Chapter 1

Introduction

Migrant and seasonal farmworkers help sustain agriculture in Oregon, providing orchardists, especially, with the means to maintain their farms and support their communities. The income of these farmworkers being below that of the general population, of rising concern has been farmworkers’s health, and access to health care. Migrant and seasonal farmworkers in Oregon are almost exclusively Hispanic of Mexican descent, which presents further cultural and language complications associated with their access to health care. Due to the migration of seasonal farmworkers, with their constant change of location, there is even more difficulty in assessing and tracking the real health care status, needs, and receipt of care among this segment of the population.

Most people are aware of the presence of migrant and seasonal farmworkers only as a result of living in an agrarian community where they experience the change in culture at their local grocer in the afternoons and evenings when farm work is done for the day. Unless they are orchardists themselves or visit an orchard during harvest months, residents usually have no idea of the workers’ living conditions, health, or lifestyle. A great number of hard-working migrants and seasonal workers are busily ensuring the prosperity of the community life-blood, and go practically unnoticed by the general population. This is unfortunate since the community would benefit by ensuring
that basic health care is accessible to these farmworkers, and that any barriers to their access of health care under community control are identified and removed.

In 2000, a community survey of Hispanics--many of whom are farmworkers--and non-Hispanic county residents was conducted by La Clínica del Cariño community health center in conjunction with Providence Hood River Memorial Hospital, respectively. The Community Health Survey was administered in Spanish and English. The survey was administered to determine the self-reported health status of Hispanics and Hispanic farmworkers, as well as that of the English-speaking residents in Hood River County. A second reason the survey was administered was to help the health services of the county in identifying barriers experienced by residents as they attempt to access health care. The results of this survey will be used as a tool in directing future health care resources of La Clínica (LC) and Providence Hood River Memorial Hospital (PHRMH) to better meet county needs.

Terms

Hispanic describes those persons originating from Mexico and Central or South American countries, or those with ancestors originating from these countries. The term Hispanic is a constructed measuring device only, and is not meant to characterize or classify those who are opposed to its application. It is not known from the survey whether or not Hispanics are documented or undocumented. Farmworker is defined as a person who has earned at least 50% or more of their income the past two years from agriculture. For ease of use, English survey and Spanish survey will refer to the English language survey and Spanish language survey, respectively.
Research questions

Two research questions are considered in this study.

1) What are the primary self-reported health conditions of the Hispanic and farmworker population of Hood River County?

2) Based on the top health conditions and needs of Hispanics and farmworkers in Hood River County, what are the apparent barriers to access of the needed care?

Significance of the study

The main concerns and questions addressed by the survey were those of health needs and conditions among Hispanics in this county (many being farmworkers), access to health care, and barriers to receiving the health care needed. An analysis of health conditions by ethnicity is available by gender, age, education level, economic class, insurance coverage and occupation. As community health centers, other health agencies, and hospitals attempt to meet the needs of their communities and adjust to a dynamic populace, community health assessments appear to be vital in identifying those areas in the community that need targeting. The survey itself was made possible by a grant from the Northwest Health Foundation, and the results will assist and direct the attention of healthcare promoters and policymakers in Hood River County, as well as other surrounding counties in Oregon, and perhaps beyond.
Chapter II

Literature Review

2.1 Hispanic access and barriers to health care

The U.S. Hispanic population, at over 35 million, has been the fastest-growing minority population, increasing 57.9% between 1990 and 2000, and is expected to soon become the nation’s largest minority group (Granados et al., 2001; Council, 1991; Latino, 2002; Mills, 2001). Population estimates in 1993 and 2000 show that roughly two-thirds of U.S. Hispanics are under 35 years of age, and Mexican-Americans constitute the majority of those recognized as Hispanic (60-65%). Of these, about 50% finish high school, compared to 80% of non-Latinos (Guendelman, 1998; Latino, 2002; Mills, 2001; Riedel, 1998). Studies in the late 1980’s and early 1990’s show that in 1987, 30.1% of Hispanics were uninsured, with recent Current Population Survey data showing that the number of uninsured is increasing, where 32% of U.S. Hispanics are currently uninsured (Mills, 2001).

The number of uninsured Hispanics is higher than any other major ethnic group. Studies have suggested that the greatest barriers to care are experienced by the poor and uninsured, where barriers were recognized as “Structural, Financial, and Personal or Cultural” (Riedel, 1998). Structural barriers are due to the lack of health providers Hispanics can communicate with and trust. Such barriers are evidenced by the use of Emergency Department services by Hispanics (Riedel, 1998). Financial barriers include low income and inability to gain health insurance coverage. Personal and cultural
barriers include language barriers as well as the cultural or personal beliefs discouraging use of conventional health care.

Many others have pointed out 3 main issues relating to Hispanic access to health care: below average educational achievement; below average family income; and above average employment in occupations which do not provide insurance benefits (Ginzberg, 1991). The Council on Scientific Affairs (1991) reports that Hispanic use of health care is “affected by perceived health care needs, insurance status, income, culture, language, and other factors.” Over the last 10 years, the picture has not altered significantly, as data and studies show no real change in trends.

Many ethnic minorities in the U.S. “suffer substantially and disproportionately from adverse health conditions and inadequate access to quality health care services” (Healthy People, 2000). Among Hispanic children, for example, a study involving nearly 6,900 Hispanic children under 18 years of age, has shown the possibility that “marked Hispanic disadvantage in access to care may be related to language ability” more than health insurance or socioeconomic status (Weinick, 2000). There is no doubt as to the reality of marked differences between Hispanic and other ethnic groups’ access and use of health care in the U.S.

According to the U.S. Census Bureau, people of Hispanic origin have the highest uninsured rate: 34.2% vs. 12% of non-Hispanic whites (De-Posada, 1999; Mills, 2001). Although the exact number of those uninsured varies a few percent from different sources and reports, consistently the uninsured rate of the Hispanic population occupies the low to mid 30% region, well ahead of the general population’s uninsured rate of 14% (+/- .5%), and even the general poor uninsured rate of nearly 30%, which is below the 32% of
non-poor uninsured Hispanics (Mills, 2001). Oregon, specifically, has held relatively
even with the national average of 14% for the amount of those without health insurance
for the entire year, for the years of 1998-2000 (Mills, 2001). Oregon Population Survey,
completed by telephone, shows 2000 uninsured rates of 11.8% and 24.6% for White and
Hispanic residents, and those from the Gorge region (Hood River and Wasco Counties)
have the highest uninsured rate of any region in Oregon at 16.3%, compared with the
state average of 12.3% (Vaidya, 2000). This finding is directly attributed to the fact that
Hood River County has the second highest amount (percentage) of Hispanic residents of
any county in Oregon.

Beyond language and acculturation issues, age, income, and being Hispanic seem
to be the factors most often coinciding with low health insurance coverage rates in the
U.S. People ages 18-24 years old are the least likely of any age group to be insured, at
72.7% being insured for some or all of 2000 with those 25-34 years old only slightly
more insured. Along with age and ethnicity, income is the strongest indicator for being
insured. In practically every category, those identified as poor (below 100% Federal
Poverty Line) are very predictably about two times more likely to lack health insurance
when compared with general population rates. In a 1997 national study, 59% of those
who made less than $20,000 had lacked insurance at least once during a two year period,
compared with 8% of those who make over $60,000 (Kuttner, 1999). Another factor
considered in the U.S. Census Bureau report of the Current Population Survey of March
2001, is nativity. They report that in 2000, the foreign-born population had 31.6%
uninsured, compared with the native-born population’s 11.9% (Mills, 2001). To further
complicate matters, the Mexicans who arrive in the U.S. have superior health status
compared with those who have been in the U.S. for more than a couple of years.

Following acculturation, an average Mexican’s health deteriorates to more closely resemble that of the typical American population. To counterbalance this effect, there is a corresponding increase in access of health care services with acculturation (Riedel, 1998).

Some studies list factors most commonly associated with poor health and access to health care among ethnic minority groups, which are culture, degree of acculturation, and socioeconomic factors. Even so, other studies have shown that directly attributing disparities in minority health status, or minorities receiving health care, to socioeconomic factors is very difficult. There is no doubt, however, that health care received is partly determined by the ethnicity of the patient, where minority groups [esp. Hispanics] are less likely than non-Hispanic whites to receive adequate care and more likely to experience barriers to care (Blendon et al., 1989; CDC, 1989; Phillips et al., 2000; Racine et al., 2001; Todd et al., 1993; Williams and Colins, 1995). About one-third of Hispanics reported not having a usual source of care, and compared with non-Hispanic whites were twice as likely to report long waits for care and insensitive care providers (Phillips, 2000). This same study contended that the most obvious connection between barriers to care and ethnic groups was lack of insurance coverage.

