

Monitoring Health Access Among Immigrants: Issues and Concerns

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Executive Summary

Background

Three statewide surveys assessing the rate of uninsurance in Minnesota have been conducted in the past decade in 1990, 1995 and 1999. All three Minnesota Health Access (MNHA) surveys were based on a two-stage sampling design that selected a random individual within a random household. In contrast to the earlier studies, the 1999 MNHA survey, funded through Blue Cross Blue Shield of Minnesota, was available in Hmong and Spanish. Therefore, when a telephone survey could not be completed in English due to a language barrier, the household would be contacted to see if the interview could be attempted in Spanish or Hmong.

In January 2000, the Minnesota Medical Foundation awarded a grant to University of Minnesota's School of Public Health to complete the analysis comparing Hmong and Spanish survey respondents, some of whom completed the English and some of whom completed the non-English survey. This also created an opportunity to study survey methodology and measurement of access to health care insurance in Minnesota's minority communities. The purpose of this report is to summarize available information and knowledge about surveying non-English speaking respondents, as well as to produce guidelines and recommendations for the next statewide survey.

Process

This report was developed using an extensive literature search, paired with interviews of individuals who work in Minnesota's health care communities and have experience and insight into data collection with Non-English speaking immigrants. The resulting information was used to interpret the data comparing characteristics of respondents in the general English speaking Minnesota Health Access survey (MNHA) to those of the same ethnicity who participated in the non-English survey and guide future data collection. The primary question was whether access to health services for Hispanic and Hmong residents varies along language lines.

Key findings

Several themes emerged from the literature search and key actor interviews, including coverage issues, data quality issues as well as various guidelines for non-probability or probability design that are particular to immigrants and minorities. These guidelines and considerations helped in interpreting the data and provided a framework for researchers in the development of future statewide surveys. Major findings of the data analysis are below:

- Levels of uninsurance are significantly higher for non-English speaking respondents than English speaking (47.4% compared to 12.4%);
- 42% of non-English speaking respondents were currently uninsured compared to 7% of English speaking respondents;
- English speaking Latinos estimates of group coverage were 65.4% compared to 25% of non-English speaking Latinos;
- A higher number of Latinos (both English and non-English speaking) than Hmong respondents are low income (less than 135% FPL for adults without dependents; less than 133% FPL for families).

It is difficult to say if these findings are generalizable to the Minnesota Hmong and Latino communities, based on the sample size and the methods by which the survey was developed. Careful consideration of sample design, coverage issues, translation protocol and other areas including trust and community support may yield stronger data in future statewide health care access surveys.

Background

The proportion of the population uninsured for medical care is a priority data need at the national, state and local level. (1) Uninsurance is defined as individuals who are continuously or intermittently without health care coverage for a given period of time. Individuals without health insurance are less likely than those with insurance to seek medical care when they need it, and less likely to obtain preventive care. As a result, health problems within this population often go untreated, often until they reach emergency status. Studies indicate a correlation between lack of health insurance and the likelihood of being hospitalized for conditions that could have been manageable through a doctor's office visit. (2) There is also a greater likelihood of death occurring among the uninsured population when they are hospitalized. (3)

Understanding the influences that affect health care coverage can substantially assist in the development of health access programs. Lack of health insurance is frequently confounded with a lack of financial resources and, as Minnesota's changing demographics are illustrating, immigrant, refugee and minority status. While employment and economic status are significant factors in insurance coverage for immigrants, lack of coverage can also be related to language barriers and/or culturally related beliefs about medicine and health. Because estimates of rates of uninsurance are based on probability samples as is information concerning access barriers, methods used to obtain data from immigrant, refugee and minority groups must be improved in order to get to the crux of the problem regarding uninsurance within these groups.

Researchers lack information about how to improve health insurance rates for recent immigrants and non-English speaking Minnesotans due to limited availability of relevant data and literature pertaining to data collection methods that work best in gathering information from these vulnerable populations. Specifically, investigators lack information and resources on ways to improve sample design, develop protocols for data collection and design questions that will generate data regarding access and barriers to insurance coverage among refugees, immigrants and minorities. Three statewide surveys assessing the rate of uninsurance in

Minnesota have been conducted in the past decade in 1990, 1995 and 1999. All three Minnesota Health Access (MNHA) surveys were based on a two-stage sampling design that selected a random individual within a random household. In contrast to the earlier studies, the 1999 MNHA survey, funded through Blue Cross Blue Shield of Minnesota, was available in Hmong and Spanish. Therefore, when a telephone survey could not be completed in English due to a language barrier, the household would be contacted to see if the interview could be attempted in Spanish or Hmong.

In January 2000, the Minnesota Medical Foundation awarded a grant to University of Minnesota's School of Public Health to complete analysis comparing survey responses of Hmong and Spanish respondents, some of who completed the English and some of whom completed the non-English survey. In addition, it created an opportunity to study survey methodology and measurement of access to health care insurance in Minnesota's minority communities. The purpose of this report is to summarize available information and knowledge about surveying non-English speaking respondents, as well as to produce guidelines and recommendations for the next statewide survey. Data comparing access to insurance among English and non-English speaking Hmong and Latino respondents is presented. Specifically, this report is designed to answer the following questions:

- Why is learning about immigrant communities' access to health care so important to our country's overall welfare?
- How might the health services research community define best practices for data collection among new immigrants?
- How can sample designs be refined to garner information that is representative of immigrant populations?
- What processes, procedures and practices should be used to acquire the most accurate data from Non-English speaking respondents?
- How do English and Non-English speaking immigrants of the same ethnicity compare on access to insurance?

Overview and Introduction

Methods

This report was developed using an extensive literature search, paired with interviews of individuals who work in Minnesota's health care communities and have experience and insight into data collection with Non-English speaking immigrants. The resulting information was used to interpret the data comparing characteristics of respondents in the general English speaking Minnesota Health Access survey (MNHA) to those of the same ethnicity who participated in the non-English survey. The primary question was whether access to health services for Hispanic and Hmong residents varies along language lines. Are those who are fluent in English different with respect to health care access than those who are not fluent or comfortable speaking English? A second question asks how best to collect data among immigrant communities and people experiencing language barriers.

The literature review was guided by an informal network of researchers and community members who have experience with survey methodology and data collection in immigrant groups. Recommendations from Health Services Research and Policy staff created the initial framework for the literature search, which then snowballed through use of bibliographies and referenced texts.

Interviews were conducted with several community members. Information collected in the interviews confirmed the findings of the literature search and helped to create examples of applied theory. While the overall goal behind the interviews was to obtain a greater perspective on data collection in non-English speaking groups in general, individuals with data collection experience in Hmong and Hispanic communities were most relevant.

All of the information accumulated was used to develop a framework and recommendations for the next health access survey. The statewide data comparing English and non-English speaking Hmong and Hispanic individuals was not of sufficient

size to run statistical tests. However, the descriptive statistics presented are illustrative, providing a good model and recommendations for future research.

