UA FLYING SAMARITANS CLINIC ASSESSMENT

A PUBLIC HEALTH SURVEY OF AGUA PRIETA, SONORA, MEXICO

By

Alexis Nicole Smith

A Thesis Submitted to The Honors College

In Partial Fulfillment of the Bachelor of Arts Degree
With Honors in

Latin American Studies

THE UNIVERSITY OF ARIZONA

May 2011
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ABSTRACT

Under the auspices of the Tucson Chapter of Flying Samaritans, the undergraduate students of the UA Flying Samaritans club organize, manage, and run a free monthly medical clinic in Agua Prieta, Sonora, Mexico. At these clinics, students take patient history and vitals, work in the pharmacy, teach health education lessons, and interpret for doctors. The clinics take place at the Nueva Esperanza community center, available for their use through Frontera de Cristo, a non-profit ministry based out of Douglas. Additionally, the UA Flying Samaritans work in partnership with Naco Wellness, a non-profit healthcare organization based in Bisbee, Arizona.

The objective of this study is to assess the effectiveness of the UA Flying Samaritans free monthly, student-run clinics in addressing the chief health complaints of patients from the Agua Prieta community. Effectiveness is defined as the value added in providing individual patient care, overall flow of the clinics, and cultural competence of the staff.

Methods of the investigation included collecting epidemiological data from patients through a retrospective chart review (September 2008 – August 2010). This review addressed chief complaints, patient histories, and medications prescribed and previously taken by patients. Furthermore, 3 focus groups of 7-8 patients met in January 2011 and provided additional data about patient demographics, and cultural and physical barriers preventing patients from attaining quality healthcare.

The results of this study indicate that patient satisfaction rates are very high for the UA Flying Samaritans clinics in terms of medications provided, the competence of the medical staff, and their overall clinical experiences. The focus groups, retrospective patient chart statistics, and physicians indicate that there is a high demand in the area for treatment of non-communicable chronic diseases, pain, dermatology issues, and other health complications requiring specialists.
INTRODUCTION

Healthcare Across the U.S.-Mexico Border

Extending 1969 miles in length, according to the International Boundary and Water commission, the United States-Mexico border is a complex region in terms of social issues and culture (Ruiz-Beltran, 2001). Approximately 11.5 million people live along the U.S-Mexico border, and 86% of those people reside in 14 pairs of “sister cities,” metropolitan areas divided by the international border (Homedes, 2003).

Many people travel back and forth, both documented and undocumented, to work, purchase goods and services, and visit family. This high traffic has increased prosperity in certain regions of the border, however, many residents continue to live in poverty. According to the U.S. Environmental Protection Agency, more than 1 in 10 people living in the Mexico border cities do not have access to clean water. Hepatitis A seropositivity is two and three times higher than the national rate in the U.S. and Mexico respectively (Homedes, 2003). The immunization rates are low, while the rates of tuberculosis and gastrointestinal disease are high (McCarthy, 2000).

On the US side of the border, the population is primarily poor and of Hispanic origin. Thirty five percent of the population lives below the poverty level (Homedes, 2003). The town of Douglas, Arizona has a population of around 20,000 and the per capita income of Douglas, Arizona was estimated at $10,232 (U.S. Census Bureau, 2010).

In the U.S, Medicare and Medicaid are the two primary government health care programs, insuring about 25% of the population. The private sector finances the majority of the healthcare system, and the U.S. Military insures about 3.5 %. It was estimated in 2005 that
approximately 16 percent of the population, 47 million Americans, lacked health insurance altogether (U.S Census Bureau, 2005). The Hispanic population had a much higher chance of being uninsured than the white population (Ruiz-Beltran, 2001).

Of the many socio-economic groups in the U.S, undocumented residents face some of the most severe systemic societal oppression. In terms of healthcare, many undocumented residents do not seek out services due to fear of deportation and discrimination. In the absence of illness, many undocumented people and uninsured documented individuals do not utilize U.S resources devoted to healthcare. However, limited access to routine healthcare services causes a higher likelihood for these individuals to develop more serious conditions requiring high cost emergency medical care.

On the Mexican side of the border, much of the population is more affluent in comparison to the general population of Mexico. In 2005, Agua Prieta had a population of 68,402 people and a literacy rate of 96.3%. 89% of the homes in the city had electricity, 94% had running water, and 86% were connected to the sewer system. The city's most important economic activities were industry, commerce, and farming. The population is estimated at approximately 70,303 residents (INEGI, 2005).

There is still limited access to healthcare in Mexico for many of its residents. The Mexican government has attempted to provide access to healthcare for all of its citizens through the Secretaria de Salud (Ministry of Health). Additionally, the Instituto Mexicano del Seguro Social (Social Security) covers 46% of the population, the Instituto de Seguridad Social para los Trabajadores del Estado (state employee social security system) covers about 20% of the population, and smaller systems cover about 4% of the population. Such smaller systems include SEDENA (Armed Forces) and PEMEX (Oil Industry). Despite the existence of these services,
many Mexican citizens, particularly indigenous people, have little access to healthcare. In 1997, eight to ten percent of the population had no access to healthcare, at all. About one third of the population purchased private healthcare services to supplement the public services, but only 2.4% of the population carried private health insurance (Ruiz-Beltran, 2001).

**Metabolic Syndrome and Its Complications Across the US Mexico Border**

Some developing health problems along the US Mexico border include obesity, type II diabetes, and high blood pressure. These are all either components or risks factors associated with metabolic syndrome. Metabolic syndrome is defined by the American Medical Association as having at least any three of the five following measurements:

- **a. Abdominal (waist) circumference greater than 40 inches for men or 35 inches for women**
- **b. High blood pressure (hypertension)**
- **c. Hyperglycemia (fasting blood sugar more than 110 mg/dL)**
- **d. Elevated triglycerides (a type of fat in the bloodstream)**
- **e. Low levels of high-density lipoprotein, also known as HDL or “good cholesterol”**

Individuals with metabolic syndrome are at high risk for developing type II diabetes, coronary heart disease, heart attack, or stroke. Treatment and prevention of metabolic syndrome include weight loss, regular exercise, stopping smoking, and reduced dietary fat intake (Torpy, 2006).

Although the U.S. has made some great efforts to minimize smoking through media campaigns, 30% of Latino teens smoke on the U.S. side of the border. Many of these teens report being influenced by peers, family, and their Latino culture (Chalela, 2007). In a study that focused on the impact of the California Control program across the border, there were
significantly lower rates of smoking in Tijuana than Guadalajara, indicating that distance from the United States is directly related to prevalence of smoking habits (Martinez-Donate, 2008). Smoking rates among adults both near the border and further south in Mexico have decreased in the last 40 years, however, it is still a very prevalent risk factor contributing to the development of metabolic syndrome.

Globalization has contributed to a transition related to food consumption in Mexico and along the U.S.-Mexico border, increasing the risk for the development of metabolic syndrome. Dietary intake has transitioned from that of traditional crops to energy-dense processed foods with higher fat and refined carbohydrate content. Nationally, from 1988 to 1999, the percentage of total energy from fat increased from 23.5 percent to 30.3 percent (Rivera, 2004).

The more urbanized and wealthier regions in the north have an even larger increase in dietary fat intake than the poorer southern regions. Food purchases of refined carbohydrates and soda increased by 6.3 percent and 37.2 percent, respectively, in 1998 relative to 1984. This is due in part to an increase in economic interdependence between the U.S. and Mexico following the NAFTA agreement. Consequently, there has been a shift in Mexico in prevalence of disease from under-nutrition to the aforementioned complications related to metabolic syndrome via obesity (Rivera, 2004).

The risk of obesity associated with socioeconomic status is unclear. In Mexico, one study found that the prevalence of obesity is higher in more-educated women than less educated women (Martorell, 1998). Conversely, a national health survey conducted in 2000 found that as socioeconomic status increases, the sum of overweight and obese people decreases (McCarthy, 2000). During the recent economic recession, more and more people are falling below the poverty line and may be at higher risk for developing obesity and metabolic syndrome.
Recent increasing awareness of the importance of exercise and other healthy behaviors has decreased the severity of the impact of globalization on the development of obesity, but the percentages of obese people are increasing on both sides of the border. Specifically, in the U.S. the Child Nutrition and WIC Re-authorization Act of 2004 required that all school districts with a federally funded school meal program develop wellness policies that address nutrition and physical activity (Pangrazi, 2006). In Mexico, on July 2, 2010, the lower house of Congress approved two reform measures banning the sale of junk food in schools and making physical education classes mandatory. They made the decision based of the statistics of the 2006 National Health Survey indicating that 70% of adults and children ages 5-11 years old are overweight. Forty percent (40%) of Mexicans are obese (Hearld Tribune, 2010). Although these efforts decrease the risk factors related to developing obesity and metabolic syndrome, rates of disease have continued to rise due to other sedentary lifestyle factors (Ghaddar, 2010).

**UA Flying Samaritans Clinics**

Flying Samaritans Arizona is a volunteer-based, nonsectarian organization dedicated to providing free medical care to residents in remote, underserved regions of Mexico who are unable to access medical services. To accomplish this mission, organization activities may include but are not limited to:

- Establish and operate clinics to provide medical care at no cost in Mexican communities.
- Recruit volunteers who wish to join the organization as members and participate in the organization’s activities or support the mission.
- Raise funds to establish and operate clinical facilities and procure (and maintain/replenish) medical equipment and supplies for those facilities.
• Partner with health care programs at universities, allowing participation of students and graduates at Flying Samaritans Arizona clinics as part of their training and community service.

Under the auspices of the Tucson Chapter of Flying Samaritans Arizona, the undergraduate students of the UA Flying Samaritans club organize, manage, and run a monthly free medical clinic in Agua Prieta, Sonora, Mexico. At these clinics, students take patient history and vitals, work in the pharmacy, teach health education lessons, and interpret for doctors. The clinics take place at the Nueva Esperanza community center, available for their use through Frontera de Cristo, a non-profit ministry-based located in Douglas. Additionally, UA Flying Samaritans works in a partnership with the organization Naco Wellness, which is based in Bisbee, Arizona (Bylaws, 2010).