Mayberry et al. (2000) recently published a paper entitled “Racial and Ethnic Differences in Access to Medical Care,” where they contend that the obvious differences seen in minority access of medical care are “not explained by such factors as socioeconomic status, insurance coverage, stage or severity of disease, comorbidities, type and availability of health care services, and patient preferences.” Lieu et al. (1993)
also suggest this, and say that even though health insurance leads to improved access and use of health care, racial differences still exist after adjusting for health insurance, access, need, and family income. This is significant, because the easy way out is to place blame of disparities on one or two obvious economic or social differences in the populations of interest, and then enact legislation to deal with it. It seems that identifying barriers to access is more complicated than a simple connection with lack of insurance coverage.

Other articles mirror this finding that disparities in health care access are not owing exclusively to the factors of socioeconomic status or insurance coverage. Instead, they propose that holding all of these factors constant and then changing language spoken has the greatest effect in explaining the disparities between ethnic groups (Granados et al., 2001; Weinick, 2000). Another study revealed that in the southwest U.S., language of interview is the most important variable for children, whereas with adults income is the most important variable in determining access to health care and health status (Kirkman-Liff, 1991). The possibility that language affects health care access would also agree with opinions that immigration status is a more important component of ethnic and racial disparity in insurance and access of health care issues (Leighton, 2001). Finally, in a study to determine whether or not Hispanics prefer Hispanic physicians, it was not surprising to find that they did, and most reported that language was the major reason for this preference (Saha, 2000).

2.2 Hispanic health conditions and factors involved

Hispanics in the U.S. are more healthy than would be expected, given their socioeconomic status and high uninsured and access of health care service rates. To
account for this, reasons may be the strong work ethic, family structure, and young average age of U.S. Hispanics. For example, fewer Hispanic women smoke during pregnancy, compared with non-Hispanic pregnant women. Foreign-born Hispanic women were 3.6 times less likely to smoke than Hispanic women born in the U.S. Also, Dr. Castañares suggests that part of the deterioration in Hispanic health following acculturation may be due to their eating American fast food, and has been implicated in the recent increase in obesity and diabetes in populations which frequently eat fast food (2002).

Because of the young age of Hispanics, fertility rates are higher, death due to homicide and accidents is more common, and heart disease deaths are significantly less. Nevertheless, Hispanics suffer from higher morbidity rates than non-Hispanics for diabetes, high blood pressure, allergies (possibly due to farm work), liver disease and stroke. Hispanics are twice as likely as non-Hispanics to have an untreated oral disease, many times more likely to have tuberculosis, sexually-transmitted diseases, and also have slightly higher alcoholism rates (Guendelman, 1998). Poverty, low education level, and ineligibility for federal or state health services and insurance contribute to the challenges faced by Hispanics in the U.S. (Guendelman, 1998).

Leading causes of death for Hispanics are clearly heart disease and stroke, and Hispanic men and women both have nearly identical rates of blood cholesterol above 200 mg/dL (American Heart Association [AHA], 1998). Looking at the results of the National Health and Nutrition Examination Survey from 1988-94, nearly 25% of men, and 36% of Mexican-American women are obese, with nearly 70% of both sexes being considered overweight, and the risk of diabetes for Hispanics is twice that for non-
Hispanic whites (AHA, 1998). The non-Hispanic diabetes rate is 25 per 100,000. This is actually higher than the Hispanic rate of 15.7, except for the fact that data for Hispanic persons are not tabulated by race, where that for non-Hispanics is tabulated by race (National Vital, 2000). Other reports show that the rates of diagnosed diabetics in the U.S. are 10.6% and 6.2% for Hispanics and whites, respectively (Diabetes disparities, 2001). It appears that there may be a low incidence of diagnosis due to various studies showing different figures, which may also be owing to the fact that Hispanics in the U.S. are much younger than their non-Hispanic counterparts, on average.

Using Vital Statistics data (2000), the leading causes of death of Hispanics and non-Hispanics are compared. For Hispanics, the top five leading causes of death are as follows (number in parenthesis following cause is rate per 100,000): Heart disease (81), Cancer (64), Accidents (27), Stroke (18), and Diabetes (15.7). For non-Hispanics: Heart Diseases (290), Cancer (216), Stroke (63), COPD (45), and Accidents (37).

In women’s health, the Center for Disease Control published a fact sheet based on a 14-year study published in Nov. 1999 Obstetrics & Gynecology, which stated that the Hispanic women’s pregnancy-related death rate in the U.S. is nearly twice that of non-Hispanic white women (10.3 and 6.0 per 100,000 for Hispanic and non-Hispanic, respectively), with rates of foreign born women being higher than U.S. born women for each subgroup studied (Increased risk, 2000). This finding, and the fact that most of the time these deaths are preventable with early detection and related prenatal care, suggests that more could be done to encourage Hispanic women’s access to and use of prenatal care.
2.3 Farmworker health

There are between 3 and 5 million migrant and seasonal farmworkers in the U.S. with nearly 1.5 million of them located in California. Of the more than 35 million Hispanics in the U.S., between 3 and 6 million are undocumented, where undocumented Hispanics are less likely to apply for government programs or access health care for fear of possible deportation (Molina, 1994). Farm work is the second most dangerous occupation in the U.S., and the need for adequate access to health care is obvious. Seasonal farmworkers are 70% immigrants, and over 90% are Mexican (Rothenburg, 1998). Seasonal farmworkers earn an average of $6,500 a year, have lower life expectancies than the general population, and have an incidence of infant mortality that is two-times higher than the national average (Rothenburg, 1998).

Many studies have been conducted on migrant farmworker populations, with consistent findings. Migrant and seasonal farmworkers experience the same difficulty in accessing health care as do most other U.S. Hispanics: low income, non-resident status, and most significantly—language barriers (Meister, 1991; Molina, 1994; Rothenburg, 1998).

More important than these issues, mobility and non-transfer of care and patient records is an added barrier to care for migrant seasonal Hispanic farmworkers (Molina, 1994; Rothenburg, 1998). Many of these workers are on the move, constantly changing location as they follow the harvest of various fruits and vegetables across the west and northwest. They may not be in one place more than a few weeks, so their ability to maintain a continuity of care, let alone apply, be accepted and then receive health care before they move to the next county or state, is very difficult, if not impossible.
Addressing this issue of transferability of care, the Migrant Health Program (MHP) has concentrated efforts toward the following areas: comprehensive health services focused on high-risk health needs, cultural and lifestyle appropriate services, multilingual/cultural providers, and health promotion and education with community outreach (1998). Others have addressed this issue and have followed suit, listing patient tracking, interagency coordination with centralized databases, consolidation of health services, and recruitment of bilingual/cultural care providers as vital in helping to reduce Hispanic health disparities (Bridging the gap, 2000; MSFW Health Objectives, 1996).

Getting down to the root of why farmworkers have experienced disparities and will continue to experience them, several books hit on a familiar theme. Both Rothenburg and Martin cite the fact that farmworker health and living conditions have been in a sorry state for many years. They both say that loose borders have allowed migrant and seasonal farmworkers to constantly stream across into the U.S., meeting farmer’s demands for cheap labor. While it is contended that migrant farm work allows food prices to remain low, and gives farmers the ability to maintain competition with imported foods from other countries, it is suggested that farmworkers account for only 10% of the farm work done. This suggests that increasing wages will not significantly alter supermarket prices, contrary to common belief. While it is highly likely that increasing wages will not significantly impact the price of food, it is certain that farmworker health and living conditions will never change unless something is changed in regard to the federal system governing farm labor (Martin, 1994; Rothenburg, 1998). In short, Martin (1994) summarizes it nicely in saying that “…little effective pressure exists to persuade farmers to improve wages and eliminate migrancy.” The “revolving


“door” analogy is drawn, where workers enter the seasonal farm labor market as a result of no other options, and after a decade or two are replaced by incoming younger and faster workers once the hard work has taken its toll on the former’s body. Martin (1994) finally suggests that:

> The alternative of continuing influx of desperate workers, and then low wages and poor conditions that prompt ever tougher laws and more extensive services, has failed. Enforcement and services are needed, but they will not solve the problems in a labor market awash with workers…. The single most effective step [the federal government could take] would be to reduce the number of workers competing for farm jobs by better enforcing immigration and labor laws (p. 7).

Alternatively, it can be argued that relaxing border restrictions will allow more farmworkers to access medical care that they normally avoid for fear of deportation. Also, continuity of care would presumably increase, as there is more communication across national lines (which would make it more similar to what it was before the southern border existed). The purpose of this thesis is not to explore suggested problems and solutions to disparities in Hispanic care and access to care, but these problems and suggested solutions are mentioned for perspective.

2.4 Demographics of Hood River County Hispanics

U.S. Census Bureau listed the total population of Hood River County, Oregon at 20,411 for the year 2000. Of this, 25% are Hispanic or Latino in ethnicity. In comparison with the entire state of Oregon, Hood River County has only 0.615% of the population, but 1.85% of the state’s Hispanics. Those Hispanics 18 and older make up 20% of the total population in Hood River County. Compared with all other counties in
Oregon, Hood River is number 25, of the 36 counties, in population size; while as far as Hispanic population is concerned, it is number 11. Hood River is virtually tied (25.02% vs. 25.62%) with Malheur County as the county with the most Hispanics by percent of total population, with only one other county even close to as high (Summary file, 2001).