Justification

There are several reasons why data collection among non-English speaking groups must be perfected. These reasons include 1) the changing demographics of Minnesota, 2) shortage of culturally, or ethnic, specific health service and access data 3) awareness of cultural influences in the perception of health and the need for health services and, finally, 4) the need to understand the limits of telephone survey methods in general and among sub-populations in particular.

Minnesota's Changing Demographics

The demographics of Minnesota's population are changing rapidly. In 1990, approximately 6 percent of Minnesotans were born in countries other than the United States. This proportion is expected to grow to 15 percent by the year 2020.(4) While the overall proportion of immigrants in Minnesota is considerable less than the current national average of 24 percent, it is notable that in Minnesota more than 40 percent of these individuals are refugees, fleeing from strife and violence in their homelands. This figure is nearly three times the national average.(5)

The reasons why immigrants settle in Minnesota are diverse; but one reason dominates over the others: Throughout the later half of the 20th century, Minnesota advocates worked tirelessly to bring persecuted individuals safely to America. In many religious and civic communities, it has become part of the Minnesota ethic to sponsor immigrant families and assist in acculturation.

A brief look at each immigrant population's history in the US reveals additional explanations regarding resettlement:

Hmong: While Hmong have their roots in many different countries, Hmong who have immigrated to the US all lived in the highlands of Laos.(6) Most depended on farming to sustain their communities. During the Vietnam War, the United

States proposed that the CIA train Hmong farmers to be soldiers and protect the Ho Chi Minh Trail running through the mountainside. The Trail was the main supply trail for the North Vietnamese Army. This drastic change in lifestyle would be met with protection from the US. Soon after beginning to aid the US, Hmong families were targeted by the communists. The Hmong lost more than 12,000 lives, as well as their homeland following Communist upheaval. Many fled to Thailand to escape death and eventually to the US, where the government promised refuge. Minnesota became a state of settlement due to presence of the General Vang Pao, a Hmong leader who was a general in the Laos Royal Lao Army.

It's been twenty-five years since the Hmong began arriving, and their numbers are now estimated to range from 45,000 – 75,000.(7) For many Hmong, their immigration was sponsored by churches and refugee advocates. However, in supporting resettlement, these groups effectively broke up 13 clans of Hmong who were used to living together in a fairly small geographic area. The need for close proximity led to a second migration in the 1990, when many Hmong moved from California to Minnesota to be closer to family. It is predicted that Minnesota will overshadow California in numbers of Hmong in the 2000 Census results.

Latino: There has been, and continues to be debate about what terminology can be most appropriately used to describe populations of color. Many terms are mistakenly used interchangeably to describe the groups of individual that originate from Latin America and live in the United States. Among these terms are Spanish-speaking, Spanish-surnamed, Spanish-origin and Spanish American, Latino, Hispanic, Hispanic-origin, Chicano.(8),(9)

Hispanic is the terms used most often in the United States public sector. It is thought to be broad in its inclusion of individuals from all Spanish-speaking countries in the Caribbean, Central and South America as well as from the

Iberian Peninsula. To many, however, this seemingly broad definition narrowly defines those individuals of white European ancestry living in or emigrating from Spain or Portugal.(8),(10) As a result, many individuals feel that the term places more importance on European cultures and those in Latin America that arose from the Spanish invasion than those cultures that arose out of Indigenous and African contributions.(11)

Likewise, the term Chicano is limiting in that it refers to Mexican Americans who identify with their Mexican heritage and culture. It is a national-origin label.(11) Having its roots in ethnic and ideological movements within the United States during the 1960s and 1970s, Chicano is a term that only describes a subgroup of individuals of Latin American origin. Other national-origin labels include the terms Mexican, Puerto Rican and Cuban.

The most accurate term used to describe populations of Latin American origin is *Latino*, which also is the most racially and linguistically neutral.(12) *Latino* was used throughout the report: “Public Health and Health Care Access: Minnesota’s Latino Community,” a report written in collaboration between the University of Minnesota School of Public Health, Chicanos Latinos Unidos En Servicio (CLUES), Hispanic Advocacy and Community Empowerment through Research (HACER) and the Minnesota Department of Health. For consistency within this body of text, as well as with other reports published by the University of Minnesota School of Public Health, *Latino* will be used through this report to describe populations of Latin American origin in Minnesota.

Many individuals of Latino origin who live in Minnesota are of Mexican heritage. While the US put limits on immigration in 1920, Mexicans were still allowed into this country so that industry could employ cheap labor. However, when the depression hit, many Mexicans were sent back to Mexico. Estimates of up to 600,000 Mexican people were told to leave.(13) This trend

of wavering public policy continued when World War II hit. A shortage of workers led to the government to make allowances for contracted workers to come into US for short periods of time, a policy known as the Bracero Program. Many individuals of Hispanic origin came to Minnesota as migrant workers during this period, which lasted until 1964. Several meatpacking and food production plants in Southern Minnesota provided a good opportunity for wages. Currently, the state demographer's office estimates the number of Mexicans in the Minnesota to be approximately 125,000.

Immigrants of Latino origin come from other parts of US and many other countries. Many of these individuals are undocumented. It is often difficult to obtain data from Latinos and Hispanics, according to a recent St. Paul Pioneer Press series on immigration, because of fear of the government. While a specific individual may hold citizenship, fears of disclosing information may still be prevail, especially when they have of undocumented family members.

Somalis: After a civil war led by clan warfare tore their country apart in the early 1990s, many Somalis knew they would be forced to leave their homeland. Twin City churches and civic group reached out to many Somalis who, in their homeland, were facing political turmoil. The civil war left Somali without an official government and without a respected system of law and law enforcement. The chaos held tremendous emotional effects because almost every refugee lost loved ones to the war. For many, immigration to the United States, and Minnesota in particular, was one way to escape the brutality, the memories and the corruption. Currently, Minnesota state demographers estimate the number of Somalis to be approximately 15,000, but Somalis themselves say that they number anywhere from 22,000 to 28,000. (14) In late August 2000, Somalia's parliament elected the first president since the opposition leaders joined forces to over throw dictator Muhammad Siad Barre in 1991. The new president, Abdiqasim Salad Hassan, has strong support from Twin City Somalis, who are determined to return to their homeland. (15)

Many, however, will undoubtedly remain until they have adequate resources to return.

Russians: During the past few years, over 5,000 Russian Jews followed their relatives, who moved to Minnesota in the 1970s, and immigrated to the Twin Cities. Most left Russia to escape the rampant anti-Semitic attitudes which are widespread in post-Soviet Russia. Most of these recent immigrants have both a high school and college diploma as well as advanced education credentials but face widespread discrimination and religious persecution.

