. I developed cardiovascular disease and diabetes prevention, care, and treatment curricula and offered both individual counseling sessions and group workshops. Through eliciting the clients' explanatory models of their chronic diseases and their typical diet and physical activity behaviors, these counseling sessions and workshops aimed to improve their dietary, physical activity, and cardiovascular or diabetes self-care behaviors. In addition, a process evaluation was performed in order to assess clients' actual and providers' perceived barriers to accessing the health education workshops. Text analysis was used to examine the client and provider interviews, and descriptive statistics was used to analyze the quantitative data culled from medical charts and questionnaires.

### B. Setting

This internship focused on clients who access the Pregnancy Aid Center in College Park, near the University of Maryland campus.

According to the latest demographics (from 2005), of the approximately 320,000 documented Latinos in Maryland (5.7 percent of the state's population), approximately 100,000 (32 percent) live in Prince George's County (2007). The 2005 census data does not account for the thousands of undocumented Latin American immigrants who reside and/or access health services in Prince George's County. The majority of Latino residents in the Washington, D.C., metro area emigrated from El Salvador, Mexico, Guatemala, Peru, or Bolivia (Schifferes 2003).

Established in 1974, Pregnancy Aid CenterPAC caters to low-income adolescents and women who have either Medicare or no health insurance. With funding from federal and private agencies, the clinic provides women's reproductive and sexual health care and treatment, including pre- and post-family planning, breast and cervical cancer screenings, and sexually transmitted disease and HIV testing. PAC also provides social services such as adoption assistance and emergency food for mothers and their newborns (Pregnancy Aid Center 2006).

### **PAC Clients**

More than 800 clients access PAC's services yearly, ranging in age from 12 to 42 years, with the majority from 15 to 25 years old. Half of PAC's patients have emigrated from Central and South America,<sup>4</sup> and most reside in low-income neighborhoods in Prince George's County.(Pregnancy Aid Centers 2006).

### *C. Targeting the Clients*

PAC's executive director and founder, Mary Jelacic, indicated during my internship proposal phase that a health education intervention would most benefit PAC clients with GDM. She estimated that of the clinic's current prenatal clients, approximately 100 had GDM, of whom approximately 90 percent are Latina. During the first week of my internship, PAC's Title X coordinator, Claudia Lucaccioni, used a database of client laboratory results to compile names of clients whose plasma glucose was at or above 200 mg/dL after a three-hour glucose tolerance test taken between August 2006 and June 2007. Using this client list, I searched for and reviewed client charts, finding all but two of the **146** clients on the list. Then I entered the client data into an Excel spreadsheet, focusing on GDM indicators such as client age, country of origin, number of children, birth weight of last child, pre- and post-pregnancy weight, family and personal history of diabetes, and fasting glucose and glucose tolerance test results (see Appendix B for the spreadsheet).

Instead of the 100 expected clients with GDM, only twelve current prenatal clients were found to have the condition. Renee Milligan—the nurse practitioner who has worked at PAC the longest and sees the most

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<sup>4</sup> Unless nationality is specifically mentioned in this paper, I use the term "Latina" to describe a woman born in Mexico, Central America, or South America who immigrated to the U.S.

clients, being the clinic's only full-time provider—followed up on my progress. After learning that PAC had only 12 GDM clients, she mentioned that one of the most important needs at PAC is to provide health education to clients with high cholesterol and/or hypertension and diabetes. She perceived that many of her clients are Latinas over 40 years old who typically visit the clinic annually for breast and cervical cancer exams through a Prince George's County-sponsored program. As PAC focuses on providing reproductive health services, clients are not usually screened for hypercholesterolemia or diabetes. (Only pregnant clients are screened for GDM.) Renee explained that the clients had to exhibit particularly striking indicators of high cholesterol, hypertension, or diabetes (including morbid obesity, high diastolic blood pressure, fasting blood glucose at or above 126 mg/dL, and/or complaints of fatigue and headache) before she would order lipid panel and blood glucose lab tests.

Using her database of laboratory results, Claudia compiled another report of all clients who had indicators of hypercholesterolemia or diabetes from June 1, 2006, to June 12, 2007 (see Appendix A for a spreadsheet of all clients diagnosed with hypercholesterolemia, hypertension, and diabetes during this period; see Appendix B for selected client sociocultural demographics).

### **Demographics of Patients with Cardiovascular Disease and Diabetes**

I identified and reviewed charts of 144 clients with lab results indicating high cholesterol or high glucose levels from June 2006 to August 2007. Of these clients, 71 (49 percent) had indicators for borderline-high or high cholesterol<sup>5</sup> (mean of 212.83 mg/dL), 16 (11.1 percent) for prehypertension or hypertension,<sup>6</sup> and

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<sup>5</sup> Total cholesterol count is determined by four indicators: low-density lipoprotein (LDL or "bad" cholesterol), high-density lipoprotein (HDL or "good" cholesterol), triglycerides, and Lp(a) cholesterol. The total cholesterol count ranges from desirable (less than 200 mg/dL), to borderline-high risk (200–239 mg/dL), to high risk (240 mg/dL and over). Optimal LDL cholesterol levels are less than 100 mg/dL, near optimal/above optimal 100–129 mg/dL, borderline high 130–159 mg/dL, high 160–189 mg/dL, and very high 190 mg/dL and above. Triglyceride levels are classified as normal (less than 150 mg/dL), borderline-high (150–199 mg/dL), high (200–499 mg/dL), or very high (500 mg/dL and above) (American Heart Association 2008e).

<sup>6</sup> For an adult, the American Heart Association (2008b) classifies normal blood pressure as less than 120/80 mm Hg, prehypertension as 120–139/80–89 mm Hg, and hypertension as 140/90 mm Hg.

96 (66.7 percent) for prediabetes or diabetes,<sup>7</sup> including 73 (50.7 percent) with GDM. The mean weight for non-maternity clients (49 percent) was 177 lbs, with a mean height of 5'3". These variables indicate a mean BMI of 30.4.<sup>8</sup>

Nearly 80 percent of the patients identified emigrated from 20 different countries spanning the globe.<sup>9</sup> Nearly 70 percent were originally from Latin America, of which 20 percent are African American and 6 percent are Anglo American. Three percent originated from Africa, while the remainder emigrated from the Caribbean, Oceania, Europe, and the Middle East.<sup>10</sup> Nearly half of the women are married or in a common law relationship. Two-thirds of the women are between the ages of 20 and 39. See Table 1 for more client sociodemographic characteristics.<sup>11</sup>

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<sup>7</sup> In order to determine whether or not a patient has pre-diabetes or diabetes, PAC orders a fasting plasma glucose test (FPG) or an oral glucose tolerance test (OGTT) at a pre-negotiated rate at a local diagnostic center. Either test can be used to diagnose pre-diabetes or diabetes, although OGTT is used to diagnose gestational diabetes. In an FPG, a fasting blood glucose level between 100 and 125 mg/dl signals pre-diabetes, and a level of 126 mg/dl or higher indicates diabetes. In an OGTT, the patient's blood glucose level is measured after a fast and two hours after drinking a glucose-rich beverage. If the two-hour blood glucose level is between 140 and 199 mg/dl, the person tested has pre-diabetes, and if the blood glucose level is at 200 mg/dl or higher, the person tested has diabetes (American Diabetes Association 2008a).

<sup>8</sup> It is more difficult to calculate BMI for maternity clients, since some clients would be considered overweight or obese with the 20 to 35 lbs they gain over the course of their pregnancy.

<sup>9</sup> At PAC, staff members do not note the patient's country of origin at time of intake. However, in her progress notes, the nurse midwife always notes her patient's country of origin. In a few medical records, staff members inserted a copy of the patient's green card or passport, which notes the country of origin. I could also glean the country of origin by noting the location where the patient had given birth—oftentimes the country name would be listed instead of the hospital name.

<sup>10</sup> As of July 2006, Prince George's County had a population of slightly over 841,000, a five percent increase from the 2000 U.S. census count (Federation for American Immigration Reform 2007). Nearly two-thirds of the county's population is between the ages of 18 and 65, and females make up just over half of the total population. Latinos make up 12 percent of the population (U.S. Census Bureau 2008). In 2000, the U.S. Census recorded nearly 110,500 foreign-born persons in Prince George's County (14 percent of the total population), and estimates put the foreign-born population in 2006 at over 190,000, an increase of 74 percent (U.S. Census Bureau 2008). Most of the documented immigrants who settled in Prince George's County from 1991 to 1998 came from El Salvador, Nigeria, the Philippines, Jamaica, India, China, Ethiopia, Sierra Leone, Ghana, or Trinidad and Tobago (Federation for American Immigration Reform 2007).

<sup>11</sup> For a list of all the sociodemographics abstracted from the medical records, see Appendix A.

**Table 1. Sociodemographic Characteristics of Patients with Hypercholesterolemia, Diabetes, or Hypertension**

<b>Age range (N=144)</b>	<b>n</b>	<b>%</b>	<b>Country of Origin</b>	<b>n</b>	<b>%</b>
14-19	9	6.3	North America		
20-29	48	33	U.S.	32	22.2
30-39	48	33	Latin America		
40-49	19	13	Brazil	1	0.7
50-59	17	12	Columbia	1	0.7
60-69	3	2.1	Dominican Republic	2	1.4
			Ecuador	1	0.7
			El Salvador	22	15.3
<b>Marital Status (N=139)</b>	<b>n</b>	<b>%</b>	Guatemala	12	8.3
Single	66	48	Guyana	1	0.7
Married or common law	67	48	Jamaica	2	1.4
Separated or divorced	5	3.6	Mexico	20	13.9
Widowed	1	0.7	Nicaragua	1	0.7
			Peru	2	1.4
<b>Ethnicity (N=142)</b>	<b>n</b>	<b>%</b>	Trinidad and Tobago	1	0.7
Latina	95	67	Country not known	33	22.9
African American	29	20	Pacific Islands and Oceania		
Anglo American	8	5.6	Philippines	1	0.7
African	6	4.2	Africa		
Middle Eastern	1	0.7	Cameroon	1	0.7
Asian	2	1.4	Ethiopia	2	1.4
Native American	1	0.7	Liberia	1	0.7
			Mali	1	0.7
			Tanzania	1	0.7
			Country not known	4	2.8
			Middle East		
			Iran	1	0.7
			Europe		
			Germany	1	0.7

#### *D. Developing the Intervention*

In the 1970s, Byron Good and Arthur Kleinman began to explore a meaning-centered approach to medical anthropology (Good 1977; Kleinman, et al. 1978). According to Dressler (2001), “What was important to these researchers was the way in which groups and individuals constructed explanations of their own suffering and the way in which those constructions encapsulated an expression of their social suffering.”

The Cultural-Constructivist theoretical framework, derived from Good and Kleinman’s work, “explores how sicknesses are culturally constructed” (Joralemon 2006:12). Cultural-constructivist research engages lay, folk, and professional health care sectors, including their illness experiences (Kleinman 1980)., Cultural-constructivists argue that members of a culture use an explanatory model to provide meaning and

comprehension of an illness. Kleinman, Eisenberg, and Good's (1978) explanatory model framework offers a conceptual framework for thinking about the interface and communication between clients' and providers' different points of view, experience, and involvement in curing and treatment. Providers share a background of biomedical training focused on diseases, yet clients do not usually share the same experience and may have different concepts or explanatory models regarding illness.