In Oregon (population nearly 3.5 million), Hispanics are by far the largest ethnic minority (four times as many as the nearest minority group) at 275,314 and rapidly increasing, making up 8.3% of Oregon’s population. This number has increased from 112,707 reported in the 1990 census, an increase of 244% (or from 4% to over 8% of the total population) in the last 10 years. Non-Hispanic whites, still the overwhelming majority at 86.6%, have only increased by a factor of 1.12 in the same 10-year period, compared with 2.44 of Hispanics (Profile of General, 1993; Oregon population profile, 2000). In 1990, whites accounted for 92.8% of the total population, and in the last 10 years have slipped down to 86.6%.

Consistent with national statistics on death rates of Hispanics, they have much lower death rates than non-Hispanics. The male heart disease death rates for 1991-95, for example, show that Oregon had one of the lowest rates of all 50 states, and that the rate for Hispanic men was less than half that of non-Hispanic Black and non-Hispanic White men, where heart disease is the number one overall cause of death among all men in Oregon (Men and heart, 2001).

Oregon has maintained a relatively constant uninsured percentage at 13.8%, varying only slightly during the years of 1998-2000. This is essentially the national average, except that during the three-year period mentioned, the national average
decreased from 15%, while the Oregon average remained virtually unchanged (Mills, 2001).

2.5 Discussion and Summary of literature review

From Current Population Survey and Oregon Population Survey data, it is clear that Hispanics are by far the most uninsured of any ethnic group. Other factors related to high uninsured rates include being male vs. female (2% higher), being foreign born (31.6%), not a citizen (41%), Hispanic (32%), having not completed High School (26.6%), making less than $25,000/year (22.7%), living in the West or South (16.7 and 15.8%), and being between 18 and 34 years of age (average of 24%). These percentages of those uninsured compare with the total U.S. average of uninsured being 14% (Mills, 2001). Noting the high incidence of uninsured foreign-born citizens, a recent article suggests that more attention should be focused on the fact that many of those uninsured are immigrants, or U.S. born children of immigrants. It is said that one-third of U.S. Hispanics, and two-thirds of U.S. Asians are foreign born, and one-fifth of all children in the U.S. are immigrants or U.S. born children of immigrants (Leighton, 2001). Immigrants are clearly disadvantaged, with poor health and access of care, but it seems most Americans are reluctant to decide on steps to change this (Riedel, 1998).

Where most studies discuss only existing measurable conditions, editorials are bolder in proposing barriers to Hispanic health care use. They also include the well-known family of non-English speaking patients, lower education, employment without health benefits, and “…too much income to qualify for Public Aid, too little to purchase health insurance” (Furino, 1991, p. 256). One article by the Council on Scientific Affairs
claims “…poverty and lack of health insurance restrict Hispanic access to primary health care more than any other variable” (Council, 1991, p. 250). Interestingly, many feel that not all disparities can be blamed on low income, lack of insurance, and other popular explanations for low Hispanic access of health care. An annual report from the Department of Veteran Affairs in 1988 points out that Hispanic veterans who qualify for VA health services frequently underutilize them (Furino, 1991). Another article says that even though Medicaid and Medicare have increased minority access to health care, the quality of care has not improved, leaving many minorities disillusioned and discouraged from seeking further care (Watson, 2001). Suggestions to improve access and use of needed health care services among U.S. Hispanics range from employer mandated insurance programs, to increasing community outreach and numbers of Hispanic physicians practicing in the U.S., as well as providing incentives to physicians to practice among underserved populations (Furino, 1991; Molina, 1994; Saha, 2000; Watson, 2001).

One method that has resulted in positive increases of Hispanic access to health care is revealed in a study of Medicaid expansions between 1989 and 1995. This study revealed that 7 million poor and near-poor children were added to public health insurance programs. During this period, increases in insured Hispanic children amounted to 23%, with only a corresponding 7% increase in annual probability of seeing a physician. The conclusions of the article are that in spite of increased numbers who were insured, there were apparently no significant changes during the same time period in either health service use or health status (Racine, 2001). Also noted by Racine (2001) is that actual use of health care services depends on ethnicity, independent of insurance coverage.
The results of HHANES (Hispanic Health and Nutrition Examination Survey) from 1982-4, along with the 1989 Current Population Survey by the US Census Bureau were analyzed by Treviño et al. In their report, they reveal findings that were practically identical with the findings of the survey used in this study of Hispanics in Hood River County, Oregon. They said that “…over one-third of the Mexican Americans are uninsured,” and uninsured Hispanics are much less likely to have a regular source of care, have visited a physician in the past year or had a physical exam, and Hispanics with Medicare are “…least likely to rate their health status as excellent or very good” (Treviño, 1991, p. 235-236). In the results of the Hood River County survey, very close parallels are seen, which indicates that the survey is accurate, for one, and also that the disparities among Hispanics have not been significantly altered in the past 10-20 years in most locations throughout the US.
Chapter III
Research Methods

In order to ascertain the perceived health conditions and needs, as well as the barriers to access of health care among Hispanics in Hood River County, a survey was developed. The substance of this project was gleaned from the survey completed in Hood River County during the months of February, March and early April 2001. The survey is dimeric, in that it consists of an English language version and a Spanish language version. The original survey was developed by La Clínica del Cariño (LC), a community and migrant health center in Hood River, Oregon. The clinic was awarded a grant by the Northwest Health Foundation to ascertain the health status and factors influencing health care access and usage among Hispanic residents of Hood River County. In all, 312 surveys were conducted, with 114 being Spanish and 198 being English surveys. The stated objective of the survey was to “…carry out a comprehensive health and health risk profile of the Hispanic community,” with the goal of “…a strategic health care plan to meet the health care needs of the Hispanic community on an ongoing basis…” (Sprager, 2001).

3.1 How data were collected

The survey was developed by LC staff members, with technical assistance from the Oregon Health Division (OHD), and was reviewed and approved by survey specialists from OHD, Providence Health Systems, Portland State University, and the Hood River County School District. Following approval from these analysts, the survey
was field tested, revised, and then executed following instructions and guidelines suggested by the survey specialists mentioned above. Technical assistance was provided by Thomas Brundage of the OHD, who helped with the survey tool, database, developed a sample size and method to meet requirements for a random sample, and ensured accurate weighting of the data based on 2000 U.S. Census data.

A Hispanic Advisory Board from Hood River County advised those developing the survey tool on the best approach, issues of cultural appropriateness, and what type of compensation should be given to respondents. Some of their suggestions that were used successfully included getting endorsements from prominent figures in the community, sponsoring announcements at Spanish language church services, and ensuring that interviewers interviewed respondents of the same gender.

Providence Hood River Memorial Hospital desired to do a community needs-based survey also, and formed a coalition, of which LC was a part. The PHRMH coalition decided that their needs in a survey were met with the survey developed by LC, and with permission from the grantor had the survey translated into English. In addition, the coalition had some questions added to the survey to address concerns from other coalition members, such as the school board.

Both surveys are used for comparison, although the English survey was not executed in the same manner as the Spanish version. The Spanish survey was executed only after careful mapping of the Hispanic population “clusters” of the county, and then strict randomized selection of interviewees, with careful attention to gaining a true representation of the target population by gender, age, and occupation. After mapping of Hispanic population clusters in the county, census data were used to determine how many
interviews needed to be conducted in each community throughout the county in order to stay below a 10% error margin. This accomplished, the trained interviewers were sent to clusters of each community throughout the county.

The interviewers would then randomly select a dwelling in the cluster and then move on either side of the dwelling if no one was home. For cultural appropriateness, only same gender interviews were conducted between interviewers and respondents, and one respondent of every interviewer was randomly chosen for a follow up by a health promoter who inquired as to the conduct of the interviewer and to ascertain if the interviewee was treated with respect and courtesy. In a randomly selected dwelling, only adults (>18yrs) were interviewed, and if more than one individual of the selected gender was present in the dwelling, the individual with the most recent birthday was selected to participate. All interviewees were introduced to the survey and given the opportunity to decline or accept being interviewed. Following an interview, the respondent was offered a $10 gift certificate from a local grocer as compensation for his/her time investment.

The Spanish survey interviews were conducted Monday through Sunday, at various times of the day, including mornings, evenings and weekends in order to gain a more accurate representation of Hispanic residents in the county. In contrast, the English surveys conducted by PHRMH were carried out by Americorps volunteers who received the same interviewer training conducted by LC for the Spanish survey interviewers. Addresses were obtained from the county tax assessor’s office, and then every 25th dwelling was randomly selected to be surveyed (per direction by Mr. Brundage). Due to the fact that the English surveys were carried out chiefly on weekdays during regular business hours, a disproportionate amount of seniors and women were interviewed. This
fact is considered in the data analysis and results. The other difference in the English survey was that a $5 gift certificate was given to respondents.