From 1980 to 1990, the state experienced a 72 percent increase in nonwhite and Hispanic populations, constituting the fourth highest rate of increase in the country.(4) As noted previously, this resettlement is largely attributable to the 1985 arrival of many Hmong from camps in Thailand as well as the continuous influx of Hispanic populations into the Minnesota job market. The Minnesota State Demographer's Office estimates, using 1990 Census figures as a base, that Minnesota's foreign-born population increased by about 50 percent in the 1990s. There are several reasons for this; among them are the immigration of African refugees and a large secondary migration of Hmong from California.

Current growth rates in Hispanic and Asian or Pacific Islander population lead state demographers to project that these trends will continue to have a significant impact on Minnesota's population. While increased diversity due to the influx of immigrant groups is likely to occur at all ages, it is expected the larger proportional increases in the population will occur within the younger ages. It should be noted, however, that there are high levels of uncertainty accompanying demographic projections of small groups within the state that have experienced large rates of change. The Department of Planning reminds the public that many Asians who immigrated to Minnesota in the 1980s held refugee status. Many who immigrate today do so voluntarily. These changes, combined with shifting political influences and government immigration policies, further confound any apparent patterns that may emerge, making projections even more tenuous.

Minnesota Planning Department figures projections include the following:

Ethnicity	1990	2020	% Change
Hispanic	53,884	149,780	178.0 %
Asian or Pacific Islander	77,886	219,100	181.3 %

*Please note that the classification “Hispanic origin” is considered a definition of ethnicity rather than race, because many individuals of different races consider their origin to be Hispanic. Minnesota Planning found that the project trends for other races are very high and similar to those populations of Hispanic origin.

Shortage of culturally appropriate health services and access data

Presently, the availability of data is minimal with respect to patterns of diseases and access to health care among immigrants.(16) Minnesota has growing number of immigrants, and as a result, growing number of people who are not eligible or do not take advantage of programs in health care coverage due to language barriers, lack of education or unfamiliarity with the US health care system. Without adequate data, it is difficult to assess the magnitude or take steps towards alleviating the problem. Challenges in collecting data from immigrant populations are numerous and can be magnified by lack of administrative data that includes country of origin, and immigrant status.(17)

In an effort to produce more reliable health insurance data, statewide surveys were conducted in 1990, 1995 and 1999. The Minnesota Health Access survey (MNHA) developed estimates used to monitor the impact of ongoing health and welfare reform efforts on the rate of uninsurance in Minnesota. Use of the same sampling methodology and survey instrument allowed an accurate comparison of results over the three time periods. Furthermore, the sample size each year was large enough to provide more precise estimates of uninsurance rates than possible with national data.

The quality of MNHA data helps in many aspects of health care planning. The data enables the State to establish public health goals, to make projections of individuals eligible for public insurance programs as well as to develop outreach and educational efforts targeting those most likely to be without insurance. However, only in 1999 were surveys conducted in language other than English. While less than one percent of the

sample in 1990 and 1995 could not complete surveys due to language barriers, there were suspicions that non-English speakers may have constrained access to health care. For this reason, Blue Cross Blue Shield of Minnesota provided funds to translate the 1999 survey into Hmong and Spanish, administer it to non-English speaking families and analyze the resulting data.

Planning efforts include the Healthy Minnesotans Public Health Improvement Goals, published by the Minnesota Department of Health (MDH). These goals reflect the public health needs identified by people throughout Minnesota. One such goal for the year 2004 is the elimination of disparities in health outcomes and the health profile of populations of color. An objective in reaching this goal is achievement of 100 percent health care coverage, including preventive services, for all Minnesotans. The 1990 Minnesota HealthCare Access Commission Household Survey and the 1995 MNHA were used in the following table, showing the characteristics of Minnesota's uninsured:

Table 1. Race/Ethnic Composition of Minnesotans uninsured in 1990, 1995

Race/Ethnicity	1990	1995
White	94.0%	86.6%
African Americans	3.2%	2.9%
American Indian/Alaskan	0.2%	2.2%
Asian/Hmong/Pacific Islander	0.7%	1.4%
Hispanic/Latino	1.4%	3.6%
Other	0.6%	3.4%

Another 2004 Healthy Minnesotans objective states the need for improved information and expanded statistical research on the health of populations of color through the following:

- Consistency in the collection of race and ethnicity data throughout the health system;

- Improved race and ethnicity information from existing surveillance systems and the Behavioral Risk Factor Survey for policy and programmatic efforts and assurance;
- Populations of color needs assessment from managed health care action plans, Community Health Service agencies and health care collaboratives;
- Aggregate enrollment and utilization statistics on populations of color from managed health care plans;
- Research on the relationship between adverse health outcomes and the following factors: race and ethnicity, socioeconomic status and poverty.

Efforts to obtain information on populations of color have increased as federal policy alterations affected more traditional sources of data. The Personal Responsibility and Work Opportunity Reconciliation Act of 1996 dramatically changed the welfare system in our country by restricting the access of legal and illegal immigrants to many public benefits. Welfare reform bars most qualified immigrants from food stamps and Supplemental Security Income.⁽¹⁸⁾ It also bars qualified aliens admitted to the US on or after August 22, 1996 from Federal means-tested programs for 5 years. As a result, there are less people enrolled in welfare programs, and in turn less administrative data that researchers can use for analysis. The landmark welfare reform of 1996 substantially reduced a strong source of information on race and ethnicity. In Minnesota, state public programs are wide reaching and cover individuals who may not qualify for Medicaid under federal law. Additionally, many new immigrants hold refugee status, which holds automatic eligibility for Medicaid. A large number of immigrants and refugees may be eligible for Medicaid, but do not enroll because they lack the language skills and/or understanding of the US health care system. Many may have insurance but may not comprehend their coverage options.

Another problem in the collection in race and ethnicity data is lack of consistency. It is necessary for health care organizations, both public and private to develop uniform standards by which ethnic groups are classified.⁽¹⁹⁾ In so doing, these organizations would establish a level of precision and accuracy in terminology that is currently non-

existent. Standardization would allow for cross organization comparisons. Research on race and ethnicity in the United States and Europe tends to use vaguely defined labels.(20) Words such as Hispanic and Asian group together heterogeneous populations, a topic further discussed in the “Results” section of this paper.

Cultural difference in health interpretations

Because individuals from different cultures perceive their health and health care differently, there are noticeable differences in the ways in which they go about seeking care.(21) Lack of insurance, in these cases, may not be circumstantial, but may be a choice. Cultural perceptions of disease and attitudes toward preventive care are underlying factors that must be examined in tandem with health behaviors and health care utilization.

Developing an understanding of health insurance and health care access from various immigrant perspectives will be tremendously valuable in breaking down barriers to health care access. The US government can help speed up the process by which immigrants and refugees experiences feelings of inclusion in the dominant society. This process can be improved by acknowledging the different needs of migratory groups and developing policies and programs to help them live quality lives.(16) There will always be groups of individuals who will not participate in US public programs such as Social Security and Medicaid based on citizenship or language barriers.(22) But many, given the chance and the proper resources, would participate if they understood the benefits. A significant element of improving access to such programs is developing an accurate needs assessment as well as evaluating the target population’s understanding of the program and its benefits.