The club currently has 425 patient records. The files are stored in a locked drawer at the University of Arizona in between clinic dates. The patient records include reason for visit, family medical history, patient medical history, allergies, current medications, chronic conditions, diagnosis, and medications prescribed by the volunteer physicians and medical staff.

**Hypothesis**

The retrospective patient chart review and focus groups will reveal a high prevalence of conditions related to metabolic syndrome in patients (i.e., diabetes, hypertension, and renal disease), which most likely results from a nutritional transition caused by the impact of globalization.
**Objectives and Aims of Study**

The objective of this study is to assess the effectiveness of the UA Flying Samaritans free monthly, student-run clinics in addressing the chief health complaints of patients from the Agua Prieta community. Effectiveness includes individual patient care, overall flow of the clinics, and cultural competence of the staff. Intended outcomes of this study include providing the UA Flying Samaritans club, physicians, and other medical service organizations working in the area with some useful epidemiological trends to most effectively address the needs of patients from the Agua Prieta community.

This study is significant because it directly evaluates the effectiveness of the UA Flying Samaritans clinics. The results of this study can be used by interested individuals and other organizations involved with the Community Center Nueva Esperanza to improve the health and social services that they provide to the municipality of Agua Prieta. These organizations include, but are not limited to Frontera de Cristo Presbyterian Ministry, Naco Wellness Initiative, Community Center administrators, DIF, the General Hospital, and community leaders of Agua Prieta.
MATERIALS AND METHODS

Introduction

This study was approved by the Office for Human Subjects Protection at the University of Arizona. The PI and all co-investigators and research assistants were trained and certified to participate and conduct this study. A total of 425 patient records were compiled to assess epidemiological trends. The patient records consisted of information pertaining to medical history, vitals results, current medications, family illnesses, chief complaints, and medications prescribed. Additionally, three focus groups, each with seven or eight consented patients from our clinics, were brought together to discuss the education level, resource availability, migration information, residency information, nutrition, and other factors pertaining to the patients and their access to healthcare. The collection of data was supported by Frontera de Cristo, the Community Center Nueva Esperanza, and the community of Agua Prieta. No outside funding was necessary for the completion of this project.

Study Population

The targeted study participants were Spanish-speaking residents of the border community of Agua Prieta, Sonora. The estimated total population of Agua Prieta in 2005 was 70,303 permanent residents, according to the Instituto Nacional de Estadística, Geografía e Información (INEGI, 2005). All focus group participants were adults, 18 years of age or older. The focus groups consisted of both men and women. Individuals eligible to participate must have attended at least one UA Flying Samaritans clinic. Participants were randomly selected, allowing for a diverse sample, representative of the clinic patients.
Sample Size and Study Design

No recruitment was done for the retrospective medical chart study. All available charts for Flying Samaritans patients who have been treated by the UA Flying Samaritans clinics in Agua Prieta, Sonora were reviewed regardless of patient age, gender, or other characteristics. The study population consisted of patients who are residents of Agua Prieta Mexico. Twenty-two patients older than 18 years of age, not incarcerated, and who had been treated at the UA Flying Samaritans clinics were recruited to participate in three focus groups in January 2011. Patients were recruited regardless of race, ethnicity, or gender.

Subject Consent

The patient records of the clinics from September 2008 to August 2010 provided the majority of the data for the study. The 22 participants were recruited during the fall clinics by the PI and epidemiological committee to participate in one of three focus groups for one hour on February 26, 2011. The record data was anonymized and the records were locked up in a safe place except during the clinics. The focus group participant information was kept with the records. All patient contact information remains with the records.

For the retrospective medical chart review, a waiver of consent was used (Yaman et. al, 2011). It would have been too difficult to obtain consent for each patient whose chart was reviewed given that the population in this border region is highly mobile, not all may have current permanent contact information, and some of the charts reviewed dated back 2 years. Personal identifiers were not used in the chart review, so there was minimal risk to patients whose medical records were reviewed. For the focus group interviews, written consent for participation was obtained.
Written consent forms were provided in English or Spanish depending on participant preference. Consent forms explained objectives of the study, the fact that participation is completely voluntary, that participation is uncompensated, and that participation would be confidential. We reiterated that at any point the participant may withdraw from the study completely without consequence (Garcia, 2006).

Inclusion/Exclusion Criteria

All available charts for Flying Samaritans patients who have been treated by the UA Flying Samaritans clinics in Agua Prieta, Sonora were reviewed regardless of patient age, gender, or other characteristics. For the focus groups, 22 patients were recruited. These patients were older than 18 years of age, had not been incarcerated, and were treated at the UA Flying Samaritans clinics. Patients were recruited regardless of race, ethnicity, or gender.

Data Management and Statistical Method

Data collected from the retrospective chart review (September 2008-August 2010) was anonymized by Gena Damento, the UA Flying Samaritans Epidemiology Coordinator. The data was inputted into an excel spreadsheet and quantified, and trends were analyzed. Statistical methods used included descriptive frequency distributions. The focus group data was compiled and analyzed using the same methods.

Additionally, surveys were distributed in March 2010 in Agua Prieta to a group of individuals interested in the healthcare of the region. This group of individuals included the director of the General Hospital, the director of Frontera de Cristo, and two local physicians. One of the physicians worked for IMSS (Instituto Mexicano del Seguro Social) and the other held her
own private practice. Data was analyzed prior to the distribution of surveys and the participants were asked to provide insights to direct further data analysis.

**Questionnaires, Consent Forms, and Focus Group Questions**

Refer to the Appendix.
RESULTS

Part I: Retrospective Chart Analysis

The patient records were organized into a spreadsheet by the UA Flying Samaritans Epidemiology Coordinator and then anonymized before being analyzed by the PI and other CITI certified members of the epidemiology committee. The anonymized patient record spreadsheet included the following information for 425 patients:

Date Seen
Age
Date of birth
Sex
Chief Complaint(s)
Patient Medical History
Family Medical History
Weight
Height
Temperature
Blood Pressure
Heart Rate
Respiratory Rate
Blood Sugar
Blood Pressure
Skin Color
Patient Medications
Allergies

Since the purpose of the study is to analyze how well the UA Flying Samaritans clinics function to serve the patients, a special focus was placed on the chief complaints and medications taken by the patients. The first trends observed were chief complaints of patients with correspondence to age. The results were split by gender.
1. Chief Complaints of Patients with Correspondence to Age

Prevalence of Chief Complaints Among Patients Ages 0-19 Years
Total Patients: 213

<table>
<thead>
<tr>
<th></th>
<th>All Patients (213)</th>
<th>Frequency</th>
<th>%</th>
<th>Females (107)</th>
<th>Frequency</th>
<th>%</th>
<th>Males (106)</th>
<th>Frequency</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Respiratory Symptoms</td>
<td>67</td>
<td>31.4</td>
<td>Respiratory Symptoms</td>
<td>35</td>
<td>32.7</td>
<td>Cold/Allergy</td>
<td>36</td>
<td>34.0</td>
</tr>
<tr>
<td>2</td>
<td>Cold/Allergy Symptoms</td>
<td>62</td>
<td>29.1</td>
<td>Cold/Allergy</td>
<td>25</td>
<td>23.3</td>
<td>Respiratory</td>
<td>35</td>
<td>33.0</td>
</tr>
<tr>
<td>3</td>
<td>Fever</td>
<td>39</td>
<td>18.3</td>
<td>Fever</td>
<td>21</td>
<td>19.6</td>
<td>Loss of Appetite</td>
<td>20</td>
<td>18.9</td>
</tr>
<tr>
<td>4</td>
<td>Dermatology Issues</td>
<td>34</td>
<td>16.0</td>
<td>Dermatology Issues</td>
<td>17</td>
<td>15.9</td>
<td>Dermatology Issues</td>
<td>17</td>
<td>16.0</td>
</tr>
<tr>
<td>5</td>
<td>Throat Problems</td>
<td>19</td>
<td>8.92</td>
<td>Pain</td>
<td>12</td>
<td>11.2</td>
<td>Throat Problems</td>
<td>10</td>
<td>9.43</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>213</td>
<td>100</td>
<td>107</td>
<td>100</td>
<td>106</td>
<td>100</td>
<td>100</td>
<td></td>
</tr>
</tbody>
</table>

Over half of the patients are under the age of twenty. This can be explained by the high child-to-parent ratio reported in the Agua Prieta 2005 and 2010 census bureaus. This population is approximately 50% male and 50% female. This also corresponds well to data reported by the census bureau (INEGI, 2005/2010). This population mostly accessed the clinics with chief complaints of colds/allergies (29.1%), respiratory issues (31.4%), fevers (18.3%), and sore throats (8.92%). These symptoms are mostly related to temporary illnesses. Additionally, 16% of the population came primarily to see a dermatologist. Five focus group participants indicated that low cost dermatology services are very limited in Agua Prieta. This may explain the high demand for dermatology services at the clinic even in the youngest population served.
Prevalence of Chief Complaints Among Patients Ages 20-39 Years
Total Patients: 96

<table>
<thead>
<tr>
<th>Prevalence of Chief Complaint</th>
<th>Males (20)</th>
<th>Frequency</th>
<th>%</th>
<th>Females (76)</th>
<th>Frequency</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Dermatology Issues</td>
<td>9</td>
<td>45.0</td>
<td></td>
<td>Pain</td>
<td>19</td>
<td>25.0</td>
</tr>
<tr>
<td>2 Pain</td>
<td>5</td>
<td>25.0</td>
<td></td>
<td>Dermatology Issues</td>
<td>14</td>
<td>18.4</td>
</tr>
<tr>
<td>3 Inflammation</td>
<td>2</td>
<td>10.0</td>
<td></td>
<td>Check Up</td>
<td>9</td>
<td>11.8</td>
</tr>
<tr>
<td>4 Respiratory Issues</td>
<td>2</td>
<td>10.0</td>
<td></td>
<td>Respiratory Symptoms</td>
<td>8</td>
<td>10.5</td>
</tr>
<tr>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td>Head Trauma/ Dizziness</td>
<td>7</td>
<td>9.21</td>
</tr>
<tr>
<td>Total</td>
<td>20</td>
<td>100</td>
<td></td>
<td>76</td>
<td>100</td>
<td></td>
</tr>
</tbody>
</table>

This population also had a high demand for dermatology services. This age group, unlike the younger group, listed pain as a chief complaint. Twenty five percent of both males and females sought out services for pain relief. This age group contributes largely to the working population, most of which have jobs requiring lower levels of education and higher amounts of physical labor than similar populations in the United States (Ruiz-Beltran, 2001). According to figures provided by the Dirección General de Epidemiología (DGEI) in 1997, only 35.72 % of the population in the state of Sonora had completed some or all of high school (Rosales, 2000).