The results of the completed surveys were entered into a database and double-checked by Thomas Brundage and myself using the SPSS® statistical analysis software. Variables were created and the data were analyzed and cross-tabulated, yielding weighted and un-weighted results. The key variables were then analyzed for independence using Chi-square analysis. These results are used to demonstrate health conditions, needs, access, and barriers to access of health care in this report.

3.2 Key concepts and variables defined

Variables were created and/or analyzed to answer the two research questions. The table below (3.2) shows these variables, with explanations as to what they are and how they were measured in the survey. In table 3.2, implied barriers are measured in the survey by presentation of insurance information and use of care questions: “Do you currently have health insurance?” “Have you ever had health insurance?” “Do you have a medical condition that requires you to see a doctor on a regular basis?” and “Have you seen a doctor in the past 12 months?” Cross-tables are made to measure barriers based on these questions and demographic variables.
Table 3.1  Key concepts and variables used to address the research questions

<table>
<thead>
<tr>
<th>Concept</th>
<th>Variable</th>
<th>Definition</th>
<th>Measurement</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Adverse health conditions</strong>&lt;sup&gt;1&lt;/sup&gt;</td>
<td>Back Pain</td>
<td>“Now” or “both now and in the past have had” this condition.</td>
<td>0 = No condition&lt;br&gt; 1 = Has condition</td>
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<tr>
<td></td>
<td>Dental problem</td>
<td>“Now” or “both now and in the past have had” this condition.</td>
<td>0 = No condition&lt;br&gt; 1 = Has condition</td>
</tr>
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<td></td>
<td>Obesity</td>
<td>“Now” or “both now and in the past have had” this condition.</td>
<td>0 = No condition&lt;br&gt; 1 = Has condition</td>
</tr>
<tr>
<td></td>
<td>High Blood Pressure</td>
<td>“Now” or “both now and in the past have had” this condition.</td>
<td>0 = No condition&lt;br&gt; 1 = Has condition</td>
</tr>
<tr>
<td></td>
<td>High Cholesterol</td>
<td>“Now” or “both now and in the past have had” this condition.</td>
<td>0 = No condition&lt;br&gt; 1 = Has condition</td>
</tr>
<tr>
<td><strong>Health Needs</strong></td>
<td>Dental Health Need</td>
<td>Need of dental care based on question “Do you feel you need dental care right now?” “Yes” answer indicates need.</td>
<td>0 = No need&lt;br&gt; 1 = Need</td>
</tr>
<tr>
<td></td>
<td>Health Need</td>
<td>Need of medical care based on the question “Do you feel you need medical care right now?” “Yes” answer indicates need.</td>
<td>0 = No need&lt;br&gt; 1 = Need</td>
</tr>
<tr>
<td></td>
<td>Medical Condition Need</td>
<td>Need of medical care based on the question “Do you have a medical condition that requires you to see a doctor regularly?” “Yes” answer indicates need.</td>
<td>0 = No need&lt;br&gt; 1 = Need</td>
</tr>
<tr>
<td><strong>Barriers to receipt of Health Care</strong>&lt;sup&gt;2&lt;/sup&gt;</td>
<td>Insurance Barrier</td>
<td>“Do you now have Health Insurance?”</td>
<td>0 = no barrier&lt;br&gt; 1 = barrier</td>
</tr>
<tr>
<td></td>
<td>Doctor Barrier</td>
<td>“Do you have a doctor in the area?”</td>
<td>0 = no barrier&lt;br&gt; 1 = barrier</td>
</tr>
<tr>
<td></td>
<td>Dentist Barrier</td>
<td>“Do you have a dentist in the area?”</td>
<td>0 = no barrier&lt;br&gt; 1 = barrier</td>
</tr>
</tbody>
</table>

<sup>1</sup> Adverse health conditions table in the survey is a table filled out by survey respondents, which lists various health conditions and diseases and asks respondents to respond as to whether or not they have the condition/disease, have had it, both now and in the past, and never had this condition/disease.

<sup>2</sup> Barriers were identified by the following: “Yes” answer to the appropriate question indicates no barrier exists, and “No” answer to each question indicates a barrier exists.

Along with the three variables in Table 3.2, the survey population is measured and defined as Hispanic and non-Hispanic, farmworker and non-farmworker, insured and uninsured etc… by responses to specific questions in the survey addressing these factors.

Hispanic is self-identified using a question in the survey, “Are you Hispanic/Latino?”
Farmworker is defined from the question, “For the last two years, has more than half the money your immediate family earned each year come from farm work (orchard, packing house, cannery, nursery, Christmas tree farm)?” Insured individuals are identified by those responding to the question, “Do you currently have health insurance?” Variables created, such as “Hispanic farmworker,” are simply combinations of responses to these questions, where such an individual responded that he/she is both Hispanic, and in the past two years more than half of his/her immediate family’s income has come from farm work.

3.3 Methods of analysis

In this study, the top health conditions will be ranked from the survey in two ways; first, responses will be measured from the self-identified health conditions table in the survey, and responses “now have,” and “both now and in the past have had [this medical condition]” will be counted. Second, responses to the question of self-perceived medical and dental health, and the responses to the questions of “do you need medical/dental care right now?” will be used to measure the perceived medical and dental needs of respondents. Along with responses to the question, “What prevents or limits you from receiving the health care you need?” barriers to access of health care will be assessed through analysis of demographic and socioeconomic, as well as language and other cultural avenues. Chiefly, barriers will be assessed by evaluation of insurance coverage, use of medical care, contact with the health care system, perceived health need, self-reported health and feelings about overall health.
To measure the top health conditions of Hispanics in Hood River County, several questions were posed which requested specific and general responses from those surveyed. A large chart with numerous health conditions and diseases was completed where boxes next to the condition were filled with one of the following responses: “Now have,” “Have had in the past,” “Both now and in the past,” and “Never have had.”

To measure health need, questions were asked which revealed self-perceived medical and dental health by asking them to rank their overall health as either “Very Good,” “Good,” “Fair,” or “Poor.” Dental health responses were similar, with the following possible responses: “Excellent,” “Very good,” “Fair,” or “Poor.” The respondents were also asked in separate questions if they felt as though they needed dental or medical care at the time of the survey.

To evaluate whether or not significant association existed between health conditions, health needs, health barriers, and ethnicity, Chi-square analyses were carried out. Tables in the following chapter show and discuss the results of these analyses and significant results which strongly suggest associations within the variables, and between ethnicity and the key variables.
Chapter IV

Results of the Survey

4.1 Social demographic background of the study population

Using U.S. Census Bureau population estimates, Spanish surveys were carried out in proportional numbers among the previously mapped Hispanic populations in the towns throughout Hood River County. Surveys were completed in Hood River itself, Odell, and Parkdale, between 20% and 30% each, with Pine Grove making up the rest along with a very small percentage from Cascade Locks. Very consistent with the estimated Hispanic gender percentage of 61% male, the Spanish survey achieved an unweighted percentage of 57.9% with English surveys having 36.9% male respondents. For practical purposes, Hispanic and Spanish survey respondent are synonymous when the results of this survey are being discussed. The un-weighted populations for each of the surveys show that 114 Spanish surveys were conducted, and 198 English surveys were conducted. Over 95% of the Spanish survey respondents were Hispanic in ethnicity, compared with 5% of English language respondents identifying themselves as Hispanic. Hispanic Farmworkers made up 78% (74% weighted) of the respondents from the Spanish survey.

General Demographics

The basic demographics of the survey are discussed in the following tables and figures below. The demographics of the Spanish language survey very closely compared with the demographics of Hood River County given by Current Population Reports.
Table 4.1  Basic demographics by survey type

<table>
<thead>
<tr>
<th>Survey</th>
<th>Farmworker</th>
<th>Seasonal Farmworker</th>
<th>Migrant/Seasonal Farmworker</th>
<th>Hispanic Farmworker</th>
<th>Completed High School</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spanish</td>
<td>78.9%</td>
<td>58.8%</td>
<td>17.5%</td>
<td>95.6%</td>
<td>78.1%</td>
</tr>
<tr>
<td>English</td>
<td>16.2%</td>
<td>5.6%</td>
<td>1.0%</td>
<td>5.1%</td>
<td>1.0%</td>
</tr>
</tbody>
</table>

The percentages in Table 4.1 are all unweighted percentages, and the data in tables and figures following are weighted (unless otherwise noted), where the data are weighted according to 2000 Census results to reflect the population over 18 years of age in Hood River County. Farmworkers in the Spanish survey were 97.7% Hispanic, and the English survey farmworkers were 95.4% non-Hispanic.

Figure 4.1  General age trends by survey type

The general age of Spanish Survey respondents was 26-45, amounting to 66%, compared with 53% of the English Survey respondents being in the 36-55 age group, and over 21% being over 65 years of age. Hispanic Farmworker ages closely followed the Spanish Survey results in the figure above, with the exception of slightly more in the 18-25 year age group for the Hispanic Farmworkers (20.4%). It is important to note that
some of the increased average age and dominant female representation of the English survey is very possibly owing to the interview process, especially since the times and days the interviews were conducted was during weekday business hours, as compared with the much more random Spanish survey interviews which included evenings and weekends.