Researchers may look to reports of wellness or of physical or psychological symptoms to analyze the need for health care access. Analysis by Angel and Thoits (1987) of changes in reported health status illustrates that, while most clinical aspects of an illness stay the same across cultural lines, the conscious experience differs. For example, in the MNHA uses the standard, self-reported question: “How would you rate your health status? 1)

Excellent, 2) Very good, 3) Average, 4) Below Average, 5) Poor.” The answer to this question may vary across cultural lines, even between two people experiencing the same physiologic state of health. Literature points to evidence that this variance may not only be based on self-perspective and rating of health or illness, but also on lived experience.(23),(24),(25) Angel and Cleary (1984) found levels of traditional or indigenous health beliefs and practices to be tied to length of time spent in the U.S. This difference reflected characteristics of longer-term residents who may have been further along in the assimilation process.(25)

It is noteworthy that recent evidence links declining health and mental health outcomes among immigrant groups with increased time in the United States.(26),(27),(28) It is also recognized that while their health status declines, many immigrants are in fact using more health care services with each year spent in the United States.(29) This evidence begs the question of whether there is a change in actual health status or a change in the reference group against which they evaluate their health status (from people in their native country to people in their host country). Individuals who are recent immigrants are often the most difficult to interview for reasons including lack of surveys in their country of origin, language barriers, and survey question comprehension.

Experience comes from cultural upbringing, as well as national origin. For years, researchers have found evidence indicating different approaches among cultural groups to teaching their members how to assess and monitor their physical well being.(25) For example, Zola (1964) found that Italians were more likely to report a variety of symptoms, while Irish would list just a few. Researchers have also associated cultures with introspective individuals, correlated with greater self-awareness,(30) to the practice of monitoring one’s bodily conditions.(25) Depending on the culture of the individual, experienced symptoms may not warrant limiting physical activity. The need to perform daily activities while experiencing symptoms of illness varies among ethnic, economic or age related subsets of the clinical population. (24)

Regardless of culture, many individuals will pursue the assistance of a trained health care professional if they believe that they are ill or experience symptoms of disease. For this reason, perceptions of health status affect health care utilization and perceptions of access. Other factors can also impact the way cultures approach health care services. Many cultures place more emphasis on wellness than the illness focus of the US medical model.(17) These cultures are familiar with daily health maintenance and less familiar with the formal health care delivery system. A variety of cultures may seek formal health care delivery only when encountering emergencies and life threatening conditions.

Barriers in Telephone Surveying

A frequently chosen method of obtaining information is through telephone surveys. Current literature indicates that the telephone interview is one of the most common modes of interviewing. But telephone interviews create a compounding of biases. One significant bias is not reaching groups with limited English abilities; in such cases, the data are less than complete.(31) In many studies, telephone survey designs under-represent minority and non-English respondents.(32) These groups tend to have higher refusal rates and are more difficult to locate. Additionally, one study revealed differences in health insurance status between households with phones and those without. (32) These same differences may hold true for English versus non-English speaking participants.

Most surveys are not very good at predicting the rate at which people will seek health care following a specific illness (illness behavior) and the influences the individual's culture has on this rate. The likelihood that a person will decide that a change in normal body function is a symptom of disease or sickness is dependent on the individual as well as social beliefs .(33) Questions of this nature are more appropriate for unstructured, in-person interviews rather than structured, fixed response surveys.(34) Part of the reason that many surveys are unable to reveal stratified breakdowns of health service utilization by race and ethnicity is due to inappropriate sample size, challenges in following appropriate protocol in survey instrument development, and lack of information regarding appropriate survey question development for non-English speaking

respondents. There are marked differences in the ways that different cultures respond to questions about their health. (23) (35) Without following appropriate guidelines, these differences may hamper researchers ability to make direct comparisons between English and non-English speaking respondents with regard to health services access.(36)

Data Collection Among Immigrants

Part I. Coverage Issues

The greater data coverage that investigators are able to secure, the higher the validity of their data. Probability sampling requires that all members of a population who are known or reachable should have an equal chance of being selected and that they are selected through a random process. Several factors may bias coverage rates for data collection from immigrants and minorities, such as high mobility and the tendency for immigrants and refugees to be relatively isolated populations. While there are few strategies available to minimize these biases, awareness of their possibility is essential in research design.

- High Mobility: A common problem in sampling is the high mobility of immigrant groups. (37, 38) Twenty-one percent all U.S. immigrants were not legal citizens in 1990.(17) Lack of citizenship may further increase the likelihood that an immigrant changes addresses frequently to avoid deportation proceedings.(37) Other groups tend to have high population migration within cities and circular migration back to their homelands.(38) Due to these issues, researchers may find themselves confronted with extreme challenges in achieving good coverage.
- Isolated Populations: Foreign-born immigrant groups tend to be small, difficult to reach populations that are challenging for researchers to access. Some sampling tools traditionally used in telephone surveys are useless among many immigrant groups. For example, most available lists of immigrants and refugees are those maintained by the INS, voluntary agencies or at the point of entry into the US.(37) While these lists have been used with Southeast Asian refugees and legal Latino immigrants, they do not capture undocumented aliens and other non-reporting individuals. (37) Thus, they eliminate the ability for findings to be generalized to the broader population. These lists are typically inadequate for use on the state level because there are no public lists of all Hmong or Hispanics individuals residing in the Minnesota.

Research shows that the most successful sampling of isolated populations comes through selection of a geographic area, name spotting, snowballing, and other techniques.(39)(38)(37) In some cases, the best method of targeting special populations is to pair a traditional probability-based sample design such as census and population data, with information provided by local sources (e.g. community organization staff, store owners, community leaders, local residents and clergy).(38)

Even a combination of methods can present challenges. For example, if the target population is Hispanics living in Minnesota, how will Hispanic be defined? Using the US Census classification, Hispanic/Latino means Spanish Heritage.(40)

Researchers attempting to apply the U.S Census definition have considered a multitude of approaches to identifying Spanish heritage individuals including use of Spanish surnames and/or Spanish language use. Problems arise when the researchers identify an individual to be part of the Hispanic/Latino population, but they themselves do not consider themselves of Spanish.(38) For this reason, researchers need to employ self-identification methods, using consistent and clear classification categories. This procedure should reveals the most accurate demographic information.(19)

- Heterogeneity: Researchers are often interested in broad categories of ethnic groups, and in the process, lump several subgroups into one. Literature shows that there are significant differences between subgroups in terms of health statistics.(41) Looking at health insurance coverage and service utilization, several studies point to differences within a cultural classification.

The work of Trevino and Moss (1991) illustrates the differences in health services utilization and health insurance coverage of Latinos by country of origin.