### The Client Interview Guide

Based on an extensive literature review of health education intervention studies, I designed the interview guide (see Appendix D) to engage each client in a discussion about perceptions of diabetes, hypercholesterolemia, and hypertension risk and impact, preferred biomedical and herbal treatment, and nutrition and physical activity-related perceptions and practices. The interview guide is composed of three sections. Section II is based on Kleinman's eight questions used to elicit a client's explanatory model (1978),<sup>12</sup> a framework that proved successful in previous medical anthropological research on diabetes and tuberculosis (Rubel and Moore 2001; Schoenberg, et al. 2005). Section III comprised questions on the clients' typical eating and physical activity habits, as well as perceived level of family support. Studies focusing on Puerto Rican and Mexican immigrants in the U.S. and Mexicans and Guatemalans in their native countries describe family support, or *familismo*, as a key factor in helping clients self-manage diabetes and ensuring compliance with dietary and other aspects of diabetes management (Mauldon, et al. 2006; Weller, et al. 1999). Studies demonstrate that diabetics with family support are more likely to successfully self-manage their condition than those without such support (de Alba Garcia, et al. 2007; Gallant 2003).

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<sup>12</sup> Kleinman's eight questions are:

1. What do you call the problem?
2. What do you think has caused the problem?
3. Why do you think it started when it did?
4. What do you think the sickness does?
5. How severe is the sickness? Will it have a short or long course?
6. What kind of treatment do you think you/patient should receive? What are the most important results you hope to receive from this treatment?
7. What are the chief problems the sickness has caused?
8. What do you fear most about the sickness?

## Finding Client Education Materials

Over the past few years, the National Diabetes Education Program (NDEP) has developed several campaigns for high-risk minority populations, including two campaigns specifically for Latinos: “Prevenamos la Diabetes Tipo 2, Paso a Paso” and “Si Tiene Diabetes, Cuide Su Corazón.” The associated materials and tools are free to download at the NDEP website; I downloaded several fact sheets in English and Spanish and ordered two music exercise videos catering to Latinos and African Americans.

The American Heart Association has also developed a Spanish-language campaign, “Conozca Su Corazón,” which raises awareness among Latinos about the risk factors for cardiovascular disease. I downloaded several Spanish-language educational materials on hypercholesterolemia and hypertension to hand out to my Latina clients.

### *E. Implementing the Intervention*

#### **Individual Patient Education and Nutritional and Exercise Counseling Sessions**

PAC providers often expressed frustration that they did not have the time to provide an extensive cardiovascular or diabetes education session to their clients. Often, they would either ask me to meet with clients after medical exams, or ask a staff member to call the client and set up an appointment to discuss their lab test results with me. These meetings were offered free of charge to the client and ranged from 45 to 60 minutes, usually depending on the amount of questions the client asked. If children accompanied the client to the visit, they were invited into the session. In most cases, Title X coordinator Claudia Lucaccioni provided Spanish-English translation services; in her absence, a bilingual administrative staff person would translate.

The initial counseling session involved eight steps for eliciting discussion with the client:

1. **Elicit the client’s demographic information**, including family size, occupation, and country of origin.

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2. **Elicit the client's explanatory model** of hypercholesterolemia, hypertension, or diabetes. In some cases the client had, or was at risk of developing, more than one of these conditions, so explanatory models were elicited for each one.
3. **Provide an overview of the chronic disease.** I would provide an overview of cardiovascular disease or diabetes, including risk factors. We would then discuss the client's lab results, explaining the significance of each result.
4. **Elicit client's perceptions of nutrition and eating habits.**
5. **Elicit client's perception of physical activity.**
6. **Provide recommendations based on client's preferred method of treatment.** If the client expressed a preference for supplements or herbs while discussing her explanatory model, I would recommend a variety of remedies, including omega-3 fish oil supplements, garlic, and cinnamon.<sup>13</sup> If the client preferred to modify her diet, I would recommend healthier ways to prepare food, such as replacing corn oil with canola oil, drinking reduced fat or soy milk instead of whole milk, consuming less sugary drinks, and consuming more water, fiber, fruits, and vegetables. I would also emphasize controlling portions and eating a variety of colorful foods.<sup>14</sup> If the client mentioned that she did not participate in regular physical activity, we would discuss ways in which to incorporate physical activity into her daily routine and participate in leisure-time activities with her family.
7. **Provide client with education materials.** I provided the patients fact sheets on risk factors for diabetes or cardiovascular disease to read at home with their family.
8. **Recommend follow-up with health care provider.** In some cases, the provider asked me to follow up with the client every two weeks to discuss whether or not my recommendations were working for the

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<sup>13</sup> Well known integrative medicine proponent Andrew Weil, MD, offers free medical advice on his website (Weil Lifestyle 2007), recommending several non-biomedical treatments including herbs and supplements. I have found the website to be a useful resource not just for my clients, but for my own personal and family use.

<sup>14</sup> These nutritional recommendations are based on years of personal and academic research into a variety of weight loss and nutritional strategies, ranging from traditional best practices (United States Department of Agriculture 2008) to findings from the fields of complementary and alternative medicine (Weil Lifestyle 2007). Full analysis of this research is beyond the scope of this paper, which describes a pilot study rather than a vigorous clinical intervention.

client and to find out how the client was feeling in terms of symptoms. If the provider did not specify a follow-up timeline and the client's cholesterol levels were not significantly high, then I recommended that the client follow up with her provider to recheck her lipid panel in three months.<sup>15</sup>

In addition to the counseling sessions, I offered a two-hour workshop each Friday afternoon in July.<sup>16</sup> To announce the Friday afternoon workshops in July, I created and printed eye-catching bilingual flyers (see Appendix E) inviting clients and their family to the workshops. I posted the flyers in the PAC waiting room and on the front and inside doors, as well as along the hallways on the first and second floors. Approximately two weeks before the first workshop date, I mailed the diabetes and cardiovascular health class flyers to the current clients with diabetes, hypercholesterolemia, and hypertension. In mid July, I mailed the diabetes class flyers and a diabetes prevention information sheet tailored to women who have had GDM to all the pre- and post-natal clients diagnosed with GDM over the past year.

According to the PAC receptionists, several clients (exact number unknown) expressed interest in attending. For the last two weeks in July, the receptionists kept a clipboard with a sign up sheet for clients to commit to attending a workshop.

The workshops had a similar structure as the individual counseling sessions, with the added steps of taste testing, reading nutrition labels, and performing exercises with a music video.

Table 2 on the following page compares the individual counseling session and the group workshop and lists the instruments used for both, including educational materials.

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<sup>15</sup> The three-month timeline is based on a study conducted participants attempting to reach their lipid goals in a cardiovascular health intervention (Wood 2007).

<sup>16</sup> PAC Executive Director Mary Jelacic set the Friday afternoon time since she perceived that at the very least the high-risk clients, including those with GDM, would attend a workshop. The clients were scheduled to see the obstetrician who came every Friday from 2 to 4:30.

**Table 2. Format and Content of the Health Education Intervention**

<b>Length</b>	<b>Individual Counseling Session</b>	<b>Group Workshop</b>	<b>Instrument</b>
10-15 min.	Interview client on her [disease] explanatory model	Interview the client on her [disease] explanatory model	Client interview guide
5 min.	Review client's lab results Provide a short overview of high cholesterol and cardiovascular disease	Review client's lab results Provide a short overview of high cholesterol and cardiovascular disease	Materials in English: - What Your Cholesterol Levels Mean (Association 2008e) - Risk Factors and Coronary Heart Disease (Association 2008d)  Materials in Spanish: - ¿Qué son las enfermedades del corazón y los ataques al cerebro? (American Heart Association 2004c) - ¿Qué significan mis cifras de colesterol? (American Heart Association 2004b)
	Provide brief overview of hypertension and cardiovascular disease	Provide brief overview of hypertension and cardiovascular disease	Materials in English: - About High Blood Pressure (Association 2008b)  Materials in Spanish: - ¿Qué son las enfermedades del corazón y los ataques al cerebro? (American Heart Association 2004c) - ¿Qué es la presión alta? (American Heart Association 2004a)
	Provide a short overview of diabetes, and if client has high cholesterol, diabetes's relation to cardiovascular disease	Provide a short overview of diabetes, and if client has high cholesterol, diabetes's relation to cardiovascular disease	Materials in English: - All about Diabetes (Association 2008a) - It's Never Too Early to Prevent Diabetes (National Diabetes Education Program 2006a)  Materials in Spanish: - Sobre la diabetes (American Heart Association 2007b) - Nunca es muy Temprano para Prevenir la Diabetes (National Diabetes Education Program 2006b)
10-15 min.	Interview client on her dietary and physical activity behavior	Interview client on her dietary and physical activity behavior	Client interview guide
10-20 min.	Discuss how to cook the food the client typically eats in a healthier way and discuss portion control	Discuss how to cook the food the client typically eats in a healthier way and discuss portion control	Portion Control Fact Sheet (HealthMark Multimedia 2006), Food Spectrum Fact Sheet

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15 min.		Taste test vanilla yogurt with blueberries and low-fat granola <sup>17</sup> and discussed the benefits of calcium, antioxidants, oats, and low fat foods as part of a heart healthy diet	
10 min.		Discuss nutrition labels using the info from the yogurt container and granola box, and discuss buying healthy foods on a low-income budget	
10 min.	Discuss the benefits of exercise as part of a heart healthy lifestyle and how to incorporate more physical activity into daily routines	Discuss the benefits of exercise as part of a heart healthy lifestyle.	
15 min.		Show a music video and perform cardio exercises with the client that she can do at home	Materials in English: - Step by Step: Moving towards prevention of Type 2 Diabetes (National Diabetes Education Program 2005b)  Materials in Spanish: - Movimiento Por Su Vida (National Diabetes Education Program 2005a)
5 min.	Review materials and discuss any questions the client has	Review materials and discuss any questions the client has	

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<sup>17</sup> In Dec. 2006, I attended a three-day diabetes education workshop for Latino clients and their family members at the Spanish Catholic Center in Langley Park, MD, where the dietician provided this yogurt parfait recipe to the participants. I observed many participants rave about the parfait, so I felt confident that the workshop participants at PAC would enjoy it, too. The recipe consists of mixing low-fat vanilla yogurt with low-fat granola and blueberries. Using store brand yogurt and granola, as well as in season blueberries, it cost me about five dollars to make ten servings (or 50 cents per serving), which seemed a reasonably priced and healthier alternative to sweet bread for breakfast or highly processed, salt-laden snack foods.

From June to November 2007, I provided a total of 47 counseling sessions with 31 patients of the targeted 144 (20 percent). Eight clients (25.8 percent) followed up with me at least once, of whom two followed up with three additional visits. The majority of the clients (61.3 percent) were between 20 and 39 years old, married or in a common law relationship (50 percent), and had a mean of 2.32 children. The clients come from 12 different countries; the majority (77.4 percent) having immigrated from Latin American, most commonly from Mexico (25.8 percent), El Salvador (22.6 percent), and Guatemala (9.7 percent).

The average weight was 175 lbs. with a mean height of 5'2" and mean BMI of 32. Twelve clients (38.7 percent) had pre-diabetes or diabetes, and of these clients, seven (58.3 percent) had GDM. The majority of clients (65 percent) reported having a family history of diabetes or cardiovascular disease.

The 22 clients (70.9 percent) who had a lipid panel screening, the mean total cholesterol was 197 mg/dL; mean triglycerides 180 mg/dL; mean LDL, or bad cholesterol, 114 mg/dL; and mean HDL, or good cholesterol, 48 mg/dL. Of the 23 clients (74.2 percent) who had their glucose levels checked, the mean fasting blood glucose 119 mg/dL and mean two-hour glucose was 180 mg/dL.

Table 3 provides a sample of the clients' demographics.