Less of the population (10.0 % males and 10.5% females) sought treatment for respiratory symptoms than the population age 0-19. This rate is about one third of that of the population age 0-19 years (31.4%). This difference may be explained by general knowledge that mild fevers and colds can be more severe for minors than for adults (Ruiz-Beltran, 2001).
Prevalence of Chief Complaints Among Patients Ages 40-59 Years
Total Patients: 98

<table>
<thead>
<tr>
<th>Prevalence of Chief Complaint</th>
<th>Males (19)</th>
<th>Frequency</th>
<th>%</th>
<th>Females (79)</th>
<th>Frequency</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Checkup or Unknown</td>
<td>6</td>
<td>31.6</td>
<td>Pain</td>
<td>28</td>
<td>35.4</td>
</tr>
<tr>
<td>2</td>
<td>Pain</td>
<td>5</td>
<td>26.3</td>
<td>Dermatology Issues</td>
<td>16</td>
<td>20.3</td>
</tr>
<tr>
<td>3</td>
<td>Inflammation</td>
<td>3</td>
<td>15.8</td>
<td>Head Trauma/Dizziness</td>
<td>13</td>
<td>16.5</td>
</tr>
<tr>
<td>4</td>
<td>Respiratory Issues</td>
<td>3</td>
<td>15.8</td>
<td>Respiratory Symptoms</td>
<td>12</td>
<td>15.2</td>
</tr>
<tr>
<td>5</td>
<td>Eye Issues</td>
<td>3</td>
<td>15.8</td>
<td>High Blood Pressure</td>
<td>10</td>
<td>12.7</td>
</tr>
<tr>
<td>Total</td>
<td>19</td>
<td>100</td>
<td></td>
<td>79</td>
<td>100</td>
<td></td>
</tr>
</tbody>
</table>

The patients in the age group 40-59 showed similar chief complaints as the age group 20-39. In this group, high blood pressure (15.8% of men and 15.2% of women) and eye issues (15.8% of men) are more prevalent than in previous groups. These are both conditions that are prevalent both in the US and Mexico for people of this age group (Mayo Clinic, 2011).

Prevalence of Chief Complaints Among Patients Ages 60+ Years
Total Patients: 18

<table>
<thead>
<tr>
<th>Prevalence of Chief Complaint</th>
<th>Males (2)</th>
<th>Frequency</th>
<th>%</th>
<th>Females (16)</th>
<th>Frequency</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Difficulty Walking</td>
<td>1</td>
<td>50.0</td>
<td>Pain</td>
<td>7</td>
<td>43.8</td>
</tr>
<tr>
<td>2</td>
<td>Pain</td>
<td>1</td>
<td>50.0</td>
<td>Unknown</td>
<td>3</td>
<td>18.8</td>
</tr>
<tr>
<td>3</td>
<td>Hernia</td>
<td>1</td>
<td>50.0</td>
<td>Head Trauma/Dizziness</td>
<td>3</td>
<td>18.8</td>
</tr>
<tr>
<td>4</td>
<td>Respiratory Issues</td>
<td>1</td>
<td>50.0</td>
<td>Type II Diabetes</td>
<td>3</td>
<td>18.8</td>
</tr>
<tr>
<td>Total</td>
<td>2</td>
<td>100</td>
<td></td>
<td>16</td>
<td>100</td>
<td></td>
</tr>
</tbody>
</table>

This segment of the patient population was much smaller than the others, but similar chief complaints are reported as from the 40-59 year group. Type II diabetes also comprised 18.8% of the reasons provided for patient visits. In the US, 26.9% of people over the age of 65
have type II diabetes. Mexican Americans have a rate of incidence of type II diabetes, which is two times higher than that for white people. The US-Mexico border region has an even higher rate of type II diabetes, especially in older populations. Diabetes is now the leading cause of death and costs Mexico more than $300 million annually, one-third of the public health care budget (Latin American Hearld Tribune, 2010).

2. Chief Complaints with Correspondence to Patient Medical History of Diabetes and Hypertension.

The surveyed healthcare professionals and the literature cited type II diabetes, obesity, hypertension, and metabolic syndrome as some of the most prevalent non-communicable chronic diseases along the US-Mexico border. The patient and family rates of hypertension and type II diabetes were provided in the patient records, so they were focused on in greater depth.

<table>
<thead>
<tr>
<th>Non Communicable Chronic Disease</th>
<th>Percent of Adult Patients with Reported History of Disease</th>
<th>Percent of Families with Reported History of Disease</th>
<th>National Average</th>
<th>Percent of Adults in Clinic With Measured Condition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type II Diabetes</td>
<td>15.1</td>
<td>5.7</td>
<td>10.6</td>
<td>NA</td>
</tr>
<tr>
<td>Hypertension</td>
<td>23.1</td>
<td>4.0</td>
<td>43.1</td>
<td>33.5</td>
</tr>
<tr>
<td>Obesity</td>
<td>NA</td>
<td>NA</td>
<td>40.0</td>
<td>18.9</td>
</tr>
</tbody>
</table>

The reported and measured rates of hypertension in patients and families are much lower than the national averages (Latin American Hearld Tribune, 2010). While only 23.1% of adult patients reported hypertension, blood pressures were measured for all adult patients, and 33.5% had either a systolic pressure above 140 mmHg and or a diastolic pressure above 90 mmHg, which qualifies for hypertension according to the American Heart Association (Mayo Clinic, 2011). Hypertension may have been underreported due to lack of diagnosis caused by a lack of access to health services. The reported patient prevalence of type II diabetes is higher than the
national average (15.1% and 10.6 % respectively). Using patient heights and weights, body mass indexes were calculated and patients with numbers over 30 were considered obese (CDC, 2011). The percent of obese adult patients is less than half of the national average (18.9% and 40.0% respectively). Since less than half of triaged patients had blood sugar levels tested, the same analysis could not be done to test for prevalence of diabetes mellitus in the clinic.

Patients With Reported Personal History of Diabetes Top Chief Complaints
Total Patients: 32

<table>
<thead>
<tr>
<th>Prevalence of Chief Complaint</th>
<th>Males (9)</th>
<th>Frequency</th>
<th>%</th>
<th>Females (23)</th>
<th>Frequency</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Type II Diabetes</td>
<td>3</td>
<td>33.3</td>
<td>Dermatology Issues</td>
<td>7</td>
<td>30.4</td>
</tr>
<tr>
<td>2</td>
<td>Pain</td>
<td>2</td>
<td>22.2</td>
<td>High Blood Pressure</td>
<td>6</td>
<td>26.0</td>
</tr>
<tr>
<td>3</td>
<td>Check Up</td>
<td>2</td>
<td>22.2</td>
<td>Type II Diabetes</td>
<td>5</td>
<td>21.7</td>
</tr>
<tr>
<td>4</td>
<td>Eye Issues</td>
<td>2</td>
<td>22.2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>9</td>
<td>100</td>
<td></td>
<td>23</td>
<td>100</td>
</tr>
</tbody>
</table>

Type II diabetes is associated with eye issues and high blood pressure (Mayo Clinic, 2011). These numbers indicate that the patients are seeking treatment at the UA Flying Samaritans clinics for their diabetes and related complications. Additionally, along with most other patient groups analyzed, the demand for dermatology services is high among female patients with a history of type II diabetes (30.4%).
Patients With Reported Personal History of Hypertension Top Chief Complaints
Total Patients: 49

<table>
<thead>
<tr>
<th>Prevalence of Chief Complaint</th>
<th>Males (9)</th>
<th>Frequency</th>
<th>%</th>
<th>Females (40)</th>
<th>Frequency</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Inflammation</td>
<td>2</td>
<td>22.2</td>
<td>Pain</td>
<td>12</td>
<td>30.0</td>
</tr>
<tr>
<td>2</td>
<td>Pain</td>
<td>2</td>
<td>22.2</td>
<td>Type II Diabetes</td>
<td>7</td>
<td>17.5</td>
</tr>
<tr>
<td>3</td>
<td>Dermatology Issues</td>
<td>2</td>
<td>22.2</td>
<td>Dermatology Issues</td>
<td>7</td>
<td>17.5</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>9</td>
<td>100</td>
<td></td>
<td>40</td>
<td>100</td>
</tr>
</tbody>
</table>

Inflammation (22.2% men), pain (22.2% men and 30.0% women), and type II diabetes (17.5% women) are all related to hypertension (Mayo Clinic, 2011). Additionally, one of the most common chief complaints in this group of patients was dermatology related (22.2% men and 17.5% women), which is mostly unrelated to hypertension.
3. Patient Medication Information

Medications Used By Patients On Day of Consultation (425 patients total):