Researchers found that Blacks, Cuban Americans and Puerto Ricans who were under 65 years old were more than twice as likely as whites to lack health insurance. This ratio increased substantially when Mexican Americans were studied. The rate of uninsurance for Mexican Americans was 3.5 times that of white, non-Latinos.(42) A great portion of this difference may be attributable to economic circumstances and

immigration status. However, the differences may be the result of differences in attitudes about sickness and use of western health care services. The possibility that subcultural reasons account for a significant portion of the difference between subgroups is reason enough to separately study each population's access to health care whenever possible.

National data analysis also reveals significant subgroup differences in Latino health care coverage under Medicaid.(42),(43) While reasons for these differences may largely be due to geographic immigration patterns and individual state policy differences, these patterns have important implications for Minnesota's planning efforts. Differing experiences by subgroups in other states may affect their base knowledge of the health care system and the likelihood that an individual will apply for health assistance once reaching Minnesota.

Part II. Data Quality

Accurate responses are important to any research project. However, many factors can interfere with the ability to capture good information. Some of these factors can produce responses that are less than complete or do not accurately reflect the feelings or beliefs of a respondent.(44) Below is a list of potential interferences with high data quality as they relate to research with immigrants and refugees:

- Low English usage: Surveys may lack adequate translation. For example, in their study entitled "Health Insurance Coverage and Utilization of Health Services by Mexican Americans, Mainland Puerto Ricans and Cuban Americans," researchers Trevino et al. (1991) used Current Population Survey (CPS) data. The CPS is a monthly survey of about 50,000 households conducted by the Census Bureau for the Bureau of Labor Statistics. The CPS survey sample is selected to represent the civilian non-institutional population. However, the CPS does not use a Spanish questionnaire in the case of non-English speaking Latino respondents. Instead, the CPS interviewer contacted a regional office and had a Spanish-speaking interviewer go to the home, or conduct a telephone interview. In either case, the translator had to

translate the questionnaire as the interview was being conducted. This places in question the reliability and validity of answers from possible overestimation of the comprehension of the questions by the interviewer, and precludes any standardization of Spanish interviews across interviews. However, this methodology was cited as an improvement to previously examined surveys in which few investigators translated their questionnaires into Spanish and most did not employ bilingual interviews.

Yielding reliable data entails following a closely adhered to protocol for translation and delivery of the survey instrument. This issue will be addressed further in the next section.

- Nativity – It is likely that access to health services varies not only by country of origin, but also by length of time in the United States. However, many data collection systems are not designed in such a way to support this research question. Country of origin, immigrant status and length of time in the US are all appropriate questions that should be added to health service access surveys in an effort to examine the impact or comfort with health programs on 2nd and 3rd generation immigrants. It is possible that acquisition of the host countries' language could function as a proxy for acculturation such that those who are non-English speaking will be less acculturated, or less likely to have absorbed and assimilated into mainstream U.S. culture, those who speak English. This hypothesis is further explored in the case study section of this report.
- Linguistic Issues – As a Germanic language, English is generally more conceptually flexible than other languages families such as the Sino-Tibetan Family, one family under which the many forms of the Hmong language fall (<http://www.krysstal.com/langfams.html>, <http://www.sil.org/ethnologue/families/Hmong-Mien.html>). Not only is the English language lexicon longer and broader, but also there are many more base words in English than other languages. The Hmong language, for example, is dichotomous with few levels of gradation. A concept is either positive or negative; on or off; present or absent. Hmong individuals tend towards big picture

and concept oriented thinking rather than gradation or detail. For example, Hmong often have difficulty with questions dealing with income categories brackets. Because they don't understand the concept behind the question and question format, they may simply respond with a statement that they are impoverished. The interviewer is left to infer the income value. One informant told of a typical scenario where an interviewer asks about the respondent's income. The question was answered by the Hmong respondent spending close to two hours talking about the quality of life in Laos. During this time, no reference was made to a defined income. Socioeconomic status as well as many other Western ideas are not concrete concepts to many Hmong.

Non-familiarity or comfort with gradient properties makes it difficult to participate in typical standardized surveys. Therefore, use of 5-point scale categories can be very confusing to native Hmong speakers. Informants said that their use of 5-point Likert scales with this group resulted in far too many 5 and 1 responses to be valid. Middle categories were omitted because they meant nothing to the respondents. All key informants noted that it is better to ask the question in terms of a yes/no response and then ask about levels or rank of order in measurement. To assess rank ordering or level of agreement, limit options to only two or three. In summary, it is difficult to get a range of answers on measurement scales due to the structure of the language, which in turn structures thought processes. This point is consistent with the key informant's message that it is necessary to involve native speakers at the point of question development and design.

Other language issues include use of tenses. Many languages predominantly use the present tense in such phrases as, "Tomorrow/Yesterday (I go to the post office)." Time is only designated through the marker, tomorrow. A compound sense of past is unusual in these languages and asking questions that require individuals to compute past or future conditions can be challenging. Researchers should have an understanding of how a culture linguistically recalls events, either based on a specific event or an estimate. Survey researchers often make assumptions that may not be

valid for other languages.

Additionally, while not a linguistic issue, but more of a conceptual one, it was noted that Hmong individuals over 40 have problems understanding the concept of public assistance. This is not true, however, for the younger population.

A response process is the underlying thought patterns that occur when a respondent is processing a question and preparing to answer. Cultural identity plays a significant part in how these processes occur. Following each description of common response processes are explanations of cultural roles in those processes and suggested techniques to minimize bias in the data.

- Question Interpretation -- When asked a question, a person's mind works through past experiences and beliefs to interpret the meaning of the question. Culture plays a large role in the interpretation of questions because it is the foundation and the context from which people view the world. While translation and administration of a survey may also affect a respondent's comprehension, culture plays a significant role in question interpretation and grasp of meaning. (23) (45)

Researchers often discuss cultural interpretation of survey questions in terms of etic and emic constructs.(46) Etic constructs are those which are presumed to be universal and understood across all cultural groups, while emic constructs are culturally specific and have relevance to some cultural groups and no meaning to others. Several problems occur when a question containing a culturally specific concept is developed without acknowledging the possibility that other cultures will not understand.(45) Data gathered under these conditions are susceptible to categorical fallacy. That is to say that they cannot be generalized across respondents and are subject to misinterpretation. Some respondent may not even answer the question due to lack of understanding.

Researchers suggest that surveys be analyzed for their susceptibility to categorical fallacy especially if race, ethnicity or education is a factor in data differences.(45) A strategy to deal with categorical fallacy was proposed by Triandis and Marin (see Warnecke – 1996) who suggests use of probes to determine when a respondent is affected by culturally unique interpretations/responses as well as when the underlying concept in a question transcends cultures.(47) A concluding point on the impact of culture on question interpretation is that respondents are most likely to understand and interpret information when they are able to do so in their native tongue and dialect.(48) (23) This is likely true for English speaking immigrants as well as their non-English speaking counterparts.