For income level of those who responded to the question, 64.3% of the Spanish survey respondents made less than $1,000 per month, compared with 12.2% of English survey respondents.

4.2 Top Health Conditions

The amount of those reporting health conditions was higher in the English survey than it was in the Spanish survey, while the number of those who reported having better overall health was higher in the English survey than in the Spanish survey. The top health conditions are shown in figures 4.2 and 4.3 below, where percents shown are unweighted data results.

**Figure 4.2  Top reported health conditions for the Spanish Survey**
4.3 Health Need

Despite the fact that only a small fraction of those Spanish respondents (half as many as English respondents) admitted they had specific health conditions, they were much more likely to have very low views of their own health, and were almost twice as likely to say that they felt as though they needed medical care at the time of the survey (“Yes” to the question “Do you feel you need medical care right now?” English survey = 13.2% vs. Spanish survey = 22.8%). The difference was almost identical in the response to the same question regarding the need for dental care, with 24.4% of English survey respondents saying they felt that they needed dental care at the time of the survey, compared with 55.3% of the Spanish survey respondents. In comparison, the following figure displays the differences in opinion between Hispanics and non-Hispanics regarding their dental health status.
Answering the question about overall health, Spanish survey respondents said that they had “Good” to “Fair” health on average (nearly 90% in these two categories), while English respondents said they had “Very Good” to “Good” health (nearly 91% in these two categories). There seems to be a big difference in self-reported health between English and Spanish respondents depending on how the question is asked. English speakers are much more likely to list a specific health condition and then say that their overall health is quite good, whereas Spanish speakers are much more likely to not report any specific health condition and then say that they have only good or fair medical and dental health, and that they feel like they need some sort of care soon.

In part, as it was mentioned earlier, some of the differences between the Spanish and English survey results can be explained by the demographics of the two surveys. Due to the time of the English survey implementation, namely between the hours of 8am to 4pm on weekdays, a disproportionate amount of elderly and female respondents were interviewed as compared with the Spanish surveys. Accordingly in the English survey, males make up about 36% of the respondents, compared with the U.S. Census value of 49.6% (Oregon population, 2000), and the Spanish survey value of 53.1% (58% unweighted). The average age of the two groups of survey respondents was also quite
different, as was mentioned earlier, with the majority of the Spanish survey respondents being between the ages of 18-45 (83.3%) vs. the English survey majority being between the ages of 36-55 and over 65 (about 75%).

4.4 Barriers to Health Care

When Spanish survey respondents were asked “What prevents or limits you from getting the health care you need?” the responses were typically one of two. Of the 114 Spanish survey respondents, 37 said “No obstacles,” 19 said “No money,” and 21 said “No money/various other.” No insurance accounted for only 5 responses, and “No money/insurance” was given as a response 6 times. In all, general responses were either “No obstacles,” or “No money/various other.” Insurance didn’t seem to be a large factor unless you can remove the responses involving inadequate money by giving them insurance. “Lack of good doctors,” “legal paper issues,” and “unable to qualify for aid” were very minimally acknowledged, receiving only 2 votes each.

Insurance Information

Typically, Hispanics are much more likely to be without health insurance than English-speaking non-Hispanics in the U.S. This survey found exactly the same trend as has been reported in U.S. Census Bureau reports, with the same numbers of Hood River County Hispanics being uninsured as compared with Oregon and national percentages among Hispanics.
Of those who did have insurance, Spanish survey respondents were much more likely to have the Oregon Health Plan (63.3%), contrasted with English survey respondents who were much more likely to have a private insurance company (78.1%).

The major factors associated with lacking health insurance coverage in national and state surveys and censuses are low income level, nativity, language and residency status, age, gender, ethnicity, education, employment status and employer size (financial). Another trend noticed was that uninsured numbers rose proportionally as you move west across the U.S. (moving from the northeast, 21.9% uninsured to the west, 35.1% uninsured) (Mills 2001). The trends were not individually responsible for the changes in level of insured individuals throughout the survey or national census data. Holding income level constant, for example, or changing education does not seem to affect uninsured rates significantly (Mills, 2001).
Again, holding income level constant at the lowest levels and then changing employment type from full time, to part time, to non-worker, there is actually a U-shaped curve shown, where full-time, poor workers are more insured than part-time poor workers, but the poor non-workers are more likely to be insured than either class of workers (full or part time) (Mills, 2001). In this survey, many respondents declined to submit income information, but those who did submit their income level show the following: majority of English survey respondents make more than $2,500/month compared with practically all Spanish respondents admitting to making less than $1,000/month. Although Hispanics clearly make less than non-Hispanics, it is not clear from the literature, U.S. Census data, or this survey whether or not income is connected with insurance coverage levels directly among Hispanics.

U.S. Census data reports show that Oregon closely follows the national percentages of those with insurance, and by types of insurance. In Oregon and the nation, rates of those without any insurance coverage are about 11-13% for the last 10 years, where the national trend has been decreasing, and Oregon’s trend has fluctuated up and down (presumably due to the initiation of the Oregon Health Plan around 1994). Of those who are insured in Oregon, a majority of them (66.6%) have employment-based insurance packages (March 2002). As has been suggested in the literature review sections, Hispanics more often do not have insurance provided with their employment, and so must resort to state or federal insurance programs if they qualify. This is seen in the Spanish survey, where 63.3% are covered by OHP (Oregon Health Plan), compared with just 3.1% in the English survey, where the majority (78.1%) have a private insurance company providing coverage.
By age

Compared with the national average of 32% for uninsured Hispanics, Hispanics in Hood River County are much less likely to be insured (Mills, 2001). Nationally in 2000, those 18-35 years of age are twice as likely to be uninsured as all other ages, which roughly paralleled this survey in Hood River County. In fact, one of the leading factors to high rates of uninsured Hispanics may be their young age. Like the national average age of Hispanics, Hood River County Hispanics are much younger than the general population, being 18-35 on average, which directly coincides with the national age group most without insurance.

The only divergence from this trend of age being linked to insurance coverage was with those Hispanics over the age of 55, which made up a very small amount of those surveyed (5.8%), but a large portion of them were uninsured in the 56-65 age category. Unlike the national trends, where there is consistent increase of insured
individuals as age increases, Hispanics in this survey follow the trend up until the 56-65 age level, where numbers of uninsured individuals increase (see figs. 4.6 and 4.7).

**Figure 4.7  Currently uninsured respondents by ethnicity within each age group**

![Bar chart showing the percentage of uninsured respondents by ethnicity and age group.](image)

**By gender**

Evaluating those with insurance by gender, those in this survey showed the same trend seen in national census data, where males are more likely to be uninsured (Mills 2001). Analyzing the data on insurance by gender, both the English and Spanish surveys showed that males are exactly twice as likely as females to say they have never had health insurance.
Table 4.2 Male and Female comparison of those uninsured

<table>
<thead>
<tr>
<th></th>
<th>Never Insured (Spanish survey)</th>
<th>Never insured (English survey)</th>
<th>Not insured now (Spanish survey)</th>
<th>Not insured now (English survey)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>42.1%</td>
<td>4.8%</td>
<td>59.1%</td>
<td>11.7%</td>
</tr>
<tr>
<td>Female</td>
<td>19.5%</td>
<td>2.4%</td>
<td>38.2%</td>
<td>6.4%</td>
</tr>
</tbody>
</table>

Along with being generally less insured, males also are less likely to have seen a doctor in the past year. Females, while generally much more insured than males in this survey, are more likely to have a medical condition which requires them to see a doctor on a regular basis, and are more likely to have not gone to the doctor when they needed to do so due to lack of money. Both the English and Spanish surveys show comparable results of insurance and health conditions by gender.

By education

Whereas with the U.S. census 2000 data where the uninsured rate drops off nicely as education level increases, in this survey there are differences which are not consistent throughout. For example, those in the Spanish survey show that the rate of uninsured is constant at 52% and 52.5% for those with no, or little high school, drops off to 33.8% for those who have completed high school, and then back up to exactly 52% for those who have some college. Looking at those who have never been insured of the Spanish survey, increased education equals decreased insurance coverage up until you get to those individuals who have had some college, where the number of those who have never been insured drops off dramatically.
By need

By asking the question as to whether or not a respondent has a condition that requires regular medical care, it is possible to see more accurately where insurance would be helpful, and compare these respondents with others who say they have no medical conditions that require regular medical attention. In the Spanish survey, within those who said they had a medical condition requiring them to see a doctor regularly, 30% said they were uninsured, compared with no English survey responses (100% with regular need were insured). In the Spanish survey, 16% reported having a medical condition requiring regular visits with a doctor for care, compared with 26% of English survey respondents. By asking the same questions, and comparing Hispanic with non-Hispanic respondents vs. Spanish with English survey types, the disparity is even larger, with only 14% having a medical condition requiring regular medical attention but of these 34.6% are uninsured.