<table>
<thead>
<tr>
<th>Type of Medication</th>
<th>Frequency</th>
<th>Percent of Patients</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td>291</td>
<td>68.5</td>
</tr>
<tr>
<td>Hypertension/ Heart Medication</td>
<td>44</td>
<td>10.4</td>
</tr>
<tr>
<td>Pain</td>
<td>37</td>
<td>8.71</td>
</tr>
<tr>
<td>Congestion/Respiratory</td>
<td>19</td>
<td>4.47</td>
</tr>
<tr>
<td>Type II Diabetes</td>
<td>16</td>
<td>3.76</td>
</tr>
<tr>
<td>Antibiotic</td>
<td>15</td>
<td>3.53</td>
</tr>
<tr>
<td>Allergy</td>
<td>9</td>
<td>2.12</td>
</tr>
<tr>
<td>Cough/Cold</td>
<td>7</td>
<td>1.65</td>
</tr>
<tr>
<td>Anxiety</td>
<td>4</td>
<td>&lt; 1</td>
</tr>
<tr>
<td>Vitamins</td>
<td>4</td>
<td>&lt; 1</td>
</tr>
<tr>
<td>Stomach</td>
<td>3</td>
<td>&lt; 1</td>
</tr>
<tr>
<td>Nosebleed/Nasal</td>
<td>2</td>
<td>&lt; 1</td>
</tr>
<tr>
<td>Skin/Ointment</td>
<td>2</td>
<td>&lt; 1</td>
</tr>
<tr>
<td>Thyroid</td>
<td>2</td>
<td>&lt; 1</td>
</tr>
<tr>
<td>Oral Anesthetic</td>
<td>2</td>
<td>&lt; 1</td>
</tr>
<tr>
<td>Cholesterol</td>
<td>1</td>
<td>&lt; 1</td>
</tr>
<tr>
<td>Fever</td>
<td>1</td>
<td>&lt; 1</td>
</tr>
<tr>
<td>Uterine</td>
<td>1</td>
<td>&lt; 1</td>
</tr>
<tr>
<td>Urinary</td>
<td>1</td>
<td>&lt; 1</td>
</tr>
<tr>
<td>Total</td>
<td>425</td>
<td>100</td>
</tr>
</tbody>
</table>

The specific medications reported in the patient files are listed on the following page with the category they belong to in the chart above. These medications were reported as currently taken before patients received medical consultation at the UA Flying Samaritans clinics. The medications are grouped by their utilities, which are ordered by prevalence in the clinics.
<table>
<thead>
<tr>
<th>Utility</th>
<th>Medications Reported</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hypertension/ Heart Medication</td>
<td>Captopril, Enalapril, Propanolol, Metoprolol, Atenolol, Analopril, Cortalidona, Micardis, Losartan, Imdur</td>
</tr>
<tr>
<td>Pain</td>
<td>Paracetamol, Motrin, Tempra, Tylenol, Aspirin, Ibuprofen, Back Pain Injections, Excedrin, Bioleco, Butilloshina, Diclofenaco, Metotrexato, Flanex, Feldene, Dolaren, Isosolbide, Naproxen, Optalidon</td>
</tr>
<tr>
<td>Congestion/Respiratory</td>
<td>Ambroxol, Brona, Broxol, Contac, Symbicort</td>
</tr>
<tr>
<td>Type II Diabetes</td>
<td>Metformin, Gibendamida, Mephormin</td>
</tr>
<tr>
<td>Antibiotic</td>
<td>Amproxon, Tetraderm, Prednison, Ciproflaxino, Theraflu, Alivin Plus, Cortizone, Clindamicina,</td>
</tr>
<tr>
<td>Cold/Allergy</td>
<td>Lortamil, Desenfriolito, Dimetap, Loradatina, Ranitidina, Benadryl</td>
</tr>
<tr>
<td>Anxiety</td>
<td>Fluoxetine, Stress/Sleep Medication, Schizophrenia Medication, Tafil,</td>
</tr>
<tr>
<td>Vitamins</td>
<td>Folic Acid, Calcium Supplements, Complex B,</td>
</tr>
<tr>
<td>Stomach</td>
<td>Genoprazol, Omeprazol,</td>
</tr>
<tr>
<td>Skin/Ointment</td>
<td>Mupirocina Pomada, Ointment</td>
</tr>
<tr>
<td>Thyroid</td>
<td>Tapazole, Levotiroxina Sodica,</td>
</tr>
<tr>
<td>Oral Anesthetic</td>
<td>Difenidol Hydrochloride</td>
</tr>
<tr>
<td>Uterine</td>
<td>Clormadinona</td>
</tr>
<tr>
<td>Urinary</td>
<td>Aloprinol, Rofucal</td>
</tr>
</tbody>
</table>

The top five types of medications taken by patients prior to seeing a physician at the UA Flying Samaritans clinic were hypertension/heart (44 patients), pain (37 patients), congestion/respiratory (19 patients), type II diabetes (16 patients), and antibiotics (15 patients). The top chief complaints from each medication group were analyzed.
Top Chief Complaints for Top 5 Medications Taken by Patients

Hypertension/Heart Medication (44 Patients)

<table>
<thead>
<tr>
<th>Chief Complaint</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Pain</td>
<td>15</td>
<td>34.1</td>
</tr>
<tr>
<td>2 Dermatology Issues</td>
<td>9</td>
<td>20.4</td>
</tr>
<tr>
<td>3 Head Trauma</td>
<td>7</td>
<td>15.9</td>
</tr>
<tr>
<td>4 Check Up</td>
<td>5</td>
<td>11.4</td>
</tr>
<tr>
<td>5 Sore Throat</td>
<td>4</td>
<td>9.09</td>
</tr>
<tr>
<td>Total</td>
<td>44</td>
<td>100</td>
</tr>
</tbody>
</table>

Pain (37 Patients)

<table>
<thead>
<tr>
<th>Chief Complaint</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Pain</td>
<td>12</td>
<td>32.43</td>
</tr>
<tr>
<td>2 Respiratory Symptoms</td>
<td>9</td>
<td>24.3</td>
</tr>
<tr>
<td>3 Head Trauma</td>
<td>8</td>
<td>21.6</td>
</tr>
<tr>
<td>4 Cold/Allergy</td>
<td>7</td>
<td>18.9</td>
</tr>
<tr>
<td>5 Fever</td>
<td>6</td>
<td>16.2</td>
</tr>
<tr>
<td>Total</td>
<td>37</td>
<td>100</td>
</tr>
</tbody>
</table>

Congestion/ Respiratory (19 Patients)

<table>
<thead>
<tr>
<th>Chief Complaint</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Respiratory Symptoms</td>
<td>14</td>
<td>73.7</td>
</tr>
<tr>
<td>2 Cold/Allergy</td>
<td>7</td>
<td>36.8</td>
</tr>
<tr>
<td>3 Fever</td>
<td>5</td>
<td>26.3</td>
</tr>
<tr>
<td>4 Sore Throat</td>
<td>3</td>
<td>15.8</td>
</tr>
<tr>
<td>Total</td>
<td>19</td>
<td>100</td>
</tr>
</tbody>
</table>

Type II Diabetes (16 Patients)

<table>
<thead>
<tr>
<th>Chief Complaint</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Pain</td>
<td>8</td>
<td>50.0</td>
</tr>
<tr>
<td>2 Dermatology Issues</td>
<td>5</td>
<td>31.3</td>
</tr>
<tr>
<td>3 Head Trauma/ Dizziness</td>
<td>2</td>
<td>11.1</td>
</tr>
<tr>
<td>4 Sore Throat</td>
<td>2</td>
<td>11.1</td>
</tr>
<tr>
<td>Total</td>
<td>16</td>
<td>100</td>
</tr>
</tbody>
</table>
Antibiotics (15 Patients)

<table>
<thead>
<tr>
<th>Chief Complaint</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Respiratory Issues</td>
<td>6</td>
<td>40.0</td>
</tr>
<tr>
<td>2 Pain</td>
<td>4</td>
<td>26.7</td>
</tr>
<tr>
<td>3 Dermatology Issues</td>
<td>4</td>
<td>26.7</td>
</tr>
<tr>
<td>4 Sore Throat</td>
<td>2</td>
<td>13.3</td>
</tr>
<tr>
<td>5 Fever</td>
<td>2</td>
<td>13.3</td>
</tr>
<tr>
<td>Total</td>
<td>15</td>
<td>100</td>
</tr>
</tbody>
</table>

While some of the chief complaints were associated with the medications taken, others were not. Patients taking antibiotics and medications for type II diabetes and hypertension had high frequencies of chief complaints related to dermatology issues (26.7%, 31.3%, and 20.4% respectively).

Part II: Focus Group Discussion Topics

Basic Demographics

Twenty-two participants were recruited from the UA Flying Samaritans November, December, January, and February clinics. The participants were dispersed to form two groups of seven people and one group of eight. The participants consisted of eight men and fourteen women ages 21 to 67. Twenty out of 22 patients reported having large extended families. The participants reported varying levels of education. The answer from each was recorded and the results were compiled into the table below.

<table>
<thead>
<tr>
<th>Education Level Completed</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elementary or Middle School</td>
<td>14</td>
<td>63.6</td>
</tr>
<tr>
<td>High School</td>
<td>6</td>
<td>27.3</td>
</tr>
<tr>
<td>University</td>
<td>2</td>
<td>9.1</td>
</tr>
<tr>
<td>Total</td>
<td>22</td>
<td>100.0</td>
</tr>
</tbody>
</table>
According to a report provided by the Dirección General de Epidemiología (DGEI) in 1997, 9.13 percent of people in Mexico have never attended school and 3.99 percent of people in the state of Sonora have never attended. The national average for partial or full high school completion is 27.88 percent and the average for Sonora is 35.72 percent (Rosales, 2000). This was reflected in our study demographics.

**Utilization of Resources**

During the group discussions, participants were requested to provide resources that they normally use to receive healthcare. Four participants reported use of the ISSSTE (Instituto de Seguridad Social al Servicio de los Trabajadores del Estado), which provides healthcare for the working population. While all four participants mentioned that the service was very good, other participants mentioned that it is hard to seek employment in Agua Prieta and other parts of Mexico, which is why many people attempt to work in the US. Three of the participants had worked in the US before and although they were all undocumented, they reported that it was easier for them to work in the states than in Mexico. Two of the three intend to return to the US within the next six months.

Other participants mentioned that they use the General Hospital, consult their regular physicians, and receive dental services from a low cost dentist who works in the Nueva Esperanza Community Center one day per week. Eight of the patients mentioned that they regularly attended UA Flying Samaritans clinics. Four patients did not report the use of any resources. These four participants had lived in Agua Prieta for less than one year.

Seven of the participants also mentioned DIF (Desarrollo Integral de la Familia) as a resource for healthcare, which is operated by the wife of the municipal mayor, Irma Villalobos de Teran. For three of UA Flying Samaritans clinics, local physicians were recruited to serve
through DIF. The UA Flying Samaritans also provided some recently expired medications to DIF, because the Flying Samaritans are not authorized to dispense expired medications (Bylaws, 2010).