- Judgment - Many survey questions do not require a judgment, but simply ask for a specific piece of information. In these cases standard memory recall techniques are used. However, questions that require a respondent to rate or assess an event, feeling, attribute, etc. require not only memory recall, but also a judgment. There is evidence that different cultures use different processes and patterns to make judgments.(49) (23) This may be because cultural values and norms govern the degree of importance that respondents give to specific memories and information recalled from memory. Researchers are interested in identifying these patterns because they can distort group averages and limit the ability to make valid cross-cultural comparisons.(48) Of additional interest to researchers are ways to minimize judgment patterns through question wording and structure.

For example, studies show that African Americans and Latinos are more likely to choose an extreme category in a response measurement scale than others.(50) (48)(36) This tendency is greater in responses from men, the aged and lower socioeconomic status. In some studies, however, this tendency is only apparent when 5-point scales are used. The use of 10-point scales has been shown to reduce this difference.(50)(48) Not only do cultural groups respond differently to measurement scales, but the understanding the scales may also differ by ethnicity.(51) For example, as stated earlier, the Hmong may not respond well to questions about levels

and degrees, but more clearly relate to concepts that they can judge as being present or absent. In these cases, fewer points are helpful as are simple yes or no questions.

Fatalism is another factor affecting judgment in survey responses. This outlook on life is based on the belief that life's events are largely out of one's hands; that fate is in control rather than the individual.(52) Some analysts have connected fatalism with non-compliance in health promotion activities (i.e. use of preventive services, changes in lifestyle or behavior).(53)(54)(52) But the nature of fatalism and the characteristics it creates in the individual (placing the locus of control outside the individual as well as orientation towards the present rather than the future) may effect their health behaviors, approach to the health care system and responses to survey questions on this topic. For example, with regard to the Minnesota Health Access Survey, fatalism may affect responses to questions about reasons for not obtaining health insurance or the possibility of extended a spouse's or family member's insurance to cover the respondent. When listing main reasons for not pursuing health insurance coverage more ardently, the respondent may believe that health in general is out of one's control. Health insurance, therefore, may be placed into this category and left up to fate. It is important to note that studies show Latinos born outside the U.S. were more likely to have fatalistic beliefs than those who were second and third generation residents.(52) Researchers may consider looking more thoroughly into the value and meaning of health insurance and health access beliefs through focus groups and other qualitative methods.

- Response Editing - Response editing occurs when individuals reach one judgment in response to a question, but express another. There are a variety of factors that cause such dissimilarity between thoughts and judgments and responses. Included among these factors are the cultural patterns of *simpatico* and influence of interviewer ethnicity.

Simpatico is a cultural script that may affect response patterns among Latinos. Latinos are more likely than non-Latinos to avoid conflict and encourage positive

social behaviors.(55)(36) The word simpatico does not have an English equivalent, but means to behave in a way that others may find likeable, fun and easy-going. Individuals displaying simpatico tendencies show conformity and the ability to understand other's feelings.(56) Because direct conflict is considered rude, a respondent may tend to avoid disagreeing or appearing negative unless this can be done in a cordial manner.(57) While not always a conscious part of the judgment process, simpatico encourages extreme response styles and response editing. For example, an individual may express extreme satisfaction with their health care provider or their ability to obtain health care when necessary. This connection is displayed through the respondent's desire to perceive a group or collective need rather than voice an individual opinion.(48) It is based on a desire to focus attention on others rather than themselves. While little can be done to alleviate simpatico patterns, awareness of its existence may help researchers in developing probes or methods to assure a respondent that his or her ideas are respected and valued.

Ethnicity of the interviewer may affect survey responses in a few select situations. Respondents over-report ethnic behavior when in-person interviews are conducted by someone of the same ethnicity. However, they tend to underreport the same behavior when interviewed by someone of another ethnicity.(58) Basically, this tendency translates into individuals avoiding responses that may be offensive to the interviewer of another ethnicity, but will be open and frank with interviewers of the same ethnicity. (59) Because ethnicity is observable, this effect may be a factor in telephone surveys, as well as in-person surveys and written surveys administered by an interviewer of another ethnicity.

- Assimilation and Response Patterns - Assimilation refers to the process people undergo when they adopt vocabulary and practices of their host society. Assimilation may occur in one or more areas including the social, economic and cultural aspects of an individual's life.(60) The process of assimilation has been found to affect responses in data collection. Because of its influence, assimilation leads to variation in health related beliefs ranging from the traditional practices, often retained by the

culturally unassimilated, to the less traditional biomedical orientation of residents who are more assimilated.(60)(61)

Different levels of assimilation affect research results in many ways. First of all, the influence of being from a particular culture may be lessened after a substantial period of time is spent in the U.S. Without knowledge of length of time in the U.S., researchers are left without indication of the cultural impact on health related questions. Secondly, assimilation has subtler affect such as comfort level with strangers coming to one's house or calling on the telephone for the purpose of conducting an interview.(62) The comfort level a respondent feels with the interview process may also affect a question's context of meaning.

To acquire valid data, it is important to assure that respondents understood the questions and, based on this understanding, gave their best answers. Levels of assimilation are important factors to consider in data collection with immigrant groups. These levels may influence the way in which a respondent mentally processes a survey question and articulates an answer, referred to as a response process.

Part III. Non Probability Based Design

Characteristics - Non-Probability sampling targets specific groups of people with predetermined characteristics and is intended for obtaining rich, detailed information from respondents by asking open-ended questions and focusing on a small group of individuals. The ability to generalize findings from non-probability based sampling is limited, however, and must be approached with caution. In his book on survey research methods, Floyd Fowler suggests that readers of a study using non-probability sampling should be told how the sample was drawn and the possible biases that may exist.(63) However, he notes that these explanations are rarely provided to the reader.

Non-probability sampling is a widely used method of acquiring data that paints a broader picture of a situation or issues and may aid in future probability based research investigations. It is also the main method used by major public opinion polling groups (including political and market research polls).(63) However, it should be noted that beyond exploratory or pilot studies, the federal government will generally not fund research projects that do not employ probability sample techniques.(63)

There are several modes of non-probability sampling design including convenience, quota, and snowball sampling. Data collection may be done by telephone, focus group or in-person interviews. Generally the questions follow a set of themes, are administered verbally and include discussion and relationship building. Depending on the type of information sought, it is not uncommon to use a combination of sampling strategies. For example, suppose a study based on a probability based sampling design uncovers differences in health insurance coverage between immigrants and non-immigrants. Using non-probability sampling, a follow up study may selectively invite members of each group to find out the possible causes for these differences. A survey may be mailed to individuals who fall into certain ethnic categories, or people of different immigrant groups could be brought together in a focus group asking about barriers to access. Ultimately, such design questions are directly related to the research question, characteristics of the population and the available staff and resources.(63)

Recommendations - Guidelines regarding non-probability designs for immigrants and minorities found in both the literature search and key informant interviews fall into two categories: recruitment strategies and response bias due to different attitudes based on acculturation and length of time in the United States. These guidelines may help researchers in the data interpretation process.