Again, taking those who have a condition requiring regular medical attention and then asking whether or not they saw a doctor in the past year revealed the following results: 35.6% of Spanish survey respondents and 40.6% of Hispanics had not seen a doctor in the past year, compared with 6.6% of English survey and 6.5% of non-Hispanic respondents (where the same amounts have a medical condition requiring regular medical care = 14% Hispanic and 28.3% non-Hispanic respondents).

Hispanics and non-Hispanics both were more likely to see the doctor in the past year if they were insured. Within those Hispanics who did see the doctor this past year, 64.7% were insured, compared with 95.9% of non-Hispanics. If a Hispanic respondent had health insurance, the chances were just better than half that he or she would have
seen the doctor at 55.8%, and if a non-Hispanic respondent had health insurance, 87.7%
saw a doctor in the past year. Even so, 31.1% of uninsured Hispanic respondents saw a
doctor in the past year, compared with 42.6% of uninsured non-Hispanics.

4.5 Use of care

Health care use was measured in the survey using several direct questions such as,
“Have you been to a hospital Emergency Department in the past year?” “Have you been
to see a Dr. in the past 12 months?” and so on, asking questions about respondent, as well
as respondent’s household use of health care services in the past year. Questions were
also asked to determine why care was accessed, and what barriers, if any, were
encountered in a respondent’s use of health care over the last year.

Table 4.3 Use of care issues by survey type

<table>
<thead>
<tr>
<th></th>
<th>English Survey</th>
<th>Spanish Survey</th>
</tr>
</thead>
<tbody>
<tr>
<td>Saw MD in past year</td>
<td>83.7%</td>
<td>44.3%</td>
</tr>
<tr>
<td>Saw DDS in past year</td>
<td>65.3%</td>
<td>43.2%</td>
</tr>
<tr>
<td>Used ED last year</td>
<td>7.9%</td>
<td>21.2%</td>
</tr>
<tr>
<td>ED instead of Dr. app.</td>
<td>46.4%</td>
<td>15.3%</td>
</tr>
<tr>
<td>Need to see Dr. regularly</td>
<td>27.8%</td>
<td>16.3%</td>
</tr>
<tr>
<td>Need medical care now</td>
<td>13.2%</td>
<td>22.8%</td>
</tr>
<tr>
<td>Need dental care now</td>
<td>24.4%</td>
<td>55.3%</td>
</tr>
<tr>
<td>Had accident in past year</td>
<td>19.2%</td>
<td>10.3%</td>
</tr>
</tbody>
</table>

Farmworkers were less likely to visit an emergency department (ED) in the past
year, both among Hispanics and non-Hispanics. This translates for non-Hispanic
Farmworkers being half as likely as non-Farmworkers to visit an ED, and Hispanic
farmworkers being just less than half as likely. Hispanics were much less likely to go to
the ED instead of a doctor appointment, and Hispanic Farmworkers were much less likely
to do so. They were also much less likely to have visited a doctor in the past year.

Table 4.4 Farmworker and non-Farmworker use of care issues by ethnicity

<table>
<thead>
<tr>
<th></th>
<th>Hispanic Farmworker</th>
<th>Hispanic Non Farmworker</th>
<th>Non-Hispanic Farmworker</th>
<th>Non-Hispanic Non-Farmworker</th>
</tr>
</thead>
<tbody>
<tr>
<td>Saw MD in past year</td>
<td>38.1%</td>
<td>59.1%</td>
<td>89.7%</td>
<td>82.5%</td>
</tr>
<tr>
<td>Saw DDS in past year</td>
<td>41.5%</td>
<td>36.0%</td>
<td>69.4%</td>
<td>67.3%</td>
</tr>
<tr>
<td>Used ED last year</td>
<td>8.5%</td>
<td>13.2%</td>
<td>10.4%</td>
<td>21.8%</td>
</tr>
<tr>
<td>ED instead of Dr. app.</td>
<td>10.6%</td>
<td>29.5%</td>
<td>55.5%</td>
<td>47.0%</td>
</tr>
<tr>
<td>Need to see Dr. regularly</td>
<td>15.5%</td>
<td>10.5%</td>
<td>13.3%</td>
<td>28.6%</td>
</tr>
<tr>
<td>Need medical care now</td>
<td>24.0%</td>
<td>16.3%</td>
<td>10.2%</td>
<td>12.4%</td>
</tr>
<tr>
<td>Need dental care now</td>
<td>61.1%</td>
<td>33.6%</td>
<td>38.1%</td>
<td>22.8%</td>
</tr>
<tr>
<td>Had accident in past year</td>
<td>10.9%</td>
<td>8.1%</td>
<td>5.2%</td>
<td>21.1%</td>
</tr>
</tbody>
</table>

Slightly more from the Spanish survey, 27.7% said they didn’t go to the Doctor
because they lacked money, compared with the English respondents’ 21.8%. Asking the
question of whether or not a respondent has a doctor or dentist in the area, 66.1% and
44.2% of Spanish respondents had a doctor or dentist in the area, respectively, compared
with 84% and 73.9% for English respondents who had a doctor and dentist in the area,
respectively. When asked what they did when they needed dental care, 11% English
compared with 31.2% Spanish respondents said they just “didn’t get care.”

From the results above, it is clear that insurance coverage increases the likelihood
that Hispanics and non-Hispanics alike will see a doctor and access health care systems.
It is not conclusive, however, that insurance coverage is totally responsible for Hispanic
access of care, where even with insurance less Hispanics access care than their non-
Hispanic counterparts. This is perhaps owing to language issues (not as likely in Hood
River County due to the presence of La Clinica community health center), issues
involving cultural inhibition (not measurable in this survey, but perhaps important in
further studies and surveys like this one), or even simply the young age and better overall health of a physically active, young Hispanic population. Most likely it is an amalgam of these and many other factors that affects lower access of health care by Hispanics in Hood River County, and the country.

Looking at the data, however, reveals that strikingly disproportionate amounts of Hispanics and Hispanic Farmworkers, in particular, are in need of care and have not obtained care.

**Figure 4.8 Health care issues and barriers by ethnicity and farmworker**

From figure 4.8 above, it is clear that the ones who report they need medical care on a regular basis are the least likely to have seen a doctor in the past year or be insured.

In assessing any age-related links to access of care, it was noticed that general trends in the non-Hispanic population show increased numbers of those visiting the
doctor as they get older, with the exception of a small hump in the curve in the 36-45 year old age group. Hispanics, however show a bimodal distribution, with a very high hump in the 36-45 year old group. Overall, the non-Hispanic distribution is a smooth curve from 21% of 18-25 year olds, up to 96% of those over 65 years old having seen a doctor in the past year. Hispanics start off over 27% for 18-25 year olds, and increase straight up to 58% for 36-45, and then level off and stay very constant at about 44% at ages above 45. The figures below show the trends of age and ethnicity-related access to and barriers of access to health care.

Figure 4.9  Those who have *not* seen a doctor in a year by age and ethnicity
Figure 4.10  Those who have a medical condition requiring regular care from a doctor, by age and ethnicity

It is clear to see from figures 4.9 and 4.10 that the Hispanics in the age groups that have the most medical need, have some of the highest percentages of those who have not accessed care. This is in direct contrast with the non-Hispanic population of this survey, where the number of those who get medical care rises along with the group that needs it. This would suggest cultural explanations, and perhaps language barriers may have more of a role once Hispanics are over about 40-45 years of age. The difference may also be in generational beliefs or practices that have changed over the last decade or two, leaving the older generations--in a sense--isolated. No explanations are conclusive, however, as more research and personal interviews, with these respondents and others in surrounding agrarian communities, are needed to more accurately answer the “Why?” questions the results of this survey expose.
4.6 Chi-square Analyses

Along these lines, chi-square analyses were carried out to test for associations and independence of the variables analyzed in the survey. Following are the main results of these analyses, with some explanation as to the significant findings. The numbers in the boxes represent the counts of Hispanic respondents for each condition, need, and barrier.