**Barriers to Access to Quality Healthcare**

The conversations then transitioned to the barriers that people in Agua Prieta face preventing them from accessing quality healthcare. While seven participants reported no barriers whatsoever, others were eager to share their thoughts about the issue. One participant mentioned that although many services in the area are low cost, few are completely free like the UA Flying Samaritans clinics. Another participant mentioned that when he used a different free service, he received poor treatment and revealed a horrible scar on his arm from a free surgery he had from five years before. Two other participants mentioned that free services are often staffed with unpleasant medical personnel, who make patients feel uncomfortable. Three participants reported a lack of information presented to the general public about available health services.

Five participants mentioned that the UA Flying Samaritans only hold clinics once per month as a barrier, indicating their high dependency on the club’s free medical services. When asked how far away the patients lived from the clinic, fifteen out of twenty two patients reported living within two miles of the clinic. All participants lived within five miles of the clinic. Several participants commented that the lack of good transportation prevents many people from traveling too far to seek medical care. According to the Census data, the municipality of Agua Prieta has 99 medical professionals to serve 70,303 people (INEGI, 2010).

**Nutrition**

The conversations then focused on nutrition. On this topic, most participants were in agreement about their diets. Since many lived with large extended families, they reported that
families bought ingredients in bulk to make healthy traditional meals. Some of these foods include fruits, vegetables, meat, beans, rice, soup, eggs, tortillas, corn, milk, flour, and cereal. One of the three groups agreed that in the last 20 years, more processed food is being consumed by the general public. The group agreed that people living away from their families are more likely to eat processed foods, because they are less likely to buy natural ingredients in bulk and be willing to cook. The group was aware that the increased consumption of processed foods contributed to health complications of obesity, diabetes, and hypertension in the region.

Additionally, participants mentioned that a lot of children eat candy, which causes tooth decay. In July 2010, the Mexican government placed a ban on junk food and created mandatory physical education classes in schools. This was in response to the 2009 statistic that 70% of Mexicans are overweight and 40% are obese (Latin American Hearld Tribune, 2010). The clinic does not track family history of obesity, but will begin to next year due to the severity of the epidemic.

**Resident Inventory**

The next step in our study was to determine how long the participants had lived in Agua Prieta. Five participants reported that they had lived in Agua Prieta for over forty years. Twelve participants reported that they have lived in Agua Prieta for 10-36 years. Five participants reported living in Agua Prieta for less than one year. Three male participants reported living in the US prior to Agua Prieta. Two out of the three stated that they would soon return to the US. Many others reported living in nearby states of Mexico including Chihuahua and Baja California.
Resident Inventory

<table>
<thead>
<tr>
<th>Amount of Time Living In Agua Prieta</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 year or less</td>
<td>5</td>
<td>22.7</td>
</tr>
<tr>
<td>1-10 years</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>10-20 years</td>
<td>4</td>
<td>18.2</td>
</tr>
<tr>
<td>20-30 years</td>
<td>5</td>
<td>22.7</td>
</tr>
<tr>
<td>30-40 years</td>
<td>3</td>
<td>13.6</td>
</tr>
<tr>
<td>41 or more years</td>
<td>5</td>
<td>22.7</td>
</tr>
<tr>
<td>Total</td>
<td>22</td>
<td>100</td>
</tr>
</tbody>
</table>

Selection of UA Flying Samaritans Clinic and Patient Satisfaction

When asked why the participants chose to use the UA Flying Samaritans medical services instead of other healthcare providers, almost all of them immediately indicated that the free consultations and medications were the largest selling points. Another patient mentioned that dermatology service in Agua Prieta is very limited, and that the UA Flying Samaritans provides the most low cost dermatology services to the community. The participants indicated that the proximity of the clinic to their houses was another very good reason to choose the UA Flying Samaritans clinic. Five participants also mentioned that the staff is friendly and that the children love to play with the students. Each participant was asked to provide a number for the following categories to rank the clinic. The scores for each category were averaged in the chart below.

Patient Satisfaction Chart
(Scale is 1-10: 1 is worst and 10 is best)

<table>
<thead>
<tr>
<th>Focus Group Question</th>
<th>Medication</th>
<th>Physicians and Staff</th>
<th>General Treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average Score</td>
<td>9.98</td>
<td>9.93</td>
<td>9.94</td>
</tr>
</tbody>
</table>
Six of the participants mentioned that there is often a long wait at the clinics, but that the service is very good and well worth the wait. These satisfaction rates indicate that the UA Flying Samaritans clinics are providing good service to their patients.
DISCUSSION

Introduction

This study was created as the result of interest expressed by the epidemiology committee of the UA Flying Samaritans club to assess the effectiveness of their free monthly clinics which they host in the Community Center Nueva Esperanza in addressing the healthcare needs of local patients. The initiative was supported by the Mel and Enid Zuckerman College of Public Health at the University of Arizona, and by community health leaders in Agua Prieta. These local leaders included Angel Valencia of Frontera de Cristo, the Community Center Liaison; Dr. Benavides, the Medical Director of the General Hospital in Agua Prieta; Dr. Alicia Tolosa, and Dr. Florencia Castro (both are local primary care physicians in Agua Prieta). It was important to have the support and insight from local community leaders to help direct the analysis of the patient charts and focus groups.

The study was designed because of a lack of data sources available to document the effectiveness of the UA Flying Samaritans clinics in meeting the needs of their patients. The clinics have been held monthly since September 2008, and with 425 patient charts available, it is an opportune time to research the demographics of the patients to improve services available to them.

Access to Healthcare Service

Upon completion of the data collection the community health leaders of Agua Prieta were all provided questionnaires related to local disease and the accessibility to healthcare.

The director of the General Hospital and both physicians indicated that they had never previously heard about the UA Flying Samaritans clinics. The director of Frontera de Cristo, the partner organization of the UA Flying Samaritans, indicated that a potential barrier to access to quality healthcare is the lack of information about it to the general public. If many local health
professionals do not hear about the clinics, then it is very possible that many potential patients have not heard about the clinics as well. These opinions are similar to the views of three focus group participants, who cited a lack of information as a barrier to accessing quality healthcare.

The director of the General Hospital and one of the physicians mentioned that many poor people in Agua Prieta have limited access to transportation to reach the General Hospital. This is also similar to the focus group participant views. The other physician and the director of Frontera de Cristo mentioned that often employers impart conflicting information to their employees about their healthcare coverage. Although many employers are supposed to register their employees to either the IMSS (Instituto Mexicano del Seguro Social) or the ISSSTE (Instituto de Seguridad Social al Servicio de los Trabajadores del Estado), often employers do not register their workers as a cost savings. The focus group participants did not supply this information as barriers to receiving good care.

A resource for the people of Agua Prieta to use without being registered employees is the Seguro Popular. It was recently created to openly serve the general public at low cost, but both the directors of the General Hospital and Frontera de Cristo mentioned that it is very limited in terms of staff and resources. The focus group participants reported that many free resources are staffed with unpleasant healthcare professionals and that some of the actual medical treatment does not meet their own standards.

**Treatment of Disease**

All healthcare professionals agreed that the best way to alleviate the healthcare disparity in Agua Prieta is to teach nutrition and encourage healthy habits, to prevent high physical and financial costs for the people suffering from non-communicable chronic diseases. Given the limited resources, it is apparent that the people of Agua Prieta can greatly benefit from both the
medical treatment and the public health education lessons that the UA Flying Samaritans clinics provide.

Lastly, the professionals were asked to provide their perspectives about the most severe common health problems in Agua Prieta. The director of Frontera de Cristo mentioned that specialists are not commonly available in Agua Prieta, and that many medical problems arise from their lack of availability. He indicated that the greatest need in the community is for dermatologists, opthamologists, pediatricians, and OBGYNs. This is very consistent with the retrospective patient chart data. In most groups studied, one of the top chief complaints of patients was dermatology issues. Additionally, many patients sought treatment for eye issues.

The other three professionals indicated obesity, diabetes mellitus, hypertension, and metabolic syndrome as great concerns for the region. Almost 19% (18.9%) of adult patients are obese and 33.5% are hypertensive. Additionally, one of the professionals mentioned that teen pregnancy is a concern, causing women to drop out of school at young ages and raise children with limited financial support. Two of the professionals also indicated that physical pain and trauma is a main concern for the working population with physically demanding jobs in construction, agricultural fields, or maquiladoras. Pain was also a chief complaint among many of the adult groups, and it was especially high for the age group of adults 20-39 years old, which comprise the labor population (25% for both men and women).

**Strengths of Study**

The retrospective patient chart analysis allowed for a quantitative analysis of some of the most common chief medical complaints at the clinic in relation to patient age, medications taken, and medical history. The large data sample increases the credibility of the quantitative analysis.
The focus groups allowed for a qualitative analysis of the patient lifestyles and allowed for participants to provide in depth descriptions about some of the barriers they face in attaining quality healthcare. The data collected from the qualitative and quantitative portions of the assessment was combined to gain a well-rounded perspective on the health of the patients and the healthcare provided by the UA Flying Samaritans clinics.

Limitations of Study

One of the major limitations in the study was the facilitation of the focus groups by non-residents. Even though these individuals were fluent in Spanish, they were not well known in the Agua Prieta community. This unfamiliarity may have caused patients to be reluctant to extensively share details about their own experiences with healthcare.

Another limitation in the study was the number of focus group participants. Although all participants were recruited through the UA Flying Samaritans clinics, it is most likely that the people who care and know most about health and wellness decided to participate. This population may have had healthier diets than the other clinic patients who were uninterested in participating in the focus groups.

For the retrospective patient chart analysis, the data was dichotomized by gender, but in all age groups other than 0-19 years, each age group had more than three times as many women as men. In the 60+ age group, there were only two male patients. This could allow for sampling bias.

Another inconsistency of the patient chart analysis is methodology of obtaining patient medical history. Some of the student volunteers speak better Spanish and are more culturally sensitive than others. This could lead to some patients being more willing to disclose personal
information on their medical history forms than others. The focus groups were also facilitated by three different students, which is another methodological inconsistency in this study.

Another limitation of the study is that the only indicator of prevalence of chronic disease in the families of patients was the participants’ knowledge of family history. Additionally, the only indicator of the prevalence of type II diabetes that could be included in this study was patient self-awareness, because blood sugar levels were only tested for less than half of the patients. It is possible that some patients were unaware of the diseases from which they and their family members suffered. Because of this study, the UA Flying Samaritans clinics will begin recording blood sugar levels for all patients.