A. Recruitment Strategies:

Use of a multi-method recruitment design worked well for some of the key informants. For example, many informants suggested not only conducting surveys at high profile ethnic events, but also incorporating focus groups and mailings. Several informants suggested that researchers ask not only who are the primary people from whom information needs to be gathered, but also ask who could serve as proxy respondents. Researchers indicated high levels of confidence in proxies, which improves their ability to identify other sources of primary information.

For example, Hmong women under age 40 tend to defer to their husbands. In this regard, it is often difficult to obtain information first hand from Hmong females. The husbands tell interviewers that their wife will respond the same way that they respond and, therefore, it is not necessary to administer the survey to her too.

The Hmong are generally not familiar with surveys and interviews. This, however, varies by generation. For Hmong teens and young adults, their ethnic culture does not play as significant role in their comfort with data collection and information sharing as it did for past generations. Their culture does however, serve as a basis for a socializing and self-identity. It was suggested by one key actor that a solid method of reaching groups of Hmong teenagers by attending ethnic festivals. In one case, Interviewers gave out a coupon for a snack stand located within the festival as an incentive for teens to fill out their surveys. Non-probability samples of Hmong individuals can also be obtained by going to the ESL training at many local centers.

As is true of all non-probability sampling designs, generalizations of study results cannot go beyond the scope of these somewhat restrictive sample frames (i.e. not all Hmong enroll in ESL). Another suggestion was to talk to staff at the Hmong American Partnership about surveying people as they come in the door. Other large gatherings such as sports tournaments offer an opportunity to interview large numbers of Hmong (an annual volleyball tournament is held every July 4). Many times, interviewers will need to ask about residency before doing the survey because Hmong individuals will travel from out of state to attend the big festivals.

Informants said that county social service program staff often have a difficult time reaching Somali, Hmong and Latino populations to sign them up for public health programs. This may explain the lack of insurance among these groups in addition to providing insight into how to locate groups for non-probability based research. Ramsey County has started a formalized intervention through which they hold monthly meetings in apartment buildings that are heavily settled by these immigrant and refugee groups. Each month will focus on a different topic as it relates to health status including public program enrollment, Child and Teen Check Ups, immunizations, etc. If Ramsey County is successful in mapping where concentrated groups of immigrants and refugees reside and if county staff are able to establish some trust in these communities, they may offer a good source of respondents for future focus groups and snowball sampling, as well as providing a model of health intervention.

Another example of successful non-probability research comes from researcher Alex Stepick, who for years has been involved in conducting survey research with Haitian immigrants in Florida, there are many methods for obtaining a sample of undocumented immigrants.(37) Stepick studies the sample cases to which he has access. He is more interested in non-probability sampling techniques in which he studies any and all relevant information gained, rather than on creating the representative sample required for probability sampling. Stepick's non-probability sampling methods included inferences made from secondary sources, direct samples conducted by interviewing apprehended illegal immigrants; locating illegal immigrants who use social service agencies; tracking

down individuals selected from birth or marriage records, and creating snowball samples from illegal immigrant social networks. Stepick encourages establishing strong ties with the ethnic community of interest to create trust and positive relations. In his study with Haitian immigrants, Stepick used an area sample, focusing on tightly clustered neighborhoods from which his researchers located census maps and randomly designating blocks.(37)

Community Support - Several studies and informants indicated that community support from the study population was fundamental to the success of the survey.(39) (37)(64)(38) Researchers became involved with community leaders, setting up survey development advisory groups. These individuals offered insight and awareness into how the survey would be perceived, helped with question development and made sampling suggestions. Other researchers went so far as to become involved in community events. This activity not only built trust between the researcher and the community members, but also served as a way to access individuals who could offer feedback. There may be significant differences between the community leaders and individuals a researcher might meet at community events. Leaders may be more acculturated and familiar with the dominant culture. While they are good bridges back to the community, their viewpoints are different from individuals who may not speak English and are recently new to the country.

Ties with an immigrant community may come in terms of political assistance, as was offered by researcher A. Stepick with the Florida Haitian community.(37) This community offers an interesting precedent for research with undocumented immigrant groups. Because the Haitians feared the governments of both Haiti and the US, researchers had to assure the community that they were trustworthy. Support was garnered primarily through Haitian organizations that then spread the word through Haitian media modes.

Other researchers cited assistance received from clergy members, such as the priest and staff of a Catholic mission in a Latino community that was a key link in the information

gathering process (64) or help from shopkeepers and community agency staff in a study of Puerto Rican households.(38) A study of immigrants in England, authored by A.O. Hughes, used an advisory group comprised of immigrant community members including black Caribbean/African, South Asian and Far-East Asian residents to enhance their data collection practices.(39) Hughes noted that because the research was being managed by white middle-class academics, the community advisory group kept the research connected with the ethnic groups views.

Recruiting and Training Interviewers: A detailed training program is the safest route to ensuring that interviewers understand the expectations placed on them and are fully engaged in the process. Researchers suggest a training program consisting of clear descriptions of the survey objectives, standard interview techniques with an emphasis on a uniform approach to all respondents, a strong message about the importance of wording adherence, a role play session and, if time permits, a brief presentation conducted by experienced interviewer.(39) Informants said that regular meetings with interviewers while they are in the process of conducting the survey are as vital as the training period contact.

If resources permit, an ideal scenario is one in which members of the immigrant or refugee community serve as the interviewers and focus group moderators. While this requires extensive training, it is a renewable resource for the community. Not only is the individual helping researchers uncover trends about his or her community, but also he or she individually benefits by developing a highly desirable skill. Individuals who are already trained in interviewing and facilitation are difficult to find.

B. Data Collection

Establishing Trust: Members from within the Latino community interested in data collection have succeeded in establishing trusting relationships with fellow Latinos and find that they are able to engage them in open dialogue. This honest communication has produced interesting discoveries. For example, in many cases Latino WIC caseworkers find that the WIC recipients are not using their own identification. Often, these

individuals are illegal immigrants too afraid to attempt navigation of the system. Through the trusting relationship, the caseworker is able to gain information and guide them to resources that are non-threatening. This same theory works for survey administration. It is only through trust and open communication that themes and patterns begin to emerge. Building trust begins at the initial steps of planning a survey and is important in gaining community support and input.

Often times, illegal immigrants are the individuals most in need of care. Their illegal status may cause them to delay seeking care until they reach emergency status. The effects of illegal immigrant status are twofold. Many relatives and friends may jeopardize their own care out of fear that the government will discover a loved-one's status. Some free clinics will see patients, regardless of their citizen status. The dilemma is that there are US based firms willing to be free riders of this system, neglecting to provide their immigrant laborers with health insurance.(66)

Length of time spent in the US: Informants stressed the importance of finding out length of time spent in the US, as well as in a given state or locale. The latter is especially important as researchers compare secondary migration tendencies to new immigrants and is a potential indicator of their familiarity with the local health care or public health environment. Many individuals use traditional medicine and are not very familiar with the US health care system until they've been here many years.