I had anticipated that at least 45 clients (30 percent) of 144 targeted clients would attend at least one of the group workshops held Friday afternoons in July. However, only two clients (1 percent) and one client’s mother attended, and no clients signed up for the workshop despite several clients expressing an interest attending. For a graduate-level evaluation class with Dr. Mary Odell Butler held in Fall 2007, I evaluated my health education intervention to learn what clients’ barriers to accessing the workshops were, as well as the providers’ perceptions of clients’ barriers.

*F. Process Evaluation Measures*

In order to provide a comprehensive analysis of evaluation data, the Evaluation Question has been broken down into sub-questions, as show in Table 4.

**Table 4. Evaluation Question and Sub-Questions**

<b>Evaluation Question. What are barriers to accessing the health education workshops offered by the Pregnancy Aid Center?</b>
• What are the clients’ perceptions of these barriers?
• What are the providers’ perceptions of these barriers?

This section comprises the steps I took in order to address the aforementioned evaluation questions described in Table 4, including the data collection and the data analysis processes.

**Data Collection**

In order to answer the evaluation questions mentioned above, I collected client data, including surveys and interviews, during site visits to PAC. All client interviews were conducted in person at PAC. The specific kinds of data collection for this evaluation are described in Table 5.

**Table 5. Data Collection Plan**

<b>Data Source</b>	<b>Description</b>	<b>Collected by:</b>	<b>Instrument</b>
Client surveys	Surveys passed out to clients in the reception area waiting to see a provider. The evaluator attempted to elicit 35 responses and received 12 responses (34 percent response rate).	Evaluator. No identifiers were collected.	Client Survey Instrument
Client interviews	Ten interviews attempted and seven 20- to 30-minute individual interviews conducted (70 percent response rate). <ul style="list-style-type: none"> <li>• Two Interviews attempted and conducted with two clients (100 percent) who attended a July 2007 health education workshop at PAC.</li> <li>• Attempted 5 interviews with clients who attended at least one counseling session conducted from June to Nov. 2007; conducted 2 interviews (40 percent response rate).</li> <li>• Attempted and conducted one interview with a new client who had not received a flyer (100 percent response rate).</li> </ul>	Evaluator randomly selected interviewees from counseling sessions. No identifiers were collected.	Client Interview Instrument
Provider interviews	Informal interviews with 5 staff members.	Evaluator.	None

## Client Data

**Client Surveys.** Surveys were handed to clients waiting in the PAC reception area to see their provider. These surveys (see Appendix F for client survey instrument) address clients' barriers to attending a PAC-sponsored one- to two-hour workshop that offers nutrition education and exercise tips I asked the clients if they would want to fill out a survey and left blank surveys next to the sign up sheet while she conducted other business. The receptionists reported that no patients wanted to complete the surveys, and I again asked patients to complete the survey forms. I expected to receive at least 30 survey responses from clients; I actually received 12 (34 percent response rate).

**Client Interviews.** I conducted client interviews at PAC to address perceived barriers to accessing health education workshops. The semi-structured interview (see Appendix B for the client interview instrument) lasted approximately 20 to 30 minutes and was open-ended. Interviews were completed with the two clients (100 percent) who attended the workshops, and I attempted to conduct interviews with a sample of six clients out of

30 (20 percent) who attended an individual health education counseling session from June to Nov. 2007. I randomly selected the six clients to interview by picking the name of every fifth client who attended at least one counseling session. When the client was not home at the time that evaluator called to schedule an interview, I chose another client to contact. I conducted three interviews (40 percent response rate), including one with a new client who had not received a health educator flyer.

**Provider Interviews.** I attempted and conducted informal interviews with five providers (100 percent response rate), including two nurse practitioners, one medical assistant, one administrative staff person/interpreter, and the executive director.

*Data Analysis*

Data collection yielded two types of data from PAC: quantitative data from client surveys, and qualitative data from interviews with clients and providers. The survey responses were be typed into a word processing document, and the quantitative data was then written into SPSS data sets for statistical analyses using a data dictionary that specifies variable names, values, formats and labels for all variables. Qualitative data was typed into a Word document and then hand coded for themes. The data analysis required writing data into SPSS data sets (for quantitative data) and coding the data into text analysis software (for qualitative data). The specific kinds of data analysis used for this evaluation are described in Table 6.

**Table 6. Data Analysis Plan**

	<b>Data to be used</b>	<b>Sets of variables included</b>
<b>Descriptive and Exploratory Analyses</b>		
Frequencies	Client surveys	<ul style="list-style-type: none"> <li>• Client demographics</li> <li>• Number of responses</li> </ul>
Cross Tabs	Client surveys	<ul style="list-style-type: none"> <li>• Client demographics</li> <li>• Barriers to access</li> </ul>
Narratives	Interview data	<ul style="list-style-type: none"> <li>• Client characteristics</li> <li>• Provider characteristics</li> <li>• Barriers to access</li> </ul>

### III. Results

Eight of the 29 clients who attended a counseling session returned for a follow up visit, with four returning more than twice. All but one of the non-maternity clients (n=5) lost weight, with a mean of 6.8 lbs. (range from 3 to 11 lbs.) These clients also lowered their total cholesterol by a mean of 23.2 mg/dL. (range from 4 to 61 mg/dL), and LDL by a mean of 90 mg/dL (range from 2 to 32 mg/dL). Of the non-maternity clients<sup>18</sup>, one lowered her blood glucose by 14 mg/dL. Two clients who followed up with me multiple times decreased their blood glucose levels mid-way through my internship (mean of 8 mg/dL), but by the end of my internship, their levels had increased again to levels higher than when they were first checked. The providers recommended that they see a family practice doctor located in College Park, so I made an appointment for them to continue care there. Of the five clients with prehypertension or hypertension who followed up with me, two lowered both their diastolic and systolic pressures by 10 mm Hg. However, one client was not able to lower her blood pressure and was scheduled for a follow up appointment with the family practice doctor. All but one client who followed up reported increased energy. They also reported consuming less soda (n=3) and less starches, specifically tortillas (n=3). They reported increased water consumption (n=5), increased fruit and vegetable consumption (n=3), and increased physical activity (n=5). They also control their portions, watching their serving sizes of foods and drinks (n=5).

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<sup>18</sup> I do not have any post-natal data on the clients with GDM, as they either had not given birth by the end of my internship or had not yet attended their mandatory post-natal appointments at PAC. However, I did call the clients to confirm their delivery date—both of the clients that I counseled delivered healthy 7 lbs. babies.

## A. Common Themes

### Explanatory Models

Nearly all the clients with hypercholesterolemia (90 percent) attributed high cholesterol to eating greasy foods, and many had a family history and were familiar with the symptoms their parents or siblings felt and the treatment they sought. Out of the ten Latina clients with diabetes, only one perceived her diabetes to be caused by *susto*, and another client perceived hers to be caused by *coraje*.

### Desire for Weight Loss

Regardless of age or ethnicity, a quarter of the clients were candid about discussing how uncomfortable they are with their current weight quart. A sample of their perceptions follow:

- Salome, a 41-year old Mexican woman, gained 20 pounds on a recent visit to her hometown in Puebla. Now she feels pain in her feet, which she attributes to the weight gain.
- Doreen, a 57-year old Jamaican elderly caregiver who lives with her second son and his family, explained that she “wants to lose weight and belly fat—what Jamaicans call ‘paunch.’”
- Lupe, a 36-year old Mexican with three children who works as a cashier and lineworker at Taco Bell, mentioned three times in our first conversation about her “fat.” Over a month, she lost 11 pounds, but her husband said that he wouldn’t be proud of her until she had lost at least 20.
- Maria Angela, a 36-year old Salvadorean weighed 155 in El Salvador and since moving to the U.S., now weighs 178. She was more active in El Salvador. Since living in the U.S., she feels homesick, so she eats more to comfort herself.
- Mercedes, a 47-year old Guatemalan with diabetes feels uncomfortable with her weight gain, which she put on since moving to the U.S. 15 years ago.
- Norma, a 26-year old mother and retail clerk, heard about diabetes in the classroom in Mexico but “never thought it’d happen to me.” Her partner pressures her to lose weight, which makes her want to

open the refrigerator often and eat whatever is in there. She and her partner are both concerned about her four year old daughter, whose pediatrician recently told them was obese.

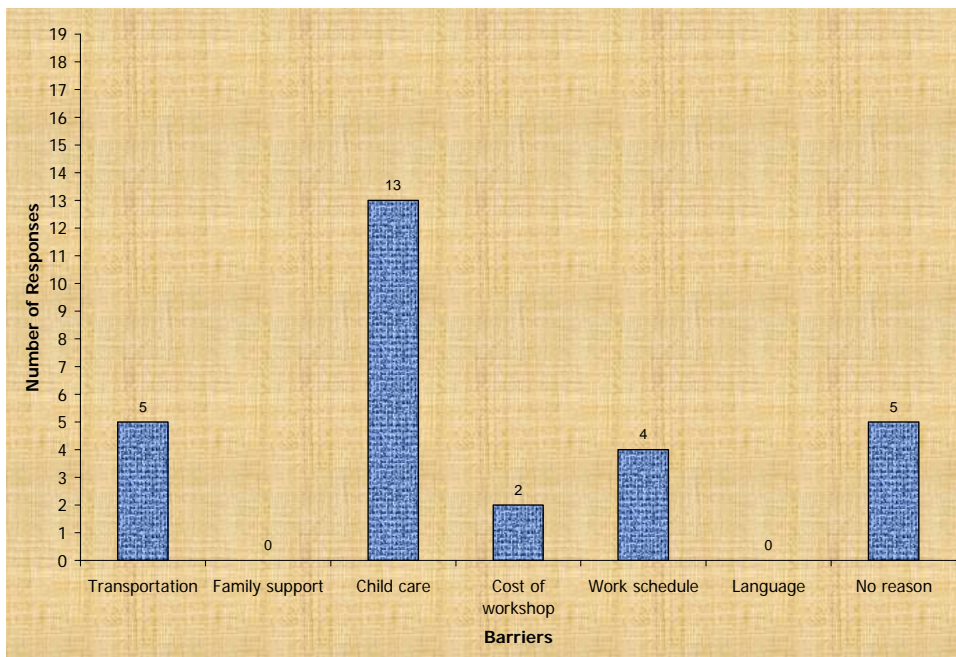
- Martha, a 28-year old single mother of three who works as cook/waitress in Chinese restaurant lifted up her shirt to bra level and exclaimed that she was very unhappy with her belly, which her provider described as obese in her medical chart.

### *B. Process Evaluation Results*

The evaluation findings significantly varied between provider and client perceptions of barriers to accessing health education workshops. The majority of clients perceived child care (68 percent) to be the biggest barrier in attending the workshops; two of the clients interviewed who did not come to the workshop in July 2007 explained that their children were home for the summer and could not want to bring their children to the workshop because they were too young.

Other barriers included transportation (21 percent) and work schedules (21 percent) However, a quarter (26 percent) of the respondents did not perceive that any barriers would prevent them from attending a workshop. Also, the respondents agreed that family support and language were not barriers. Although one client interviewed had discussed problems in July with her husband lack of support in helping to lower her cholesterol and lose weight, she did not state explicitly in this interview that lack of social support was a barrier for her in attending the workshop. See Figure 1 for a snapshot of the responses.