Conclusions

The hypothesis of this study was that the retrospective patient chart review and focus groups will reveal a high prevalence of conditions related to metabolic syndrome in patients (ie diabetes, hypertension, and renal disease), which most likely results from a nutritional transition caused by the impact of globalization. The focus groups, retrospective patient chart statistics, and local healthcare leaders indicated that there is a high demand in the area for treatment of non-communicable chronic diseases related to metabolic syndrome, and that diabetes, obesity, and hypertension rates are very high among adult clinic participants (15.1%, 18.9% and 33.5% respectively). Both focus group participants and local health care leaders indicated that the introduction of processed foods into the local diets is a contributing factor to the rising prevalence of these non-communicable chronic diseases.

The focus groups, patient charts and local healthcare leaders all indicated that there is a high demand in the region for the treatment of pain, dermatology issues, and other health complications requiring specialists. The focus group patient satisfaction rates are very high for
the UA Flying Samaritans clinics in terms of medications provided, approachability and cultural competence of the medical staff, and their overall clinical experiences.

The UA Flying Samaritans clinics will continue to recruit specialists as well as general practitioners to serve patients, take greater care in obtaining patient vitals and family medical histories during triage, and will continue their health education program, focusing on the promotion of healthy lifestyles and the prevention of non-communicable chronic diseases.
APPENDIX

Survey Instruments and Approval Forms
You are being invited to take part in a research study being conducted by The University of Arizona. The purpose of this study is to explore healthcare for people in Agua Prieta, Sonora. This study will attempt to assess the *effectiveness* of the UA Flying Samaritans free monthly, student-run clinics in addressing the chief health complaints of patients from the Agua Prieta community. There are no personal financial conflicts of interest related to this study.

You are being asked to be in this study because you are an adult older than 18 years of age that was treated at the UA Flying Samaritans clinic at the Nueva Esperanza community center in Agua Prieta, Sonora. We are seeking 24 participants from Agua Prieta, Sonora that have been treated at the UA Flying Samaritans clinic.

We will ask you to participate in one focus group (a group interview with others who attended the UA Flying Samaritans clinics). This will last one hour. All responses will be kept confidential.

You may choose not to be in this research study. You may decide not to begin or to stop the study at any time. If you choose not to be in this study, there will be no negative effects for you in your medical care, education, or employment. You will not lose any benefit to which you are otherwise entitled.

If you would like to participate in the study, please include your information below so that we can contact you. If you have any questions, please contact Alexis Smith at 001-520-235-5480 or alexiss@email.arizona.edu.

First Name:_________________________ Last Name: __________________________

Address: ________________________________________________________________

Telephone Number: ________________________________________________________

Email Address: ____________________________________________________________
Le invitamos a participar en un estudio que llevará a cabo la Universidad de Arizona. El propósito de este estudio es explorar la salud de los residentes de Agua Prieta, Sonora. La intención de este estudio es evaluar la eficacia de las clínicas mensuales brindadas por UA Flying Samaritans—estudiantes de la Universidad de Arizona—para abordar los problemas de salud de los pacientes de la comunidad de Agua Prieta. No hay conflictos de interés financieros personales relacionados con este estudio.

Se solicita su participación en este estudio porque usted es un adulto mayor de 18 años de edad que fue atendido en la clínica de UA Flying Samaritans en el centro comunitario Nueva Esperanza en Agua Prieta, Sonora. Estamos buscando 24 participantes de Agua Prieta, Sonora, que han recibido tratamiento en la clínica de UA Flying Samaritans en el centro comunitario Nueva Esperanza en Agua Prieta, Sonora.

Se solicita su participación en un grupo de enfoque (una entrevista en grupos con personas que han recibido tratamiento en las clínicas de UA Flying Samaritans). Este grupo de enfoque es de una hora. Todas sus respuestas se mantendrá confidencial hasta el límite permitido o requerido por la ley.

Usted tiene la opción de no participar en esta investigación. Usted puede decidir no iniciar o dejar de participar el estudio en cualquier momento. Si usted decide no participar en este estudio, no habrá ningún impacto negativo en relación a sus servicios de salud, sus tratamientos, o su empleo.

Si tiene interés en participar, por favor proporcione su información a continuación para poder contactarle. Si tiene preguntas, favor contactar a Alexis Smith 001-520-235-5480 o a su correo electrónico alexiss@email.arizona.edu.

Nombre: __________________________________________ Apellido: ________________________________

Dirección: ____________________________________________________________

__________________________________________________________

Numero de Teléfono: ____________________________________________

Correo Electrónico: ____________________________________________
Consentimiento Informado

Título de Investigación: UA Flying Samaritans: Evaluación de la Clínica

Ha sido invitado a participar en una investigación llevado a cabo por la Universidad de Arizona y le pide que lea este formulario para que usted sepa de esta investigación. La información en este formulario se proporciona para ayudarle a decidir si quiere participar. Si usted decide participar en el estudio, se le pedirá que firme este formulario de consentimiento. Si decide que no quiere participar, no habrá sanción para usted, y usted no perderá ningún beneficio que tendría normalmente.

¿Por qué es realizado este estudio?

El propósito de este estudio es explorar la salud de las personas en Agua Prieta, Sonora. Este estudio intenta evaluar la eficacia de las clínicas mensuales de UA Flying Samaritans, administradas por los estudiantes de la Universidad de Arizona para abordar las quejas principales de los pacientes de la comunidad de Agua Prieta.

No hay conflictos de interés financiero personal relacionado con este estudio.

¿Por qué me pide que participe en este estudio?

Se le pide que participe en este estudio porque usted es un adulto mayor de 18 años de edad que fue atendido en la clínica de UA Flying Samaritans en el centro comunitario Nueva Esperanza en Agua Prieta, Sonora.

¿Cuántas personas se le pedirán que participen en este estudio?

Estamos buscando 24 participantes de Agua Prieta, Sonora, que han recibido tratamiento en la clínica de UA Flying Samaritans en el centro comunitario Nueva Esperanza en Agua Prieta, Sonora.

¿Cuáles son las alternativas a participar en este estudio?

La alternativa es no participar en el estudio. La participación en el estudio es voluntaria, sin ningún beneficio directo.

¿Qué vas a pedir que haga en este estudio?

Su participación activa se limita a su participación en un grupo de enfoque (una entrevista de grupos con otras personas que han recibido tratamiento en las clínicas de UA Flying Samaritans). Este grupo de enfoque tendrá duración de una hora. Todas sus respuestas se mantendrá confidencial hasta el límite permitido o requerido por la ley.

¿Va a usar un grabador de audio de mí durante el estudio?

No

¿Existen riesgos para mí?

Las cosas que usted va a hacer para este estudio se suman poco riesgo para usted. Entre los riesgos posibles se incluyen la posibilidad de que otros puedan saber la enfermedad que tiene usted o un miembro de su familia. Este puede causar estrés (social, psicológico, o
económico) a usted o a su familia. Sin embargo, su participación en el estudio y sus respuestas a las preguntas durante el grupo de enfoque se mantendrán de forma confidencial. El consentimiento informado firmado se mantendrá encerrado en un gabinete en la Universidad de Arizona Colegio de Salud Pública y se mantendrá separado de la información recogida. Además, participantes en los grupos de enfoque recibirán nombres falsos para mantener sus respuestas confidenciales.

Aunque los investigadores han tratado de evitar los riesgos, usted puede sentir que algunas preguntas resultarán en estrés o tristeza. Usted no tiene que responder a algo que no desea. Información de contacto para servicios sociales de la comunidad que puedan ser capaces de ayudarle con estos problemas se le dará a usted si la necesita.

Si usted es o sería quedar embarazada, este estudio no va a ponerle el feto en más riesgo que lo que encuentra en la vida normalmente.

¿Hay beneficios para mí?
No hay beneficios directos para usted por participar en este estudio. Lo que los investigadores averiguar a través de este estudio pueden ayudar a las personas en la comunidad de Agua Prieta y sus familias alcanzar una mejor atención médica. El estudio pondrá de relieve los obstáculos a la búsqueda de profesionales de la salud y analizar las necesidades de la comunidad.

¿Habrá algunos gastos para mí?
Aparte de su tiempo y el costo de transporte para ir y venir a un grupo de enfoque, no hay costos por participar en el estudio.

¿Me pagarán estar en este estudio?
No

¿Información de este estudio se mantiene confidencial?
Información acerca de usted se mantendrá confidencial hasta el límite permitido o requerido por la ley. Los formularios de consentimiento se mantendrán separados de los datos recogidos. Su formulario de consentimiento informado se almacenará en un contenedor de archivos bloqueados en la Universidad de Arizona Colegio de Salud Pública. Solo la investigadora principal tendrá acceso a estos formularios de consentimiento. Participantes utilizarán nombres falsos asignados para los grupos de enfoque. Entidades como el Programa de Protección para los Sujetos Humanos puede acceder a sus registros para asegurarse de que el estudio se esta ejecutando correctamente y que la información se recoge correctamente.

¿A quién puedo contactar para más información?
Puede llamar a la investigadora principal para decirle acerca de una inquietud o queja sobre este estudio de investigación. La investigadora principal, Alexis Smith, se puede llamar al (520) 235-5480. También, puede comunicarse con la consejera de la investigadora principal, la Dra. Cecilia Rosales, al (520) 626-0720.

Para preguntas acerca de sus derechos como participante, o si tiene preguntas, quejas o inquietudes sobre la investigación y no puede contactar a la investigadora principal o quiere
hablar con alguien que no sea la investigadora, puede llamar al Programa de Protección para los Sujetos Humanos de la Universidad de Arizona  
   Número local de teléfono: (520) 626-6721  
   • Sitio Web (esto puede ser anónima: http://orcr.vpr.arizona.edu/irb/contact)

¿Puedo cambiar de opinión acerca de mi participación?  
Usted tiene la opción de aplicar o no estar en esta investigación. Usted puede decidir no iniciar o detener el estudio en cualquier momento. Si usted decide no participar en este estudio, no habrá ningún efecto en su condición de estudiante, sus tratamientos, y su empleo.