**Table 4.5 Association between Health Insurance and Doctor Barriers, and Health Need and Medical Condition Need**

<table>
<thead>
<tr>
<th></th>
<th>Medical Condition Need</th>
<th>Health Need</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td><strong>Health insurance</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Barrier</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>9</td>
<td>54</td>
</tr>
<tr>
<td>No</td>
<td>9</td>
<td>47</td>
</tr>
<tr>
<td>Chi-square statistic</td>
<td>(\chi^2 = .074)</td>
<td>(\chi^2 = .119)</td>
</tr>
<tr>
<td>p-value</td>
<td>(p = .493)</td>
<td>(p = .454)</td>
</tr>
<tr>
<td><strong>Doctor Barrier</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>4</td>
<td>34</td>
</tr>
<tr>
<td>No</td>
<td>14</td>
<td>67</td>
</tr>
<tr>
<td>Chi-square statistic</td>
<td>(\chi^2 = .920)</td>
<td>(\chi^2 = .000)</td>
</tr>
<tr>
<td>p-value</td>
<td>(p = .251)</td>
<td>(p = .586)</td>
</tr>
</tbody>
</table>

The results of Table 4.5 show that no association exists among Hispanic respondents in the survey between medical needs and barriers. This means that having a medical condition or health need is not significantly associated with experiencing a barrier to health care. In the following tables, however, statistically significant results are seen between health conditions, needs, and barriers when ethnicity is the other factor considered. This means that being Hispanic is significantly associated with having or not having certain health conditions, needs, and barriers.
Table 4.6 Association between Barriers and Ethnicity

<table>
<thead>
<tr>
<th>Ethnicity</th>
<th>Spanish</th>
<th>Non-Spanish</th>
<th>Chi-square statistic</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health insurance Barrier</td>
<td>Yes</td>
<td>63</td>
<td>14</td>
<td>$\chi^2 = 82.659$</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>56</td>
<td>179</td>
<td></td>
</tr>
<tr>
<td>Chi-square statistic</td>
<td>$\chi^2 = 82.659$</td>
<td>$p = &lt; .001$</td>
<td></td>
<td></td>
</tr>
<tr>
<td>p-value</td>
<td>$p = &lt; .001$</td>
<td>$p = &lt; .001$</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Doctor Barrier</td>
<td>Yes</td>
<td>38</td>
<td>30</td>
<td>$\chi^2 = 11.600$</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>81</td>
<td>163</td>
<td></td>
</tr>
<tr>
<td>Chi-square statistic</td>
<td>$\chi^2 = 11.600$</td>
<td>$p = .001$</td>
<td></td>
<td></td>
</tr>
<tr>
<td>p-value</td>
<td>$p = .001$</td>
<td>$p = &lt; .001$</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dentist Barrier</td>
<td>Yes</td>
<td>59</td>
<td>138</td>
<td>$\chi^2 = 15.201$</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>60</td>
<td>55</td>
<td></td>
</tr>
<tr>
<td>Chi-square statistic</td>
<td>$\chi^2 = 15.201$</td>
<td>$p = &lt; .001$</td>
<td></td>
<td></td>
</tr>
<tr>
<td>p-value</td>
<td>$p = &lt; .001$</td>
<td>$p = &lt; .001$</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 4.7 Association between Ethnicity and Health and Dental Need

<table>
<thead>
<tr>
<th>Ethnicity</th>
<th>Spanish</th>
<th>Non-Spanish</th>
<th>Chi-square statistic</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health Need</td>
<td>Yes</td>
<td>25</td>
<td>24</td>
<td>$\chi^2 = 4.087$</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>94</td>
<td>169</td>
<td></td>
</tr>
<tr>
<td>Chi-square statistic</td>
<td>$\chi^2 = 4.087$</td>
<td>$p = .032$</td>
<td></td>
<td></td>
</tr>
<tr>
<td>p-value</td>
<td>$p = .032$</td>
<td>$p = .032$</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dental Need</td>
<td>Yes</td>
<td>62</td>
<td>48</td>
<td>$\chi^2 = 23.912$</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>57</td>
<td>145</td>
<td></td>
</tr>
<tr>
<td>Chi-square statistic</td>
<td>$\chi^2 = 23.912$</td>
<td>$p = &lt; .001$</td>
<td></td>
<td></td>
</tr>
<tr>
<td>p-value</td>
<td>$p = &lt; .001$</td>
<td>$p = &lt; .001$</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

As seen in tables 4.6 and 4.7, the association of ethnicity with medical and dental need, as well as the three proposed barriers to receipt of health care is statistically significant. This follows in the table 4.8, where 4 of the top health conditions reported in the survey among Hispanics are seen to be associated with ethnicity. What may appear surprising, however, is the fact that non-Hispanic respondents have much higher numbers
reporting these adverse health conditions. This is explained partially by the fact that the average age of non-Hispanics is much higher than that of Hispanic respondents.

Table 4.8 Association between Ethnicity and Adverse Health Conditions

<table>
<thead>
<tr>
<th>Ethnicity</th>
<th>Obesity</th>
<th>High Blood Pressure</th>
<th>High Cholesterol</th>
<th>Back Problem</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Hispanic</td>
<td>6</td>
<td>113</td>
<td>5</td>
<td>114</td>
</tr>
<tr>
<td>Non-Hispanic</td>
<td>25</td>
<td>168</td>
<td>34</td>
<td>159</td>
</tr>
</tbody>
</table>

Chi-square statistic

χ² = 5.15
p = .016

χ² = 12.112
p = < .001

χ² = 7.872
p = .003

χ² = 12.675
p = < .001

Note: Chi-square analysis of Ethnicity and Dental Problem did not yield statistically significant results, and so were not included in Table 4.8.

Table 4.9 Association between Health insurance Barrier and Doctor and Dentist Barriers.

<table>
<thead>
<tr>
<th>Health insurance Barrier</th>
<th>Doctor Barrier</th>
<th>Dentist Barrier</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Yes</td>
<td>29</td>
<td>34</td>
</tr>
<tr>
<td>No</td>
<td>9</td>
<td>47</td>
</tr>
</tbody>
</table>

Chi-square statistic

χ² = 12.243
p = < .001

χ² = 11.508
p = .001

Table 4.9 reveals that among Hispanic respondents, Health Insurance Barrier is significantly associated with the other two barriers. Where this is the case, there did not appear to be any association between the barriers and needs, as can be seen from tables 4.10 and 4.11 below. Medical need and barrier associations were analyzed as well, revealing no statistically significant associations (tables not shown).
Table 4.10  Association between Dental Need and Health Insurance Barrier.

| Health insurance Barrier | Dental Need |  |
|--------------------------|-------------|
|                         | Yes | No  |
| Health insurance Barrier | Yes | 34 | 29 |
|                         | No  | 28 | 28 |
| Chi-square statistic    | $\chi^2 = .187$ |
| p-value                 | $p = .402$ |

Table 4.11  Association between Dentist Barrier and Dental Need and Condition.

| Dentist Barrier | Dental Need | Dental Condition |
|-----------------|-------------|
|                 | Yes | No  | Yes | No |
| Dentist Barrier | Yes | 33 | 27 | 9  | 51 |
|                 | No  | 29 | 30 | 6  | 53 |
| Chi-square statistic | $\chi^2 = .408$ | $\chi^2 = .630$ |
| p-value          | $p = .325$ | $p = .303$ |

Table 4.12  Association between Insurance and Doctor barriers and Health Conditions

<table>
<thead>
<tr>
<th>Health insurance Barrier</th>
<th>Obese</th>
<th>High Blood Pressure</th>
<th>High Cholesterol</th>
<th>Back Problem</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Health insurance Barrier</td>
<td>Yes</td>
<td>2</td>
<td>61</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>4</td>
<td>52</td>
<td>4</td>
</tr>
<tr>
<td>Chi-square statistic</td>
<td>$\chi^2 = .975$</td>
<td>$\chi^2 = 2.273$</td>
<td>$\chi^2 = .475$</td>
<td>$\chi^2 = 1.177$</td>
</tr>
<tr>
<td>Doctor Barrier</td>
<td>Yes</td>
<td>2</td>
<td>36</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>4</td>
<td>77</td>
<td>4</td>
</tr>
<tr>
<td>Chi-square statistic</td>
<td>$\chi^2 = .006$</td>
<td>$\chi^2 = .342$</td>
<td>$\chi^2 = .003$</td>
<td>$\chi^2 = .039$</td>
</tr>
<tr>
<td>p-value</td>
<td>$p = .626$</td>
<td>$p = .486$</td>
<td>$p = .688$</td>
<td>$p = .604$</td>
</tr>
</tbody>
</table>

The results of the chi-square analyses show that among Hispanics surveyed, there is no statistically significant association between the implied barriers to health care, and health needs and/or health conditions. There is, however, statistically significant association between ethnicity and the implied barriers to health care, health needs, and...
top health conditions ($p$-value less than or equal to 0.001 for each, where significance is a $p$-value less than or equal to 0.05). These findings suggest that although those with barriers do not necessarily experience increased health needs or adverse health conditions, ethnicity is associated with experiencing health care barriers.
Chapter V
Conclusions

5.1 Summary of findings

Among the Hispanic population of Hood River County, what are the primary self-reported health conditions, needs, and barriers to health care? In Hood River County, Hispanics and Hispanic farmworkers, in particular, report a much lower incidence of adverse health conditions than compared with the general county population, presumably due to a much younger age of this population. The top reported health problems for Hispanics in Hood River County are dental problems, back problems, obesity, hypertension and colds, ranging from just over 12% for dental problems, and down to about 3.5% for colds. The non-Hispanic population listed back problems as the highest, at over 20%, followed by arthritis, hypertension, obesity and high cholesterol at the low end of about 12%. Running in stark contrast to the findings of much lower Hispanic health conditions reported, however, are answers from Hispanics, compared with non-Hispanics, as to their perceived overall general health, dental health, as well as whether or not they felt they needed medical or dental care at the time of the survey.