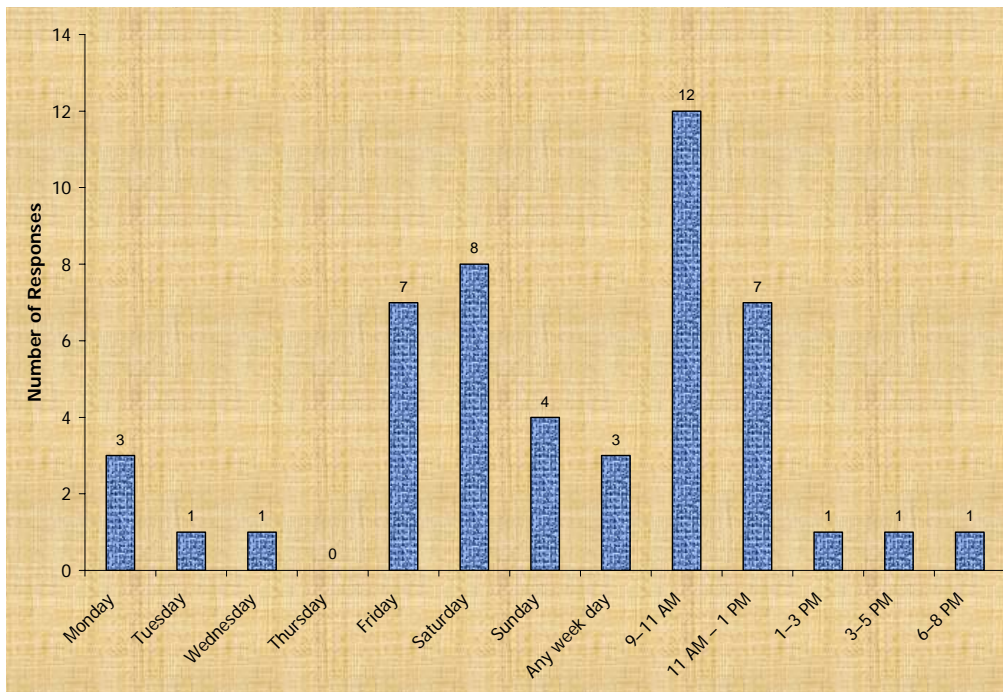
**Figure 1. Client Barriers to Attending a Health Education Workshop**



NOTE: Percentages add up to more than 100%, as respondents could chose one or more answers

Nearly half of the respondents (46 percent) agreed that Saturday was the best days to hold a health education workshop, with Friday (38 percent) as second best and Sunday (23 percent) as third best. Nearly a third (64 percent) of the respondents agreed that 9 to 11 AM was the best time slot to hold the workshop, while over a third (36 percent) of the respondents perceived 11 AM to 1 PM as a good time. Only seven percent of the respondents agreed that an afternoon or evening session would work best. See Figure 2 for a breakdown of the responses.

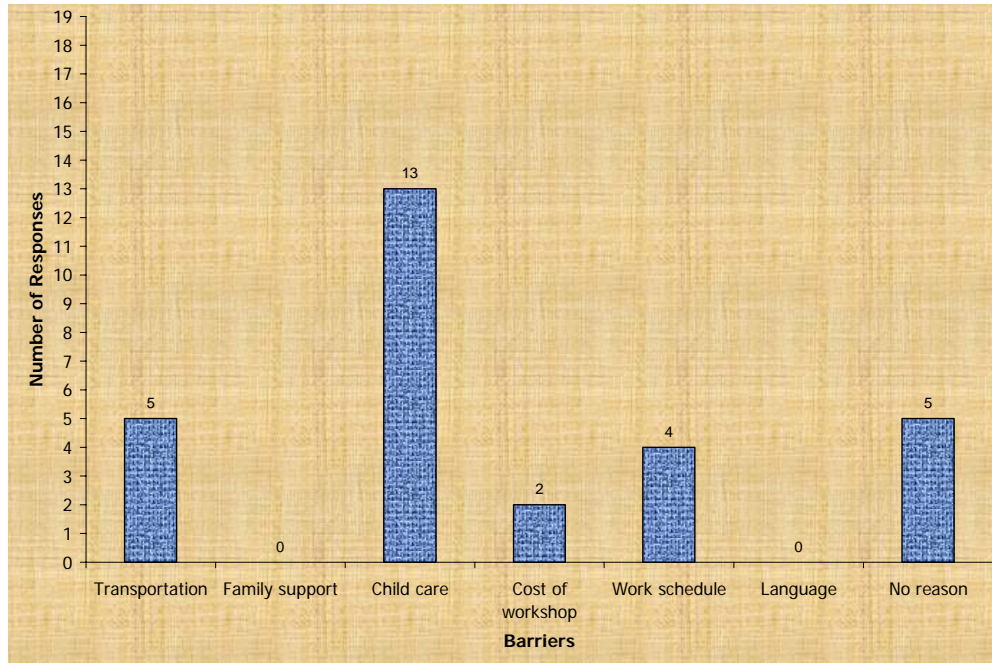
**Figure 2. Best Days and Times for Clients to Attend a Health Education Workshop**



NOTE: Percentages add up to more than 100%, as respondents could chose one or more answers

Of the 19 survey and interview respondents, 18 (95 percent) said they would be interested in attending a workshop, regardless of whether or not they had been diagnosed with diabetes, hypercholesterol, or hypertension. The one respondent who was not interested in attending a health education workshop wrote on her survey that she was a health educator herself. (On a side note, this was an interesting response, as the respondent also indicated on her survey that she has gestational diabetes, so even health educators are susceptible to illness despite their own level of knowledge.)

Nearly 90 percent of the respondents agreed that they would prefer attending a health education workshop at PAC; two respondents felt that a church or library would be better. And all but one respondent (95 percent) stated they would be willing to pay for a workshop. Over a third (41 percent) stated the cost of the workshop should be five dollars, exactly a third (33 percent) said it should be ten dollars, and 17 percent said 15 dollars. See Figure 3 for a breakdown of these results.

**Figure 3. Clients' Preferred Cost of Health Education Workshop**

NOTE: Percentages add up to more than 100%, as respondents could chose one or more answers

The providers had very different responses from the clients when asked about what barriers they perceive clients to have in accessing health education workshops. All five providers interviewed felt that lack of space and privacy at PAC, as well as transportation, were barriers for clients in attending the workshops. The evaluator has observed that the providers have verbalized their concerns with the lack of space at PAC at least once a week, if not more. PAC is housed in a two-floor Victorian former residence, and the providers, on average day, see 50 to 80 patients a day, not including the clients who come in for pregnancy tests or are newly pregnant and need to open a pre-natal medical chart in order to start their care. The providers often express concern about not having enough room at PAC to conduct private conversations, including risk assessments, with clients. The providers feel that lack of space and privacy gives the patient a bad impression of the quality of care that PAC provides.

The providers have observed a pattern regarding transportation. When it rains or snows, most of their patients do not make their scheduled appointments. The providers think this is because clients have difficulty in walking to the bus stop or getting a ride from a family member or friend.

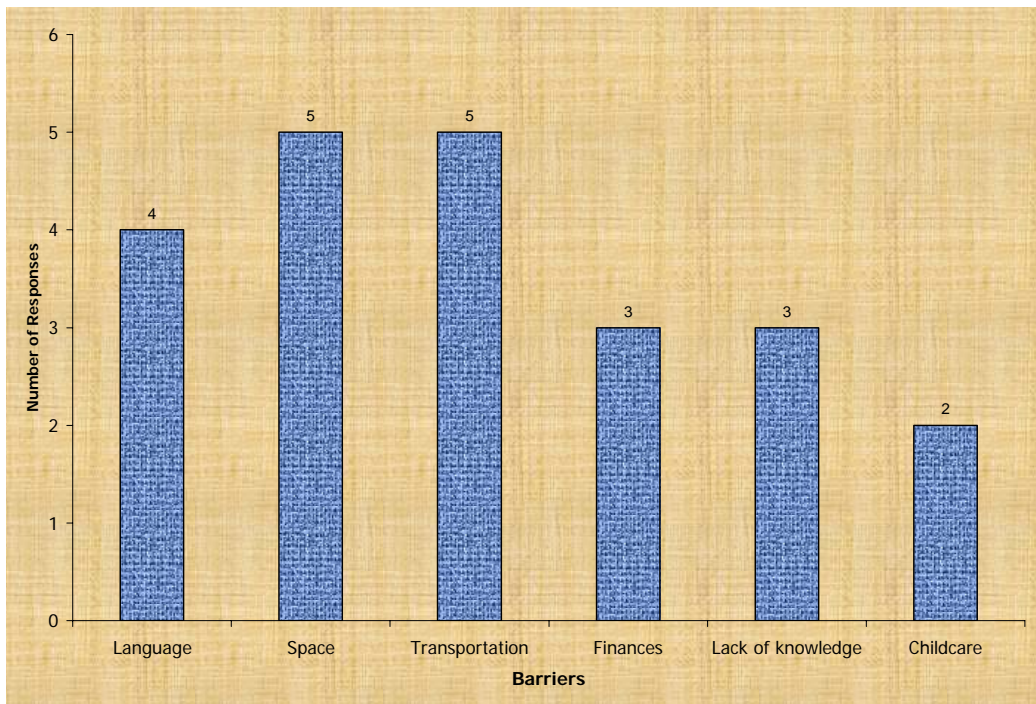
Except for one provider who is a medical assistant fluent in English and Spanish and serves as one of two interpreters at PAC, four of the five providers (95 percent) interviewed expressed concern that their staff or client provided interpreter was not translating exactly what the provider was saying to the client or what the client was saying to the patient. Out of the four respondents, three are English speakers and use either a lay or professional interpreter when talking with non-English speaking patients. The fourth respondent is a staff person who serves as interpreter for the health educator, and her concern was that her English fluency was not at a level to express exactly what the client says.

The majority of the providers (60 percent) were concerned about the clients' finances. They felt that if the clients had to pay for the workshop, they wouldn't attend. Also, 60 percent of the providers felt that despite their best efforts in providing education during the consultation, the clients lacked knowledge about their condition, e.g. hypercholesterol, hypertension, and/or diabetes, to perceive that it was important to attend a health education workshop.

Only two of the providers (40 percent) attributed barriers to childcare, which were linked to transportation issues as mentioned previously. Both of these respondents had young children at home. In addition, all the providers (100 percent) thought Fridays from 2 to 4 PM would work best for both the providers and the clients.

See Figure 4 for the results of the providers' perceptions of clients' barriers in attending the workshop.

**Figure 4. Providers' Perceptions of Clients' Barriers to Accessing Health Education Workshops**



NOTE: Percentages add up to more than 100%, as respondents could chose one or more answers

#### IV. Discussion

The process evaluation provided several recommendations for removing clients' structural barriers to accessing the health education workshops, most of which, once implemented at PAC, will accommodate most of the clients' schedules and childcare issues.

The providers and clients at PAC clearly lack consensus in assessing barriers to accessing health education workshops. For the client, structural barriers were the biggest obstacle in attending the workshops. Yet, providers do not see the same structural barriers as concerns. From what I have observed, providers feel that if they recommend a treatment, including attending a health education workshop, clients should understand that this is only beneficial to their health and should make the treatment a priority. Providers perceive communication, including language and lack of knowledge, as the two most prevalent barriers.

Clients mentioned structural barriers, such as childcare, transportation, and work schedules, as their biggest barriers to attending workshops. But, providers do not agree, as the majority of providers did not the same structural barriers, except transportation, when interviewed. For the providers, language and lack of knowledge about health issues were perceived to be the most prevalent barriers.

Another discrepancy involved the costs of the workshops. The providers perceived that clients would not attend if they had to pay for the workshop, yet clients disagreed. Most of the clients who responded felt that paying five to ten dollars for a workshop was reasonable and would not prevent them from attending a workshop. Also, providers thought that holding the workshop at PAC would prevent clients from attending the workshop because of lack of space and privacy. Despite the providers' concerns about these issues, it does not appear to be a concern on the clients' part.