Declaración de consentimiento.  
Estoy de acuerdo en participar en este estudio y sé que no estoy renunciando a cualquier derecho legal al firmar este formulario. Los procedimientos, riesgos y beneficios me se han explicados, y mis preguntas se han contestadas. Sé que la nueva información sobre este estudio de investigación será proporcionados a mí, y que esta disponible. Puedo hacer más preguntas si quiero, y todavía puedo recibir atención médica si dejo de participar en este estudio. Una copia de esta totalidad, firmado, formulario de consentimiento será dado a mí.

Firma del Sujeto                                                          Fecha

Si un representante autorizado legalmente es parte del proceso de consentimiento:

Legalmente del Representante Autorizado                                                          Fecha

Relación al Sujeto                                                          Fecha

Si un testigo ha de ser parte del proceso de consentimiento, incluir la línea siguiente firmada:

Testigo                                                          Fecha

Declaración jurada de la investigadora:  
Cualquiera de las que tengo o mi agente ha explicado cuidadosamente al sujeto la naturaleza del proyecto arriba mencionado. Por la presente certifico que, a lo mejor de mi conocimiento la persona que firmó este formulario de consentimiento fue informado de la naturaleza, exigencias, beneficios, y riesgos de su participación.

Firma del Presentador                                                          Fecha

Firma de la investigadora                                                          Fecha
Informed Consent

Project Title: UA Flying Samaritans Clinic Assessment

You are being invited to take part in a research study being conducted by The University of Arizona and asked to read this form so that you know about this research study. The information in this form is provided to help you decide whether you want to be in the study. If you decide to take part in the study, you will be asked to sign this consent form. If you decide you do not want to be in the study, there will be no penalty to you, and your treatment services through your clinic will not be affected.

WHY IS THIS STUDY BEING DONE?
The purpose of this study is to explore healthcare for people in Agua Prieta, Sonora. This study will attempt to assess the effectiveness of the UA Flying Samaritans free monthly, student-run clinics in addressing the chief health complaints of patients from the Agua Prieta community.

There are no personal financial conflicts of interest related to this study.

WHY AM I BEING ASKED TO BE IN THIS STUDY?
You are being asked to be in this study because you are an adult greater than 18 years of age that was treated at the UA Flying Samaritans clinic at the Nueva Esperanza community center in Agua Prieta, Sonora.

HOW MANY PEOPLE WILL BE ASKED TO BE IN THIS STUDY?
We are seeking 24 participants from Agua Prieta, Sonora that have been treated at the UA Flying Samaritans clinic.

WHAT ARE THE ALTERNATIVES TO BEING IN THIS STUDY?
The alternative is not to participate in the study.

WHAT WILL YOU BE ASKED TO DO IN THIS STUDY?
We will ask you to participate in one focus group (a group interview with others who attended the UA Flying Samaritans clinics). This will last one hour. All responses will be kept confidential.

WILL VIDEO OR AUDIO RECORDINGS BE MADE OF ME DURING THE STUDY?
No

ARE THERE ANY RISKS TO ME?
The things that you will do for this study add little risk to you. Potential risks do include, however, the possibility that others may learn of your current medical conditions or family medical history. However, the information that you share will be kept confidentially. Your participation in the study and your answers given in focus group discussions will not be associated with your name or other identifying information. You
will be assigned a fake name. The forms you have signed to consent will be kept locked in a file cabinet at the University of Arizona College of Public Health and will be kept separate from any data collected.

Although the researchers have tried to avoid risks, you may feel that some questions that are asked of you will be stressful or upsetting. You do not have to answer anything you do not want to. Should you become upset emotionally or physically, we can make referrals to appropriate community social services as needed (such as Safe House or suicide hotline).

Even if you are or were to become pregnant, this study would not put a fetus at greater risk than what the mother experiences in her everyday life.

ARE THERE ANY BENEFITS TO ME?
What the researchers find out from this study may help people in the Agua Prieta community and their families attain better medical care. The study will highlight barriers to seeking health professionals and analyze the needs of the community.

WILL THERE BE ANY COSTS TO ME?
Aside from your time and the cost of transportation to get to and from the one focus group meeting, there are no costs for taking part in the study.

WILL I BE PAID TO BE IN THIS STUDY?
No.

WILL INFORMATION FROM THIS STUDY BE KEPT CONFIDENTIAL?
Information about you will be kept confidential to the extent permitted or required by law. Your signed informed consent form will contain the only personally identifying information and will be stored in a locked file cabinet at the University of Arizona College of Public Health. Only the principal investigator will have access to the signed consent forms, and these consent forms will be kept separate from collected data. Participants in focus group interviews will use assigned false first names for the focus group. The University of Arizona’s Human Subjects Protection may also access your records to make sure the study is being run correctly and that information is collected properly.

WHOM CAN I CONTACT FOR MORE INFORMATION?
You can call the Principal Investigator to tell her about a concern or complaint about this research study. The Principal Investigator, Alexis Smith, can be called at (520) 235-5480. You may also contact the Principal Investigator’s advisor, Dr. Cecilia Rosales at (520) 626-0720.

For questions about your rights as a research subject or if you have questions, complaints, or concerns about the research and cannot reach the Principal Investigator or want to talk to someone other than the Investigator, you may call the University of Arizona Human Subjects Protection Program office.

- Local phone number: (520) 626-6721
- Website (this can be anonymous: http://orcr.vpr.arizona.edu/irb/contact)
MAY I CHANGE MY MIND ABOUT PARTICIPATING?
You may choose not to be in this research study. You may decide not to begin or to stop the study at any time. If you choose not to be in this study, there will be no negative effects for you in your medical care, education, or employment. You will not lose any benefit to which you are otherwise entitled.

STATEMENT OF CONSENT
I agree to be in this study and know that I am not giving up any legal rights by signing this form. The procedures, risks, and benefits have been explained to me, and my questions have been answered. I know that new information about this research study will be provided to me as it is available. I can ask more questions if I want, and I can still receive medical care if I stop participating in this study. A copy of this entire, signed consent form will be given to me.

___________________________________  ______________________  __________________
Participant’s Signature  Date

If a Legally Authorized Representative will be part of the consenting process, include the following signature line:

___________________________________  ______________________  __________________
Legally Authorized Representative  Date

___________________________________  ______________________  __________________
Relationship to Subject  Date

If a Witness will be part of the consenting process, include the following signature line:

___________________________________  ______________________  __________________
Witness  Date

INVESTIGATOR'S AFFIDAVIT:
Either I have or my agent has carefully explained to the participant the nature of the above project. I hereby certify that to the best of my knowledge the person who signed this consent form was informed of the nature, demands, benefits, and risks involved in his/her participation.

___________________________________  ______________________  __________________
Signature of Presenter  Date

___________________________________  ______________________  __________________
Signature of Investigator  Date
Focus Group Questions For Patients

UA Flying Samaritans: Evaluación de Clínica

Preguntas para grupos de enfoque. Otras preguntas pueden surgir durante el transcurso de las sesiones de grupos focales.

1. ¿Cuál es su sexo, edad y nivel de educación? Por favor, describa la estructura de su familia extendida.

2. ¿Cuáles son algunos de los recursos públicos, que se utiliza con regularidad?

3. ¿Cuáles son algunas de las barreras que encuentra que le impide aprovechar los recursos disponibles?

4. ¿A qué distancia vive usted del centro comunitario Nueva Esperanza?

5. ¿Cuáles son algunos de los principales alimentos que consume en su dieta regular?

6. ¿Hace cuanto tiempo que usted vive en Agua Prieta? ¿Dónde más ha vivido y por cuánto tiempo?

7. ¿Por qué vino la clínica de UA Flying Samaritans en el centro comunitario Nueva Esperanza? ¿Por qué eligió la clínica de UA Flying Samaritans sobre otros servicios de salud gratuitos?

8. En una escala de 1-10, ¿cuál es su satisfacción con la medicación que recibió en las clínicas de UA Flying Samaritans? 1: el peor y 10: el mejor. Por favor comente sobre su respuesta.

9. En una escala de 1-10, ¿cuál es su satisfacción con los médicos y el personal de las clínicas de UA Flying Samaritans? 1: el peor y 10: el mejor. Por favor comente sobre su respuesta.

10. En una escala de 1-10, ¿cuál es su satisfacción con el tratamiento general que recibió en las clínicas de UA Flying Samaritans? 1: el peor y 10: el mejor. Por favor comente sobre su respuesta.
Focus Group Questions For Patients

UA Flying Samaritans Clinic Assessment

Template questions for focus groups. Other relevant questions may arise during the course of the focus group sessions.

1. What is your sex, age, and education level? Please describe the structure of your extended family.

2. What are some public resources, which you use regularly?

3. What are some barriers you encounter which prevent you from taking advantage of available resources?

4. How far away do you live from the Nueva Esperanza community center?

5. What are some of the main foods you eat in your regular diet?

6. How long have you lived in Agua Prieta? Where else have you lived and for how long?

7. Why did you come to the UA Flying Samaritans clinic at the Nueva Esperanza community center? Why did you choose the UA Flying Samaritans clinic over other free health services?

8. On a scale from 1-10, what is your satisfaction with the medication you received at the UA Flying Samaritans clinics? 1: the worst and 10: the best. Please comment on your response.

9. On a scale from 1-10, what is your satisfaction with the doctors and staff at the UA Flying Samaritans clinics? 1: the worst and 10: the best. Please comment on your response.

10. On a scale from 1-10, what is your satisfaction with the overall treatment you received at the UA Flying Samaritans clinics? 1: the worst and 10: the best. Please comment on your response.
UA Flying Samaritans: Evaluación de Clínica

Preguntas para la gente profesional que a le importa la salud pública.

1. ¿Cuáles son algunos de los recursos de salud pública que recomiendan a sus pacientes a utilizar? ¿Cuáles son las fortalezas y debilidades de estos recursos?

2. ¿Cuáles son algunas de las barreras que la gente de Agua Prieta encuentra que le impiden aprovechar los recursos disponibles?

3. ¿Qué ha escuchado acerca de las clínicas UA Flying Samaritans de su propios pacientes?