For example, 12% of Hispanics reported they currently had a dental problem, but over 60% reported their dental health to be “fair,” and over 55% said they “need dental care now.” This is compared with more consistent findings among non-Hispanics, of whom under 8% reported any dental condition, nearly 80% reported their dental health to be either “excellent” or “very good,” and under 25% said they “need dental care now.” Similar results are observed in the responses to questions of medical health and whether
or not the respondent needed care at the time of the survey, compared with reported medical health conditions. These findings validate the accuracy of this survey, as they match those findings of other national health surveys, where it is stated that “Mexican Americans are…less likely to rate their health status as excellent or very good” (Treviño 1991).

Association between Hispanics with health needs and adverse health conditions were not statistically significant, so it can not be concluded that any association exists at all, and that the events are independent of one another. Chi-square analysis also showed that no statistically significant association exists between Hispanics with health care barriers and health needs, as well as health care barriers and adverse health conditions. The only statistically significant associations were observed between ethnicity and health care barriers (all three barriers), health needs, and health conditions. Additionally, health insurance barrier was significantly associated with both doctor and dentist barriers, which means that lacking health insurance is associated with not having a doctor or dentist for survey respondents. These findings reveal that although ethnicity is very closely related to experiencing health care barriers, some adverse health conditions and health needs, no other statistically significant associations exist between barriers, needs, and health conditions among either Hispanics or non-Hispanics.

When Hispanic Farmworker health is compared with other Hispanics only small differences are observed from Hispanic health responses, and no changes in chi-square analysis results are observed. Hispanic farmworkers report being less obese, having fewer incidences of high blood pressure, and less rashes than the general Hispanic population. They report that they have more dental problems and colds, however, and the
same amount of other top health conditions as other Hispanics. The differences were small, and likely due to increased physical activity and slightly younger average age of Hispanic farmworkers, compared with Hispanics in Hood River County. Hispanic farmworkers were also much more likely to be uninsured than other Hispanics, which were much more uninsured than the non-Hispanic population.

There is no argument over the fact that Hispanics in the U.S. have consistently had lower levels of access to health care. There seems to be some argument, however, over which factors contribute the most to low levels of access by this particular ethnic group. We may be able to narrow down the options, and many studies and articles in the past decade have attempted to do just this in promoting their top candidates responsible for such disparities in health care access and use among Hispanics. Some of the key factors will be addressed, with no particular hierarchy assigned to them.

First, some have proposed to eliminate some of the semifinalist factors sometimes admitted into the inner circle of those affecting Hispanic access and use of health care issues. Studies show that economic level/status is often indicted as a major player when, in fact, the comparison of all ethnic groups of similar economic levels reveals that the disparities in Hispanic health care and insurance coverage persist. While this is true of the Hood River County survey, it does not eliminate poverty as a causative agent in lower access and use of health care services among Hispanics. Pleading the case for money as a factor in the Spanish survey was a nearly 50% response rate of those who said, in one way or another, money was involved in prohibiting them from getting the care they needed.
Although money definitely does affect whether or not some Hispanics get care, it seems to have little to no effect on whether or not they are insured. Practically none said that not having insurance inhibited them from getting the care they needed, however, which suggests that perhaps more public education needs to be done regarding applying for the Oregon Health Plan, or other social aid programs. It was seen from the surveys that those Hispanics who did have insurance of some type more often gained access to and used the health care system when they needed to.

Education also appears to influence insurance coverage and health care accessibility, but when similar education levels of Hispanics and non-Hispanics are compared, it is apparent that education cannot be the main suspect leading to low levels of Hispanic health care use and access. Since many of those Hispanics are without a high school or post high school education, it may seem that education and insurance or access to health care will correspond, but this is not directly observed to be the case as it is among non-Hispanics.

Some studies suggest country of birth and language spoken have more impact on Hispanic access of health care in the U.S. Cultural reasons, as well, are most likely to be involved in determining whether or not a Hispanic will seek medical care for illness from a health care provider in the U.S. Many of those who are in farm work originate from smaller villages and cities in Mexico, and perhaps they either are not used to visiting a doctor or dentist unless they have developed a somewhat serious health condition, or else have increased access to and use of medical care due to the socialized health care system. This is possibly evidenced in the U.S. by the high numbers of Hispanics that visit an emergency department instead seeing a doctor in his office, and the fact in the survey,
where nearly three times as many Hispanics said they “just didn’t get care” when they needed dental care, compared with non-Hispanics.

Also significant is the fact that the majority of the U.S. Hispanic population is young, compared with the general population, and more often employed in physically-demanding occupations. This suggests that their health should be better than the average American, who is more sedentary and aged than his/her Hispanic counterpart. This difference in age may also play into the reason why more Hispanics visit the emergency department (not observed in this study, however).

Another significant finding of the Hood River County survey, was that very few Hispanics actually listed dental conditions as problems they had or suffered from in one portion of the survey, but later on in the survey many admitted that they had a dental condition that they could use immediate treatment for. This finding, along with the general trend that most Hispanics view themselves as not of “Excellent or Very Good” health, compared with non-Hispanics, suggests that both careful and redundant survey questionnaires, as well as actual dental and medical health exams, would be very useful in pinpointing actual health conditions and disparities among Hispanics.

5.2 Implications of research findings

Policy-makers and health-care providers can benefit from the results of this survey by noting the issues involved, paying special attention to those issues that directly apply to areas where they serve. Hispanics and Hispanic farmworkers are spread throughout Oregon, and other western states. Due to the constant migration of many Farmworkers between communities, counties and states, a coordinated effort to increase
health care access and use among needy Hispanics and Farmworkers is what is needed to significantly alter health disparities. Local policy-makers and health care providers can use the results of this survey to conduct their own community health assessment, direct their health promotion resources toward, and develop means to provide their residents with needed care.

5.3 Limitations of research

Due to the nature of this survey, there are specific limitations that should be apparent. First, this survey does not report comprehensive findings of health conditions and needs because of it being a self-assessment on the part of the respondents. As such, the findings are subjective and do not include any diagnosed medical or dental conditions. In order to most accurately ascertain the actual health conditions of the population, permission and funding would be needed to perform a complete physical exam and other necessary tests in order to obtain objective/empirical data and results. Also a part of this are conditions that English-speaking Americans don’t even know about, but which are considered common or significant illnesses by other ethnic groups. It is important to understand exactly what we are understood to be asking, when we ask someone of another culture if they have a particular illness or condition that is common to us. Perhaps our ideas of illness and disease are completely different, and in this likely case those who make up the surveys need to know exactly how to ask the questions in order to accurately assess what they are trying to assess.

Also important to note is the time of year the survey was conducted, as well as the time of day and day of the week. For the Spanish-language survey, the fact that the
survey was conducted in the winter will result in much lower numbers of individuals who are Hispanic migrant seasonal farmworkers. These individuals arrive in large numbers in the late spring and early summer months, following specific agricultural product harvests, and stay on until harvests are completed and packinghouses complete their work. As was mentioned before, English-language surveys were conducted primarily during business hours during the week, which is suspected in producing the elevated numbers of elderly and female respondents for this survey.

5.4 Recommendations for further study

As with many issues in health care, the situation of Hispanic farmworker health in Hood River County is a complex of many issues. Insurance, finances (or lack of them), language spoken, country of birth, immigration issues, cultural beliefs and practices, lifestyle, age, education, and perhaps many other unseen issues lead to lower access of health care among Hispanic farmworkers. What needs to be, and can be done about this will depend on just as many factors. Undoubtedly, culturally-appropriate health care will help only those who experience barriers to care in accessing the care they need.

Having more health care providers of ethnic diversity is important toward this goal, as well as the availability of and communication with those in each community that would serve as a good representation of ethnic minorities. Communication and dialogue between the current community health care centers and members of the community that experience barriers to care is key in being able to grasp what the actual health needs and conditions are of those who experience barriers in access to health care. More surveys are, undoubtedly, needed to gain an accurate picture of Hispanic health and health-related
issues. These studies need to include both self-assessment survey types like this one, as well as more objective and diagnostic surveys that incorporate physical exams. Such an objective survey was completed in California recently, and serves as a good model for methodology and comparison.

More time needs to be spent alongside Hispanic farmworkers to better understand their perspective and gain insight into what factors most influence their decisions to access, and not access, the U.S. healthcare system. The general public needs to be aware of the actual conditions, and any areas where they can help to alleviate any problems related to health care access and use by this often-invisible group. Health care providers need to be aware of the population they serve, and become educated about their options in dealing with patients of various ethnic groups. Counties need to know how best to serve their residents, and should work along with those who experience health care access barriers so that the barriers can be eliminated. The questions raised by surveys like this one are important. All Americans, especially those dependent on farm work, would be better off if attempts continue to be made toward answering them.


“Healthy People 2010: Understanding and improving health” (2000). 2\textsuperscript{nd} ed. U.S.