The day and time the workshop was offered correlated to the clients' structural barriers, including their work schedules, transportation, and child care issues. Half of the patients I interviewed had a job outside the home and had difficulty in changing their schedule. Many of the clients have children and either work at home

or have part time jobs allowing them to be home to provide childcare when their children come home from school in the afternoon. Conversely, for the providers, Friday afternoons are usually less crowded and offer a time for their high risk clients to attend the workshops. PAC is not open on Saturdays, allowing all the staff to have a weekend break, although clients have schedules that allow them more time to attend a workshop on the weekend.

### *A. How to Remove the Barriers*

In designing and implementing health education workshops, I, as the health educator, have the unique opportunity to remove several structural and sociocultural barriers herself. First of all, I can talk with the PAC providers and inform them that clients would prefer to move the workshop to a time that works for the majority of clients who either are homemakers or work during the week. In this case, Friday and Saturday morning, instead of Friday afternoon, would work for the majority of clients. I could ask for permission to use the clinic on Saturday mornings to host a workshop, if the executive director allows. Hosting the workshop on a Saturday morning would mean the clinic would be entirely free, allowing more room to host more clients.

Lack of knowledge and awareness is a concept that the providers consider important, not clients, and this should not be perceived as a barrier to accessing health education. Since nearly all of the PAC clients surveyed and interviewed responded that they would be interested in attending the workshop whether or not they are diagnosed with one of these problems, the workshop announcement should go out to all clients, not just ones diagnosed with diabetes or a cardiovascular condition.

In order to assist the clients in accessing the workshops, onsite child care should be considered, especially for Saturday morning workshops. PAC could offer a volunteer or staff member to watch clients' children on one floor while the workshop is taking place on another floor.

Although the physical location of PAC will not change in the near future, PAC clients do not see space as an issue, the providers do. I have observed that providers may project their concerns onto their clients, perceiving that clients have concerns about space and privacy, when in fact only the providers do. The

executive director and board of directors are currently looking for a new location that would provide more room for both providers and patients, and the evaluator will recommend that the board consider a location with a large room for workshops.

Transportation is a difficult structural barrier to remove. With regards to PAC, the clinic is located on a bus line, and the majority of clients who access PAC's services live within a five mile radius of the clinic along metro bus routes. Holding health education workshops in the morning may be helpful to most of the patients with transportation issues, as it is possible that more family members who have access to a car would be able to drive the client, or the client's, or spouse's, car would be available Saturday morning if the primary driver is not using it. It would be interesting to compare clients' perceptions about transportation once the workshop is held on a Saturday, as the metro bus does not run as many buses on weekends.

The health education workshops do not require insurance, so lack of insurance should not be considered a factor in accessing the workshops. If PAC does not receive a grant to cover all costs of the workshop, clients have indicated that they would be willing to pay five to ten dollars to attend a workshop. I would have to analyze the budget to confirm that this amount would be enough to cover most costs, including resources such as food and exercise videos, as well as additional administrative costs like electricity and water. Charging for the workshop would help offset costs, particularly if PAC needs to pay a staff person to provide childcare on Saturday, a normal day off.

The literature review and evaluation findings have identified several barriers to accessing health education workshops that PAC can help remove. Although it is not a simple process to remove structural and sociocultural barriers, the literature and evaluation indicates that removing these barriers is integral to helping clients access health care services, including the health education workshops.

### *B. Comparison of Findings to Literature*

The medical anthropology and public health literature was helpful in providing several examples of health education interventions geared to Mexican Americans with diabetes. However, some of my findings,

The Anthropology of Health Education: Developing, Implementing, and Evaluating a Culturally Appropriate Intervention specifically with regards to perception of food and physical activity, were not in lines with the literature findings.

Kieffer et al. (2002) found that Mexican American women mentioned specific dietary practices, such as frequently eating sweet foods and fats and drinking sweet beverages as an integral part of their culture. However, most of my clients did not discuss eating these foods and drinks as part of their culture; they perceived them more to be what they prefer to eat and drink. One client was reluctant to give up soda, since it gave her energy, and two clients asked about Coke substitutes, including Diet Coke, caffeine-free Coke, and Fanta, as they preferred to drink carbonated drinks over water.

Attitudes about physical activity and its relationship to health and disease may influence Latinas' participation in physical activity (Janz, et al. 2002). Kieffer et al. (2002) observed that some Mexican American women do not believe a relationship exists between physical activity and the risk of diabetes; instead they believe dietary factors to be the primary cause. Other studies show that Latinas believe inactivity to be a cultural phenomenon that increases diabetes risk (Arcury, et al. 2004; Daniulaityte 2004; de Alba Garcia, et al. 2007; Hunt, et al. 1998; Janz, et al. 2002; Keiffer 2002; Kieffer, et al. 2002; Schoenberg, et al. 2005). My findings correlate with those of Kieffer et al. None of my clients associated lack of physical activity with developing high cholesterol, hypertension, or diabetes. Instead, most attributed developing these risk factors from types of food and family history. They attributed weight gain to overeating. These findings show that a health educator should focus on emphasizing and motivating the client to increase physical activity in order to decrease levels of cholesterol, blood pressure, blood glucose, and weight.

### *C. My Personal Reflections*

Over the past two years, I have researched and worked with immigrants in Prince George's County. What I've learned is that listening and understanding the story of each woman that I've interviewed gives me a greater perspective on their lives as woman living within the immigrant experience. Many of these women have a chronic health condition and struggle with living on a low income, buying groceries with WIC stamps. Some

of the women have supportive husbands and children, but the family members that aren't supportive seriously impact the women as they try to lose weight and eat healthy. In listening to each woman's story allows me to become more empathetic when listening to the next woman's story.

I've had to struggle with my own insecurities and have forced myself to be a supportive health educator despite my own issues with weight. The most surprising and nearly uncomfortable times for me have been when clients turn to me and use me as a good example. The last client I had on my last day of work praised my figure and related twice (once at the beginning of our session, but I thought I had misunderstood her or that the translation was missing something, and then near the end when she asserted herself more forcibly and clearly) that she wanted to have my figure—she thought it was ideal, despite that we had different body shapes and heights. Her praise forced me to confront my own issues with my body. Another woman had said the same thing earlier in the summer, she was an 90-year old woman and commented at least twice that she used to be like me when she was younger. For weeks, I thought perhaps she was comparing me negatively, that it wasn't a good thing to have my body shape. But after the last client used me as a good example, I had to rethink my initial evaluation of the first client. Perhaps it was a compliment after all.

It seems every woman has issues with her body, whether it's the fat she's accumulated on her abdomen, her height, her weight, her breasts, or her hair. And a health educator certainly is just as susceptible to these issues as the next woman. However, the challenge is that the health educator must be a positive influence for her clients. When I have figured out how to do this well, I will certainly share the method.

### **Future Work**

In discussing my internship results with others, I have come up with a couple ideas for future work: investigation of hypertension symptoms and provider explanatory models.

Although not a focus of my internship, in talking with providers, I found they had their own perceptions of clients' explanatory models, specifically about *susto* and *coraje* as causes of illness. One of the providers, who immigrated with her mom from El Salvador, said her mom, like many other Salvadoreans, perceive that a strong argument causes health problems, making comments like things like, "Ever since I had that fight, X has

been happening.” She thinks many Central Americans share the same perception and that they mainly live in areas with traditional healers, or *cuanderos*. Another provider from Argentina added that Argentines who live in rural areas also share the same perception as Salvadoreans. Both providers felt that these explanatory models correlate with lack of education. It would be interesting to explore providers’ perceptions of clients’ explanatory models.

Hypertension is called the “silent killer” because it does not have any known symptoms. However, four clients I spoke to named headache as a symptom of hypertension, and I could not detect a cultural consensus in the clients’ responses considering that none of the clients had the same background.<sup>19</sup> I think it would be helpful for health providers to conduct a qualitative study on adults with hypertension who have headaches. If I collected enough data and descriptions of the types of headaches, e.g, where the headache is located and what the headache feels like, this results may be helpful in helping providers detect hypertension.

### **Lessons Learned**

Through this internship, I developed skills in several areas, including program development, assessment, implementation, teaching, data analysis, and evaluation, and came away with several lessons learned that may help improve health education programs at similar community health clinics. Assessing whether or not I can replicate an entire or modified version of this intervention at another health center may prove an exciting and challenging job. Anthropologists clearly have the skills to perform several roles in health education from program planning to evaluation.

As an evaluator, I learned several key pieces of information about my health education program, e.g. clients’ structural barriers to attending the workshops and providers’ perceptions of these barriers. I now have valuable evidence that a health education workshop would be useful to PAC clients, and if PAC chooses to continue with the program, the providers have several recommendations for how to make the program more accessible to clients.

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<sup>19</sup> These clients included a 32-year old Salvadorean, a 24-year old African American, a 47-year old Guatemalan, and a 58-year old Liberian. These clients shared only two variables: they are women, and they have children.

The three most important lessons I learned from this internship are:

1. **Accommodate the client.** You have to make the services actually accessible to the client. As I learned the hard way, just because you have a workshop and market it doesn't mean that clients can access it if it's held during the wrong time for the majority of clients.
2. **Communicate.** It's so important to understand and communicate what providers think and what clients think. In my experience, I had three perspectives to negotiate—the executive director who had her ideas about who her clients were and when they would come the workshops. Then I had the providers and their perspective as to what clients they actually see and what they thought would prevent clients from accessing the workshops. Then I had the clients and what they needed from the counseling sessions and what their barriers were to attending the workshops.
3. **Listen, investigate, change.** My advisor Dr. Judith Freidenberg recently asked me how I went about doing my internship. My first response was, “I just listened to what everyone had to say.” But then the more I thought about it, I realized I did more than just listened to what the providers and the clients had to say—I investigated what the needs were, and then I made the changes.

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## VII. Appendix

### A. All Clients with Gestational Diabetes

Ethnicity	Language	Age in years	Country of origin	Insurance status	Marital status	Legal status	Prior hx	Family hx	Total pregnancies	No. of children living	Baby's birth weight in lbs.	Height in inches	Pre-pregnancy weight in lbs.	Last pregnancy weight in lbs.	Glucose 1-hr gestational screen (mg/dL)	fasting glucose (mg/dL)	1 hr OTT (mg/dL)	2 hr OTT (mg/dL)	3 hr OTT(mg/dL)
African American	English	27	US	Medical Assistance	Single	US citizen	NK	DM	1	0	3.00	NK	276	99	173	95	179	173	138
Latina	Spanish	31	El Salvador	Uninsured	Married	Undocumented	NK	CHOL	3	3	7.00	NK	150	175	164	82	208	152	169
Latina	Spanish	25	NK	Uninsured	NK	Undocumented	NK	NK	0	0	NK	NK	NK	99	11	11	11	11	11
Latina	Spanish	27	NK	Uninsured	Common law	Undocumented	NK	NK	1	1	6.10	NK	155	184	11	78	153	137	111
Latina	Spanish	43	NK	Medical Assistance	Single	Green card	NK	No	4	4	NK	NK	11	164	164	73	160	144	126
Pacific Islander	Tagalog	28	Philippines	Medical Assistance	Single	Green card	NK	NK	2	0	NK	NK	108	99	112	152	11	11	11
African American	English	33	Jamaica	Medical Assistance	Married	US citizen	NK	CHOL	3	3	8.15	69	208	243	172	85	132	131	130
African American	English	30	US	Medical Assistance	Single	US citizen	NK	CHOL	5	3	8.00	NK	190	210	135	81	146	129	104
African American	English	20	NK	Medical Assistance	Single	NK	NK	No	1	1	NK	NK	11	136	64	11	11	11	11
Latina	Spanish	21	Guatemala	Medical Assistance	Common law	Undocumented	NK	NK	6	2	7.16	NK	105	110	153	11	11	11	11
Latina	Spanish	36	Guatemala	Uninsured	Single	Green card	HTN	CHOL	5	4	8.14	NK	11	150	235	84	221	260	11
Latina	Spanish	29	NK	Uninsured	Single	Undocumented	NK	No	1	1	6.10	NK	140	177	144	85	139	123	112
Latina	Spanish	28	Mexico	Uninsured	Single	Undocumented	NK	No	2	2	7.11	NK	158	184	193	91	176	150	105
Anglo American	English	23	US	Medical Assistance	Single	US citizen	NK	No	3	1	6.00	NK	117	151	153	73	188	164	124
Anglo American	English	34	US	Medical Assistance	Separated	US citizen	GDM	CHOL	8	6	6.50	64	160	210	11	96	257	171	114
African American	English	24	US	Medical Assistance	Single	US citizen	NK	NK	2	1	7.80	NK	141	178	193	90	143	111	76
Latina	Spanish	20	NK	Uninsured	Common law	Undocumented	NK	No	1	1	7.70	NK	11	142	75	75	106	110	72
African American	NK	40	NK	Medical Assistance	NK	NK	NK	NK	0	0	NK	NK	NK	99	11	11	11	11	11
Latina	English & Spanish	38	El Salvador	Medical Assistance	Single	Green card	NK	No	6	5	NK	60	11	99	180	117	193	187	143
Latina	Spanish	19	NK	Medical Assistance	Single	Green card	NK	No	3	2	9.50	NK	220	236	142	96	163	112	108
Latina	Spanish	22	NK	Medical Assistance	Married	Green card	NK	No	1	1	6.00	NK	112	138	160	76	153	93	59