4. ¿Cuáles son algunos de los problemas de salud más graves que muchos de sus pacientes se enfrentan?

5. ¿Qué piensan que debería difundirse más sobre la salud pública?
ATTENTION: Clinic Study Authorization

Alexis Smith
1295 N. Martin Ave
Building 2002 A239
Tucson, AZ 85724

Ms Smith:

I have reviewed your request regarding your study of the Flying Samaritans clinic and wish to support the research project entitled "UA Flying Samaritans Clinic Assessment." Your request to use information from the Nueva Esperanza Community Health Center for research is granted.

We have established that the investigation will include reviews of medical records of patients treated at the clinic from 2008 to 2010 and interviews with patient groups, and that the information people provide will be anonymous. The study objectives include identifying community health needs and assessing perceptions of medical treatment from the patients and their families. The desired outcome is to improve the quality of medical treatment in the UA Flying Samaritans clinics.

This authorization covers the period from October 1, 2010 to May 31, 2011.

We look forward to working with you.

Sincerely,

José Ángel Valencia Salazar
General Director
Octubre 1 de 2010.

ASUNTO: Autorización estudio sobre Clínicas

Alexis Smith
1295 N. Martin Ave
Building 2002 A239
Tucson, AZ 85724

Srta Smith:

He revisado su solicitud con respecto a su estudio sobre la clínica de Flying Samaritans y deseo apoyar su proyecto de investigación titulado “UA Flying Samaritans Clinic Assessment”. Su petición de utilización de información del Centro de Salud para su investigación es concedida.

Se establece que la investigación incluirá revisiones de archivos médicos de los pacientes tratados en la clínica desde 2008 hasta 2010 y las entrevistas con grupos de pacientes, y que la información que las personas proporcionen será anónima. Los objetivos del estudio incluyen identificar las necesidades comunitarias de salud y evaluar las percepciones sobre el tratamiento médico que tienen los pacientes y sus familias. El resultado final deseado es mejorar la calidad del tratamiento médico en las clínicas de UA Flying Samaritans.

Esta autorización cubre el periodo del 1° de octubre 2010 al 31 de mayo 2011.

Esperamos con interés trabajar con usted.

Atentamente,

José Ángel Valencia Salazar
Coordinador General
HSPP Correspondence Form

Date: 03/07/11
Investigator: Alexis Smith, Undergraduate
Advisor: Cecilia Rosales, M.D.
Project No./Title: 10-0808-02 UA Flying Samaritans Clinical Assessment
Current Period of Approval: 11/17/10 – 11/16/11

IRB Committee Information
IRB2 – IRB00001751
FWA Number: FWA00004218
Expedited Review – Modification

Documents Reviewed Concurrently | Status
--- | ---
F107: VOTF (signed 2/21/11) | Approved

Description of Modifications
Personnel change [adding Lacson, Neil].

Determination
Approved as submitted effective 03/07/11

Regulatory Determination(s)
Criteria for Approval has been met (45 CFR 46.111): The criteria for approval listed in 45 CFR 46.111 have been met (or if previous met, have not changed)
Modification Eligible for Expedite Review (45 CFR 46.110): The modification(s) do not affect the design of the research AND the modification(s) add no more than minimal risk to subjects.

Mariette Marsh
MPA, CIP
Chair Designee, IRB2 Committee
UA Institutional Review Board

MM: bm

3/7/11

Reminders: No changes to a project may be made prior to IRB approval except to eliminate apparent immediate hazard to subjects.

Arizona’s First University – Since 1885

Form version: 10/1/10
# HSPP Correspondence Form

**Date:** 11/17/10  
**Investigator:** Alexis Smith, Undergraduate  
**Advisor:** Cecilia Rosales, MD  
**Project No./Title:** 10-0808-02 UA Flying Samaritans Clinical Assessment  
**Current Period of Approval:** 11/17/10—11/16/11  
Submit the "FORM: Continuing Review Progress Report" no later than 45 days prior to the end of the approval period listed above.

## IRB Committee Information

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</thead>
<tbody>
<tr>
<td>Project Approval Form — Social/Behavioral (received 11/12/10)</td>
<td>Appr</td>
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| Consenting Instruments:  
  - Informed Consent (version 10/21/10) | Appr |
  - Spanish Informed Consent (version 10/21/10) | Appr |
| VOTF (version 11/12/10) | Appr |
| Site Authorizations:  
  - Centro Comunitario "Nueva Esperanza" (dated 10/01/10) | Appr |
| Recruitment Materials:  
  - Clinic Assessment (version 11/15/10) | Appr |
  - Spanish Clinic Assessment (version 11/15/10) | Appr |
| Data Collection Instruments:  
  - Focus Group Questions (version 10/21/10) | Appr |
  - Spanish Focus Group Questions (version 10/21/10) | Appr |
| Other:  
  - Waiver of PHI (version 10/21/10) | Appr |

## Determination

Approved as submitted effective 11/17/10

## Requirements

*Research Site Authorization Requirement:* Clearance from official authorities for sites where research is to be conducted must be obtained prior to performance of this study at those sites. Evidence of this must be submitted to the HSPP office.

## Regulatory Determination(s)

Criteria for Approval has been met (45 CFR 46.111):  
- Expedite Approval (45 CFR 46.110 Category 5):  
- Expedite Approval (45 CFR 46.110 Category 7):  
- Waiver of PHI Authorization (45 CFR 164.512(i)(2)(ii)):

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**Elaine G. Jones, RN, PhD**  
**11/17/10**  
**Date**

**Reminder:** No changes to a project may be made prior to IRB approval except to eliminate apparent immediate hazard to subjects.
CITI Collaborative Institutional Training Initiative

Human Research Curriculum Completion Report
Printed on 9/8/2010

Learner: Alexis Smith (username: guanajuato05)
Institution: University of Arizona
Contact Information Department: Public Health
Phone: 520 235-5480
Email: alexiss@email.arizona.edu

Students conducting no more than minimal risk research:

Stage 1. Stage 1 Passed on 09/08/10 (Ref # 4877445)

<table>
<thead>
<tr>
<th>Required Modules</th>
<th>Date Completed</th>
<th>Score</th>
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<tr>
<td>Students in Research - SBR</td>
<td>09/03/10</td>
<td>7/10 (70%)</td>
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<tr>
<td>History and Ethical Principles - SBR</td>
<td>09/03/10</td>
<td>4/4 (100%)</td>
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<tr>
<td>Defining Research with Human Subjects - SBR</td>
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<td>4/5 (80%)</td>
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<td>The Regulations and The Social and Behavioral Sciences - SBR</td>
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<td>Assessing Risk in Social and Behavioral Sciences - SBR</td>
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<td>Privacy and Confidentiality - SBR</td>
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<tr>
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<td>09/08/10</td>
<td>4/4 (100%)</td>
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<td>Workers as Research Subjects-A Vulnerable Population</td>
<td>09/08/10</td>
<td>4/4 (100%)</td>
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<tr>
<td>University of Arizona</td>
<td>09/08/10</td>
<td>no quiz</td>
</tr>
</tbody>
</table>

For this Completion Report to be valid, the learner listed above must be affiliated with a CITI participating institution. Falsified information and unauthorized use of the CITI course site is unethical, and may be considered scientific misconduct by your institution.

Paul Braunschweiger Ph.D.
Professor, University of Miami
Director Office of Research Education
CITI Course Coordinator

Return
To Whom It May Concern:

My name is Gena Damento and I am a fellow student of Alexis as well as an officer in the Flying Samaritans Club at the University of Arizona. On October 4th I renewed my IRB certification for Human Subjects through the CITI website.

The patient records for the Flying Samaritans clinics have been recorded into an excel file, each patient being assigned a record number. To ensure confidentiality of the patients, I have begun photocopying the original paper files while covering any identifiable information and labeling them with their corresponding number. These unidentified files will then be given to Alexis to be analyzed and organized. The only link between the names and their number will be kept in one file saved to a computer owned by the club.

Please let me know if you have any other questions or concerns,

Gena Damento
Damento@email.arizona.edu
UA Flying Samaritans Patient Form

Patient Name/Nombre: ______________________________ Date/Fecha: ______________________________
Date of Birth/Fecha de Nacimiento: ______________________________ Age/Edad: ______________________________
Sex/Sexo: [ ] Male/Hombre [ ] Female/Mujer Record Number/Número de Registro: ______________________________
Chief Complaint/Queja Principal: ______________________________

Medical History/Historia Clínica: ______________________________

Weight/Peso: ______________________________ Height/Altura: ______________________________
Temperature/Temperatura: ______________________________ C or F
Blood Pressure/Presión Arterial: ______________________________ / ______________________________
Heart Rate/Frecuencia Cardíaca: ______________________________
Respiratory Rate/ Frecuencia Respiratoria: ______________________________
Blood Sugar/Azúcar en la Sangre: ______________________________
Skin Color/Color de la Piel: ______________________________

Medications/Medicinas: ______________________________

Allergies/Alergias: ______________________________

For Women/Mujeres:
Last Period/Fecha de su última regla: ______________________________
Are they regular/¿regla es regular? [ ] Yes/Si [ ] No
Last PAP/Última Papilocultura: ______________________________
Pregnancies/Embarazos: ______________________________
Live Babies/Nacimientos Vivos: ______________________________
Abortions/Abortos: ______________________________
Miscarriages/Abortos Espontáneos: ______________________________

Provider/Assessment/Proveedor de la Evaluación:
Subjective/Subjetivo: ______________________________

Objective/Objetivo: ______________________________

Assessment/Evaluación: ______________________________

Plan:
• Medication to be prescribed/¿Medicinas prescritas? [ ] Yes/Si [ ] No
• Request for Special Care/Solicitud de atención especial [ ] Yes/Si [ ] No

Recommended Follow-up date/Fecha recomendada para continuar tratamiento: ______________________________

Physician Name/Nombre del Médico: ______________________________ Signature/Firma: ______________________________

Orders Completed By/Ordenes Completas Por: ______________________________ Time/Date/Hora/Fecha: ______________________________

Revised: 8 October 2009

Clinic Use Only: [ ] Form data entered? By: ______________________________
[ ] meds data entered? By: ______________________________
REFERENCES