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African	English & Amharic	34	Ethiopia	Health Department	Single	Green card	NK	NK	1	0	NK	NK	11	99	140	77	143	131	100
African	English & Amharic	33	Ethiopia	Medical Assistance	Single	Green card	HTN	CHOL	3	2	9.40	NK	11	227	150	113	242	166	86
Latina	English & Spanish	34	NK	Medical Assistance	Married	US citizen	GDM	CHOL	2	1	7.10	NK	138	147	318	11	11	11	11
Latina	Spanish	27	Guatemala	Uninsured	Single	Undocumented	NK	No	1	1	8.70	NK	108	136	147	84	149	116	124
Unknown	English	22	Guyana	Medical Assistance	Single	Green card	NK	NK	2	0	NK	63	125	99	170	83	201	158	98
Anglo American	English	27	US	Medical Assistance	Single	US citizen	NK	CHOL	4	4	7.70	NK	11	242	145	11	11	11	11
African	French	30	Mali	Medical Assistance	Married	Green card	HTN	No	1	0	NK	63	198	99	143	106	143	11	11
African American	English	21	NK	Medical Assistance	NK	NK	NK	NK	0	0	NK	NK	NK	99	11	11	11	11	11
Latina	Spanish	26	NK	Medical Assistance	Married	Green card	NK	NK	2	1	NK	61	120	99	161	11	11	11	11
Latina	Spanish	42	NK	Medical Assistance	Married	NK	NK	No	4	4	7.20	NK	150	173	151	11	11	11	11
Latina	Spanish	34	Mexico	Medical Assistance	Married	Green card	GDM	NK	3	2	7.00	NK	195	99	221	97	213	185	149
Latina	Spanish	30	El Salvador	Uninsured	Married	Undocumented	NK	CHOL	1	1	9.70	NK	172	184	143	101	240	187	90
Latina	Spanish	23	Mexico	Uninsured	Married	Green card	NK	No	1	1	NK	NK	83	110	149	81	193	125	130
Unknown	English	24	US	Medical Assistance	Single	US citizen	NK	No	4	3	6.20	NK	11	134	58	11	11	11	11
Anglo American	English	20	US	Medical Assistance	Single	US citizen	NK	NK	1	0	NK	NK	126	136	162	11	11	11	11
Anglo American	English	19	US	Medical Assistance	Single	US citizen	NK	No	1	0	NK	61	145	179	167	88	205	180	11
African American	English	23	US	Medical Assistance	Single	US citizen	NK	NK	2	0	NK	61	128	99	168	82	150	146	119
Latina	Spanish	38	Mexico	Medical Assistance	Married	Green card	NK	CHOL	4	4	8.60	NK	183	203	154	11	11	11	11
Latina	Spanish	15	NK	Uninsured	Single	Undocumented	NK	No	1	1	6.12	NK	120	148	169	91	200	131	92
Latina	English	18	NK	Medical Assistance	Single	US citizen	NK	No	1	0	NK	66	130	99	140	90	128	130	105
Latina	English	22	Guatemala	Medical Assistance	Single	Green card	NK	No	2	2	7.80	62	172	214	156	95	185	184	119
Latina	Spanish	28	Guatemala	Uninsured	Married	Green card	HTN	No	4	4	8.60	NK	166	200	183	97	219	157	86
Latina	Spanish	17	El Salvador	Uninsured	Single	Undocumented	NK	No	1	1	7.40	NK	160	179	60	11	11	11	11
African American	English	27	US	Medical Assistance	Single	US citizen	NK	No	4	0	NK	68	175	99	134	76	126	134	133
African American	English	20	NK	Medical Assistance	Single	US citizen	NK	CHOL	1	0	NK	63	155	99	147	11	11	11	11
African American	English	30	US	Medical Assistance	Single	US citizen	NK	CHOL	7	3	NK	NK	247	256	146	11	11	11	11
African American	English	29	Africa	Medical Assistance	Married	Green card	NK	No	2	2	8.50	NK	11	251	156	91	137	103	11
Latina	Spanish	32	NK	Uninsured	Single	Undocumented	HTN	No	2	2	7.15	NK	170	209	166	80	135	114	93
African	English	23	Cameroon	Medical Assistance	Single	99	NK	No	1	1	8.00	NK	129	154	143	54	127	148	124
Latina	Spanish	38	Columbia	Uninsured	Married	Undocumented	NK	CHOL	2	2	NK	NK	170	212	146	68	161	157	131
African American	English	30	US	Medical Assistance	Married	US citizen	NK	CHOL	1	1	6.13	70	235	243	151	82	195	186	132

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Latina	English & Spanish	18	NK	Medical Assistance	Single	US citizen	GDM	NK	1	1	6.40	NK	158	188	51	11	11	11	11
African American	English	22	US	Medical Assistance	Single	US citizen	NK	CHOL	2	1	NK	NK	200	230	257	11	11	11	11
Latina	English & Spanish	20	El Salvador	Medical Assistance	Single	Green card	GDM	No	1	0	NK	NK	NK	99	235	11	11	11	11
African American	English	20	US	Medical Assistance	Single	US citizen	NK	CHOL	2	1	NK	NK	11	175	142	61	159	143	91
Latina	Spanish	25	NK	Uninsured	Single	NK	NK	No	3	2	7.11	NK	122	132	169	75	122	130	131
African American	English	28	US	Medical Assistance	Single	US citizen	NK	No	3	3	NK	NK	150	190	205	125	226	236	11
Latina	English & Spanish	27	El Salvador	Medical Assistance	Separated	NK	NK	NK	3	1	6.60	NK	135	11	11	82	149	121	11
Latina	Spanish	29	Mexico	Uninsured	Married	Green card	NK	NK	4	3	NK	NK	140	156	168	76	181	160	106
Latina	Spanish	27	Mexico	Uninsured	Married	US citizen	NK	No	1	2	5.40	NK	139	171	140	69	147	11	11
Latina	Spanish	34	Mexico	Uninsured	Married	Undocumented	NK	CHOL	1	1	9.10	NK	130	148	151	72	119	126	102
African American	English	22	NK	Medical Assistance	Single	Green card	NK	CHOL	0	0	NK	NK	NK	99	11	11	11	11	11
Latina	English & Spanish	22	NK	Uninsured	Married	Undocumented	NK	CHOL	2	1	7.90	NK	103	143	144	75	154	149	99
African American	English	16	US	Medical Assistance	Single	US citizen	HTN	NK	0	0	NK	64	115	99	155	11	11	11	11
African American	English	31	US	Medical Assistance	Single	US citizen	NK	No	8	5	8.20	NK	11	293	11	103	183	166	149
Anglo American	English	19	US	Medical Assistance	Single	US citizen	NK	CHOL	2	1	7.14	NK	135	180	131	78	185	131	60
Latina	Spanish	28	NK	Uninsured	Single	Undocumented	NK	CHOL	1	1	8.00	NK	136	165	142	72	180	139	104
Latina	Spanish	37	NK	Uninsured	Common law	Undocumented	NK	CHOL	4	5	6.40	NK	115	139	99	73	159	148	161
African	English	33	Tanzania	Uninsured	Married	NK	NK	NK	2	0	NK	NK	129	11	11	48	226	222	209
Unknown	English	28	US	Medical Assistance	Divorced	US citizen	NK	No	5	5	7.10	NK	157	189	162	77	152	75	31
Latina	Spanish	36	El Salvador	Uninsured	Married	Green card	GDM	CHOL	3	2	NK	NK	NK	99	11	11	11	11	11
Latina	Spanish	19	Mexico	Uninsured	Single	Undocumented	NK	No	1	0	NK	61	139	99	139	82	113	111	125

*B. All Clients with Indicators for Hypercholesterolemia, Hypertension, and Diabetes*

Ethnicity	Language	Age	Country of origin	Insurance status	Marital status	Legal status	Prior hx	Family hx	No. of children living	Height in inches	Weight in lbs	Blood pressure (mm/Hg)	fasting glucose 1 (mg/dL)	fasting glucose 2 (mg/dL)	Total Cholesterol (mg/dL)	Triglycerides (mg/dL)	HDL (mg/dL)	LDL (mg/dL)	Total cholesterol (mg/dL)	Triglycerides (mg/dL)	HDL (mg/dL)	LDL (mg/dL)
Latina	English & Spanish	51	Nicaragua	Uninsured	Single	Green card	NK	DM & CVD	5	NK	188	120/80	0	87	224	161	50	142				
African American	English	47	NK	Uninsured	Single	NK	NK	No	4	NK	164	100/80	94	0	207	74	62	130				
Middle Eastern	Farsi	38	Iran	Medical Assistance	Married	US citizen	NK	DM	2	NK	233	110/70	96	0	227	114	66	138	231	119	63	144
Latina	Spanish	38	Mexico	Uninsured	Married	Undocumented	NK	NK	8	60	159	110/70	122	0	294	855	42		233	264	40	140
Latina	Spanish	45	El Salvador	Uninsured	Single	Green card	NK	NK	3	NK	207	120/70	96	102	229	184	47	145	202	89	46	138
Latina	Spanish	61	El Salvador	Uninsured	Married	Undocumented	NK	DM	5	NK	161	110/80	92	0	233	150	48	155				
Latina	English & Spanish	36	El Salvador	Uninsured	Common law	Undocumented	NK	No	5	60	178	90/60	0	0	199	124	46	128				
Latina	Spanish	46	El Salvador	Uninsured	Married	Green card	NK	No	3	NK	176	125/75	112	97	167	144	64	74				
Latina	Spanish	35	NK	Medical Assistance	Married	NK	NK	NK	2	NK	139	100/60	0	0	247	121	53	170				
Latina	English & Spanish	57	Dominican Republic	Uninsured	Married	US citizen	NK	CVD	2	NK	205	140/110	137	0	223	250	43	130				
Latina	Spanish	35	Mexico	Uninsured	Married	Undocumented	NK	NK	2	NK	175	120/80	0	0	227	222	49	134				
Latina	Spanish	33	El Salvador	Uninsured	Single	Undocumented	NK	DM & CVD	1	NK	148	120/80	79	0	203	158	42	129				
Anglo American	English	54	US	Health Department	Single	US citizen	NK	CVD	0	NK	260	140/60	80	0	230	331	52	112				
Latina	Spanish	39	Mexico	Uninsured	Married	Green card	NK	NK	2	NK	158	100/60	100	86	210	101	52	138	222	82	58	148
Latina	English	37	NK	Medical Assistance	Married	NK	NK	DM	4	NK	262	130/90	0	0	244	171	51	159	239	247	45	145
Latina	Spanish	38	NK	Uninsured	NK	NK	NK	NK	1	NK	170	90/60	95	0	194	105	54	119				
African American	English	34	US	Uninsured	Single	US citizen	NK	NK	5	NK	144	100/60	85	0	203	57	72	120				
Latina	Spanish	46	El Salvador	Uninsured	Common law	Undocumented	NK	DM	3	NK	198	160/90	116	0	220	174	63	122	169	109	69	78
Latina	Spanish	39	Guatemala	Uninsured	Married	Undocumented	NK	No	4	NK	150	100/60	85	83	190	92	47	125	201	136	46	128
African American	English	37	US	Social Security Assistance	Single	US citizen	NK	DM	0	NK	157	120/90	259	0	246	297	54	133				
Latina	English & Spanish	51	NK	Uninsured	Single	Green card	NK	DM	5	62	184	110/70	82	0	200	150	52	118				
Latina	Spanish	51	NK	Uninsured	Married	Green card	NK	NK	8 full term, 6 living	NK	99		0	0	195	169	49	112				
Latina	English & Spanish	49	El Salvador	Uninsured	Widowed	NK	GDM	CVD	4	NK	145	100/60	85	0	227	125	58	144				
Latina	Spanish	58	NK	Uninsured	Married	US citizen	NK	No	1	NK	152	130/80	130	86	205	281	60	89	157	157	68	58
Latina	Spanish	32	Mexico	Uninsured	Married	Undocumented	NK	DM & CVD	2	NK	133	110/70	106	0	197	140	51	118				
Latina	Spanish	44	Mexico	Uninsured	Married	NK	NK	NK	3	NK	119		0	0	165	238	48	69				

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Latina	English & Spanish	52	El Salvador	Uninsured	Married	US citizen	NK	DM	2	NK	209		0	0	256	173	51	170				
Latina	English & Spanish	58	NK	Uninsured	Single	NK	NK	CVD	0	NK	130		103	0								
Latina	English & Spanish	26	Mexico	Uninsured	Single	Undocumented	GDM	All	1	NK	191	100/60	0	0	227	158	36	159				
Latina	Spanish	48	Guatemala	Uninsured	Married	Undocumented	NK	DM	3	NK	148		0	0	296	273	52	189				
Latina	English & Spanish	39	NK	Uninsured	Single	Green card	NK	NK	2	61	149	100/60	86	0	195	104	55	119	203	150	47	126
African American	English	57	US	Health Department	Divorced	US citizen	NK	NK	3	NK	204	160/90	0	113	180	87	47	116				
African American	English	21	US	Medical Assistance	Single	US citizen	NK	HTN	2	67	277	120/80	0	0	186	53	56	11				
African	English	58	Liberia	Uninsured	Single	NK	NK	NK	12	NK	194	150/100	0	0								
Latina	English & Spanish	32	El Salvador	Medical Assistance	Married	US citizen	GDM & HTN	DM & CVD	3	63	175	130/90	93	0	112	46	37	66				
Latina	Spanish	40	NK	Uninsured	Separated	US citizen	GDM	NK	2	62	136	120/80	0	0								
Latina	Spanish	47	Mexico	Uninsured	Married	NK	NK	NK	2	55	117	100/60	0	0	201	163	45	123				
Latina	Spanish	37	NK	Uninsured	Married	NK	NK	NK	0	NK	185	90/70	103	0								
Caribbean	English	41	Trinidad	Uninsured	Married	NK	HTN	No	1	62	116	100/60	93	0	228	119	56	148				
African American	English	52	US	Uninsured	Single	US citizen	NK	CVD	3	NK	177	100/60	112	108	212	178	42	134	212	137	41	144
Latina	Spanish	52	Guatemala	Uninsured	Single	Undocumented	NK	CVD	3	NK	210	110/60	88	0	207	92	75	114				
Latina	English & Spanish	27	El Salvador	Uninsured	Single	Undocumented	NK	HTN	1	NK	129	110/70	0	0	219	64	50	156	243	136	58	158
Latina	Spanish	31	NK	Uninsured	Married	Undocumented	NK	NK	3	NK	260	110/70	0	0	186	115	27	136				
Anglo American	Unknown	54	NK	Uninsured		Has SSN	GDM	NK	2	NK	188	130/80	103	107	218	184	66	115	225	285	68	100
Latina	Spanish	39	Mexico	Uninsured	Single	Undocumented	NK	CVD	3	NK	159	100/60	81	0	207	110	60	215				
Latina	Spanish	61	Peru	Uninsured	Married	Undocumented	NK	CVD	3	NK	155	120/70	0	102	227	220	76	107	216	211	77	97
Latina	Spanish	56	El Salvador	Uninsured	Married	Green card	NK	NK	4	NK	157	130/70	113	116								
Latina	Spanish	47	Guatemala	Uninsured	Single	Undocumented	GDM	CVD	3	NK	308	150/100	164	0	161	98	35	22	170	118	40	106
Latina	English & Spanish	28	Guatemala	Uninsured	Married	Green card	NK	DM & CVD	0	NK	145	110/70	91	0	198	305	63	74	230	126	81	124
Latina	English	29	Dominican Republic	Medical Assistance	Married	Green card	GDM	NK	1	NK	144	100/60	95	0	247	85	47	183				
Latina	Spanish	39	Guatemala	Uninsured	Married	NK	NK	No	3	NK	164	140/90	94	0	264	143	44	191				
Latina	English & Spanish	51	NK	Uninsured	Married	US citizen	NK	NK	3	NK	174	120/90	77	0	252	188	47	167				
Latina	Spanish	61	El Salvador	Uninsured	Single	Green card	NK	No	3	NK	179	100/60	100	92	285	296	39	187				
Latina	Spanish	35	NK	Medical Assistance	Married	Green card	NK	No	3	60	127	100/80	0	0	206	115	73	110				
Latina	Spanish	29	Mexico	Uninsured	Common law	NK	NK	NK	2	NK	226	140/90	116	105	185	118	57	104	183	131	60	96
African American	English	57	Jamaica	Uninsured	Married	Green card	NK	All	2	NK	212	120/80	113	109	226	158	55	139	234	141	56	150
Latina	English & Portuguese	46	Brazil	Uninsured	Single	Undocumented	NK	CVD	1	NK	99	130/90	145	0	212	111	65	125				
Latina	English & Spanish	38	Mexico	Uninsured	Married	Green card	HTN	NK	3	NK	273	140/100	121	136	181	167	39	109	171	141	45	98

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Latina	Spanish	49	NK	Uninsured	Married	Green card	NK	CVD	3	NK	166	110/70	106	117	211	129	50	135				
Latina	Spanish	24	NK	Uninsured	Married	NK	NK	CVD	1	NK	177	100/60	86	94	174	116	40	111	173	214	38	92
Latina	Spanish	37	Peru	Uninsured	Married	Undocumented	NK	DM & CVD	2	NK	160	90/50	93	0	228	111	56	150				
Latina	Spanish	40	Mexico	Medical Assistance	Married	NK	NK	NK	4	NK	169	140/100	0	0	267	145	46	192				
Latina	Spanish	38	Guatemala	Uninsured	Single	Undocumented	NK	NK	3	NK	219	100/60	89	0	177	168	56	87	183	192	55	90
African American	English	24	US	Medical Assistance	Single	US citizen	HTN	HTN	2	NK	223	150/100	0	0								
Latina	Spanish	36	El Salvador	Uninsured	Single	Undocumented	NK	NK	2	56	146	100/70	0	0	107	73	59	123				
Unknown	English	59	US	Uninsured	Married	US citizen	NK	CVD	4	NK	205	140/90	0	0	224	80	61	147				
Latina	Spanish	35	El Salvador	Uninsured	Married	Undocumented	NK	CVD	3	NK	107	100/60	85	0	214	130	42	146				
African American	English	28	NK	Medical Assistance	Single	NK	NK	NK	1	63	155	120/80	0	0	255	66	92	150				
Latina	Spanish	36	El Salvador	Uninsured	Married	Undocumented	NK	NK	4	NK	209	110/80	0	0	160	56	41	108				
Latina	Spanish	41	Mexico	Medical Assistance	Married	Green card	HTN	No	4	NK	152	120/80	0	0	252	158	54	166				
Latina	English & Spanish	46	Ecuador	Uninsured	Married	Undocumented	NK	HTN	2	NK	147	99/60	93	98	185	161	51	102	218	165	51	134

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*C. All Collected Sociodemographic Characteristics of Patients with Hypercholesterolemia, Diabetes, and Hypertension*

<b>Age range (N=144)</b>	<b>n</b>	<b>%</b>	<b>Language at home (N=142)</b>	<b>n</b>	<b>%</b>
14-19	9	6.3	English	47	33.10
20-29	48	33.3	Spanish	69	48.59
30-39	48	33.3	Bilingual English & Spanish	21	14.79
40-49	19	13.2	Bilingual English & Other	5	3.52
50-59	17	11.8			
60-69	3	2.1	<b>Ethnicity (N=142)</b>	<b>n</b>	<b>%</b>
<b>Marital Status (N=139)</b>	<b>n</b>	<b>%</b>	Latina	95	66.9
Single	66	47.5	African American American	29	20.4
Married or Common law	67	43.2	Anglo	8	5.6
Separated or Divorced	5	3.6	African	6	4.2
Widowed	1	0.7	Middle Eastern	1	0.7
<b>Insurance Status (N=144)</b>	<b>n</b>	<b>%</b>	Asian	2	1.4
Uninsured	82	56.9	Native American	1	0.7
Medical Assistance	58	40.3	<b>Country of Origin</b>	<b>n</b>	<b>%</b>
Health Department	1	0.7	North America		
Social Security	3	2.1	US	32	22.2
<b>Documented Status (N=119)</b>	<b>n</b>	<b>%</b>	Latin America (country unknown)	33	22.9
Citizen	41	34.5	Brazil	1	0.7
Green Card	37	31.1	Columbia	1	0.7
Undocumented	41	34.5	Dominican Republic	2	1.4
<b>Number of children (N=143)</b>	<b>n</b>	<b>%</b>	Ecuador	1	0.7
0	24	16.7	El Salvador	22	15.3
1	34	23.6	Guatemala	12	8.3
2	30	20.8	Guyana	1	0.7
3	28	19.4	Jamaica	2	1.4
4	15	10.4	Mexico	20	13.9
5 or more	12	8.3	Nicaragua	1	0.7
			Peru	2	1.4
			Trinidad and Tobago	1	0.7
			The Pacific Islands and Oceania		
			The Philippines	1	0.7
			Africa (country unknown)	4	2.8
			Cameroon	1	0.7
			Ethiopia	2	1.4
			Liberia	1	0.7
			Mali	1	0.7
			Tanzania	1	0.7
			Middle East		
			Iran	1	0.7
			Europe		
			Germany	1	0.7

**Section I: Demographic Information/Información demográfica**

1. Age / Edad:
2. Sex / Sexo:
3. Occupation / Ocupación:
4. Marital status / Estado civil:
5. Number and age of children / Número y cantidad de hijos:
6. Household composition / Personas que conviven con usted:
7. Country of origin / País de origen:
8. Number of years living in US:

**Section II: Diabetes/High Cholesterol/Hypertension Explanatory Model (Kleinman/Like):**

1. What do you call the problem? / ¿Cómo llamarías a tu problema de salud?
2. What do you think has caused the problem? / ¿Qué crees que el problema ha causado?
3. Why do you think it started when it did? / ¿Cuándo crees que comenzó?
4. What do you think the sickness does? / ¿Cómo crees que esta enfermedad afecta tu salud?
5. How severe is the sickness? Will it have a short or long course? / ¿Cuán grave piensas que es esta enfermedad? ¿Tendrá un largo or corto desarrollo?
6. What are the chief problems the sickness has caused? / ¿Cuál piensas que son los principales problemas la ha causado?
7. What do you fear most about the sickness? / ¿Cuál es tu principal temor sobre esta enfermedad?

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8. What have you already used to treat the condition, including herbal and other non-biomedical treatments? / ¿Qué has usado para tratar esta enfermedad, incluyendo hierbas y otros tratamientos herbarios no estrictamente medicinales?
9. What kind of treatment do you think you (or the patient) should receive? / ¿Qué clase de tratamiento crees que deberías recibir cómo paciente?
10. What are the most important results you hope to receive from this treatment? / ¿Cuáles son los más importantes resultados que esperas obtener con este tratamiento?
11. Who does PAC need to work with to help you? (Your family members, parents, partner, children, siblings? Religious leaders? Community leaders?) / ¿Con quién piensas que el PAC debería trabajar para ayudarle? (Piensas por ejemplo en los miembros de tu familia: padres, esposo, hijos, hermanos; en los líderes de tu religión, en los líderes de tu comunidad, etc.)

**Section III: Nutrition and Exercise / Nutrición y Ejercicio**

1. What do you typically eat and drink for breakfast, lunch, and dinner? What type of snacks do you have? / ¿Por un día medio, qué comes para el desayuno, el almuerzo, y la cena? ¿Qué tipo de pan, postre, o frutas tienes?
2. Do you prepare the food for your household? / ¿Preparas las comidas para su familia?
3. How many times per week or month do you exercise? / ¿Cuántas veces por semana o mes ejercitas?
4. What type of exercise or activity do you enjoy? / ¿Qué tipo de ejercicio o actividad gozas, por ejemplo el caminar o el bailar?
5. Do you feel that your husband, children, and other family members and friends will support you if you have to make changes to your diet? Why? / ¿Se sientes que los miembros de tu familia como padres, esposo, hijos, hermanos le apoyarán si tienes que modificar su dieta? ¿Por qué?
6. Do you think your family and friends would enjoy exercising with you? Why? / ¿Piensas a miembros de tu familia y los amigos gozarían el ejercitar con ti? ¿Por qué?

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 E. Cardiovascular and Diabetes Health Education Announcements

1. Diabetes Health Education Announcement in English



Let's talk about  
**Diabetes!**

Learn about the importance of:

- Basics of diabetes
- Nutrition
- Exercise
- Support from family and friends

every Friday in  
July from 2 to 4 PM  
at the Pregnancy  
Aid Center!

Family and friends welcome—  
*let's live healthy together!*

For more information, contact Jackie Donaldson  
in the Social Work office at 301-441-9150

2. Diabetes Health Education Announcement in Spanish



Hablamos sobre  
**¡diabetes!**

Aprendamos la importancia de:

- Nociones básicas sobre la Diabetes
- Nutrición
- Ejercicio
- Ayuda de la familia y de amigos

¡Todos los viernes de  
julio entre las 2 y las  
4 de la tarde en el  
Pregnancy Aid Center!

Para pacientes y sus familiares y  
amigos—¡Compartamos la experiencia  
de vivir con salud!

Para más información, llámame a Jackie Donaldson  
en la oficina de Social Work a 301-441-9150

3. Cardiovascular Health Education Announcement in English



Let's talk about  
**heart health!**

Learn about the importance of:

- Heart disease and its risk factors
- Nutrition
- Physical activity
- Support from family and friends

every Friday in  
July from 2 to 4 PM  
at the Pregnancy  
Aid Center!

Family and friends welcome—  
*let's live healthy together!*

For more information, contact Jackie Donaldson  
in the Social Work office at 301-441-9150

4. Cardiovascular Health Education Announcement in Spanish



Hablamos sobre  
**¡su corazón!**

Aprendamos la importancia de:

- los factores de riesgo para desarrollar las enfermedades del corazón
- Nutrición
- Actividad física
- Ayuda de la familia y de amigos

¡Todos los viernes de  
julio entre las 2 y las  
4 de la tarde en el  
Pregnancy Aid Center!

Para pacientes, sus familiares y  
amigos—¡Compartamos la experiencia  
de vivir con salud!

Para más información, llame a Jackie Donaldson  
en la oficina de Social Work al 301-441-9150

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 F. Client Survey Instrument in English and Spanish

SURVEY ABOUT HEALTH EDUCATION WORKSHOPS  
 LA ENCUESTA SOBRE CLASES DE LA EDUCACIÓN DE SALUD

1. How old are you? *¿Cuántos años tiene?*

14-19\_\_\_ 20-29\_\_\_ 30-39\_\_\_ 40-49\_\_\_ 50-59\_\_\_ 60-69\_\_\_ 70+\_\_\_

2. What is your ethnicity? *¿A qué raza pertenece?*

Anglo African American\_\_\_ African\_\_\_ Latina\_\_\_ Asian\_\_\_ Other\_\_\_  
 American\_\_\_ Afro-americana\_\_\_ Africana\_\_\_ Latina\_\_\_ Asiática\_\_\_ Otra\_\_\_  
 Blanca\_\_\_

3. Have you been diagnosed by a doctor with the following? (Mark one or more.)

*¿Alguna vez le han diagnosticado alguna de las siguientes enfermedades? (Marque todas las que considere oportunas.)*

Diabetes (sugar in the blood)\_\_\_ High Blood Pressure\_\_\_  
 Diabetes (azúcar en la sangre)\_\_\_ Presión Alta \_\_\_  
 High Cholesterol (fat in the blood)\_\_\_ None\_\_\_  
 Alto Colesterol (grasa en la sangre)\_\_\_ Ninguna \_\_\_

4. If the Pregnancy Aid Center offered a 1 to 2-hour workshop with a nutrition session, (for example, learn how to cook healthy foods and how to read nutrition labels), and an exercise session, would you be interested in attending?

*¿Si el Pregnancy Aid Center ofreciera una clase de una a dos horas referida a de la nutrición (por ejemplo: cómo cocinar las comidas sanamente, cómo leer las etiquetas sobre nutrición) y acerca de ejercicios, usted estaría interesado en concurrir?*

Yes \_\_\_ No\_\_\_ Sí \_\_\_ No \_\_\_

5. What would prevent you from attending this workshop? *¿Qué impediría que usted concurriera a esta clase?*

Transportation\_\_\_ Family support\_\_\_ No reason\_\_\_  
 Transporte\_\_\_ Ayuda de su familia\_\_\_ Ninguna razón\_\_\_  
 Child care\_\_\_ Cost of workshop\_\_\_  
 Cuidado de niños\_\_\_ El costo de la clase\_\_\_  
 Other (please specify)\_\_\_\_\_  
 Otro (por favor, explique)\_\_\_\_\_

6. If you would like to attend a workshop, what day(s) work best for you? (Mark one or more.)

*¿Si usted quisiera concurrir a un taller, qué día(s) sería mejor para usted? (Marque todas las que considere oportunas.)*

Monday\_\_\_ Tuesday\_\_\_ Wednesday\_\_\_ Thursday\_\_\_  
 Lunes\_\_\_ Martes\_\_\_ Miércoles\_\_\_ Jueves\_\_\_  
 Friday\_\_\_ Saturday\_\_\_ Sunday\_\_\_  
 Viernes\_\_\_ Sábado\_\_\_ Domingo\_\_\_

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7. If you would like to attend a workshop, what time(s) work best for you? (Mark one or more.)

*¿Si usted quisiera concurrir a un taller, qué hora(s) sería mejor para usted? (Marque todas las que considere oportunas.)*

- 9 to 11 AM\_\_\_\_ 11 AM to 1 PM\_\_\_\_ 1 to 3 PM\_\_\_\_  
*entre las 9 y las 11 de la mañana\_\_\_\_ entre las 11 de la mañana y 1 de la tarde\_\_\_\_ entre las 1 y las 3 de la tarde\_\_\_\_*
- 3 to 5 PM\_\_\_\_ 6 to 8 PM\_\_\_\_  
*entre las 3 y las 5 de la tarde \_\_\_\_ entre las 6 y las 8 de la tarde \_\_\_\_*

8. How much would you be willing to pay for the workshop? (Mark one or more.)

*¿Cuánto usted estaría dispuesto a pagar la clase?(Marque todas las que considere oportunas.)*

- \$5\_\_\_\_ \$10\_\_\_\_ \$15\_\_\_\_ \$20\_\_\_\_  
 \$25\_\_\_\_ \$30\_\_\_\_ The workshop needs to be free\_\_\_\_ *La clase defiría ser gratuita \_\_\_\_*

9. Where would the best location be for you to attend a workshop? (Mark one or more.)

*¿Dónde sería la mejor localización para que usted concorra a una clase?(Marque todas las que considere oportunas.)*

- Pregnancy Aid Center\_\_\_\_ Community Center\_\_\_\_ Library\_\_\_\_ Church\_\_\_\_  
*Pregnancy Aid Center\_\_\_\_ El centro de la comunidad\_\_\_\_ La biblioteca\_\_\_\_ La iglesia\_\_\_\_*
- Other (please specify)\_\_\_\_\_  
*Otro (por favor, especifique)\_\_\_\_\_*

10. If you are not able to attend a workshop, would you like to receive information about preventing and/or treating diabetes (high blood sugar) or heart disease (high cholesterol or high blood pressure)? (Mark one or more.)

*¿Si usted no puede concurrir a una clase, usted quisiera recibir la información sobre la prevención, cuidado, o tratamiento de la diabetes (azúcar en la sangre) o enfermedad cardíaca (como alto colesterol y alta presión)? (Marque todas las que considere oportunas.)*

- Yes \_\_\_\_ No\_\_\_\_ Sí \_\_\_\_ No \_\_\_\_

11. If yes, in what form would you prefer to receive it? (Mark one or more.)

*¿Si sí, en qué forma usted preferiría recibirla? (Marque todas las que considere oportunas.)*

- Discussion with your doctor\_\_\_\_ One-on-one session with health educator\_\_\_\_  
*Discusión con su doctor\_\_\_\_ Una consulta en persona con el educador de la salud \_\_\_\_*
- Counseling over the phone with health educator \_\_\_\_ Read an informational brochure\_\_\_\_  
*Consulta del telefónica con el educador de la salud\_\_\_\_ Lea un folleto explicativo\_\_\_\_*
- Research on your own\_\_\_\_ Discussion with your family and/or friends\_\_\_\_  
*Investigar por su propia cuenta\_\_\_\_ Discusión con su familia y/o sus amigos \_\_\_\_*
- Other (please specify)\_\_\_\_\_  
*Otro (por favor, especifique)\_\_\_\_\_*

For information about diabetes and heart health,  
 please contact the health educator Jackie Lopez at 301-441-9150.

*Por información sobre diabetes y enfermedad cardíaca,  
 llame a educador de la salud Jackie Lopez a 301-441-9150*