Additionally, researchers need to assess a respondent's level of acculturation when figuring out which questions to ask. For example, those Hmong who lived in Laos concentration camps were treated differently than those who continued to live in their mountain villages up until the time of immigration. In Thailand and Laos, Hmong refugees may have experienced health care that more closely resembled the US health care system than those who remained in their villages.

The general attitude among newly immigrated Hmong is that Western medicine is a last resort and is meant to cure an already serious disease or illness. If the Hmong are unable

to cure with traditional healing modes, then they go to U.S. doctor. If the doctor is unable to cure them, that is where human intervention ends. Their perception, as a result of their tendency to pursue only emergency care, is that every time a person visits a US physician, the doctor wants to perform invasive procedures. Even tests and screenings prior to surgery are more invasive than many Hmong are comfortable with.(65)

Survey/Interview Administration: Extended interviews in a comfortable place, such as the home are very welcome to the Hmong community. Informants said that the Hmong will first acknowledge the needs of the family, then their clan and finally Hmong as a whole. For this reason, interpersonal connections are essential and ethnicity of the interviewer/facilitator is important. Once again, an ideal situation is one in which a Hmong person interviews the respondent and thoroughly understands the type of information the researcher is trying to acquire. If researchers simply use a translator who doesn't know the details of the project, it is likely that they will get a watered down product. One informant said she knows very few Hmong in the area who are knowledgeable about evaluation and data collection methods. Because of this, many hired workers are able to translate, but not fully grasp the necessary rigor needed to acquire accurate, unbiased data.

Part IV. Probability-based Design

In order to obtain population based estimates, a probability-based design must be followed. The need for a large sample constrains the type of information that can be obtained, therefore, a closed-ended (fixed response) survey is the most feasible and economical. However, this question format may be problematic when seeking information from immigrant, refugee or ESL populations.

Survey methods corresponding with probability sampling, in order from least to most costly, are mail, telephone, and in-person. Probability sampling is characterized by random sampling techniques. In other words, each member of a target population must have a known or equal chance of selection to participate in the survey. This technique

produces (unbiased) estimates of the characteristic investigated within the population of interest and allows for generalization from the sample to the population. There are two possible methods for sampling special populations such as immigrants and refugees. These methods ensure that the data is collected from groups that are under-represented in the general population.

One method is to provide a screen for the target group. A screen is a way to contact potential members of a sample frame and ask a set of questions to determine eligibility for inclusion. After it is determined whether or not an individual is eligible, interviewers conduct the survey with those meeting the inclusion criteria. Another method is stratified sample design, where the investigator oversamples in geographic regions known to have a disproportionate share of the subpopulation of interest. Researchers who stratify need to apply sample weights (a number for each member of the sample) reflecting the inverse of the probability of selection for that member. A separate probability is necessary for each stratum and the combined estimate from each stratum produces the estimate for the whole population.

Researchers may also wish to adjust the sample based on non-response and incomplete frame coverage (e.g. phone coverage interrupted). While there are many suggestions to use in reducing non-response rates, several guidelines should be considered when working with immigrants and refugee populations. These guidelines, as follow, fall into the areas of interviewer training/recruitment and the translation and development of the survey instrument.

A. Recruiting and Training Interviewers

Consideration of Dialects: According to the informants, this issue is noteworthy not only for Latino populations, but for Hmong and Somali as well.

1. Somali: There are divisions that affect dialects and understanding such as northern and southern Somali.

2. Hmong: There are clans within the Hmong culture (green, white) and multiple dialects that should be considered when trying to generalize a survey instrument to the sample population. There are many different “levels” of Hmong spoken. Levels of language usage vary based on role and standing. For example, there is a difference between women and men, and housewives speak differently than those women who are working. A clan leader uses a different mode of speaking than any other clan member. As far as dialect is concerned, the White Hmong comprises the majority in the Hmong communities and it is more likely to be spoken and/or understood by most people, both old and young.

Cultural context of surveyors: Cultural context can negatively or positively alter the meaning of the survey question. Whether positive or negative, a respondent’s cultural context will bias the results of the survey. To minimize these biases, awareness of background and lived experiences should be taken into account while questions are being developed.

Negative Context: Researchers need to be aware of cultural background and common experiences to avoid mentioning distasteful or painful topics during the survey. Even some basic demographics can be painful for certain groups. Many Hmong refugees lost at least one child during the Vietnam War. Asking how many children they have can be a painful question and may alter the responses to the rest of the survey. Another issue of relevance in the Hmong community is perception of government agencies. Hmong men were not required to pass a language test for U.S. citizenship. However, now that some of them have died, their citizenship does not transfer to their widows. The result is built up resentment towards the U.S. government for promises not kept or fulfilled. Studies conducted in conjunction with governmental bodies may illicit hard feelings, mistrust and perhaps non-cooperation by respondents.

Positive Context: One key informant relayed an example of cultural context and its affect on survey responses by telling a story of problems she encountered with the phone company while living in Sweden. Having had terrible experiences in United States, she

gathered copies of every transaction she had with the Swedish phone company including bills and check copies, and traveled to the phone company offices to straighten out the problem, rather than work it out over the phone. Expecting a large administrative mess taking hours of time, she was thrilled when everything was handled within 5 minutes. The promptness and efficiency of the Swedish phone company was probably not remarkable, but coming from her past experience and cultural context, it was exceptional service. The informant said that if someone had handed her a customer satisfaction survey right then, the Swedish phone company would have received outstanding comments and ratings. Survey responses are dependent on the context (both past and immediate/contemporaneous) from which the respondent is coming. Many individuals, especially non-English speaking immigrants, come from oppressive, war-torn, chaotic situations. Knowing how the respondent's background may affect their responses is fundamental to accurate data collection and instrument development, as well as interpretation of study results.

B. Translation and Development of Survey Instrument

Translation Steps – Challenges in appropriate translation of a survey instrument are common. It may be difficult to assess which items poorly translate into another language or are offensive to a particular culture. Dialect and class differences further confound the issue of translation.(40) For this reason, following a protocol compiled through other researcher's trial and error may save a lot of work in the long run. Below is a list of suggested steps to take when developing a translated survey instrument:

Step 1: Locate a research firm with considerable experience conducting interviews with non-English speaking participants.

Step 2: Hire the firm to develop two translations of the original tool:

- 1) A literal, word-for-word translation from English to other language, and
- 2) A conceptual translation using the language, dialect and syntax used by the selected community.(67) If possible, hire multiple translators to complete these two tasks. This process, also referred to as power translating, allows comparison of different translated versions. A

consensus should be reached by these translators on a final translated version before proceeding to the next step.(68)

Step 3: Bring together a committee including (at minimum):

- One of the original translators (a spokesperson for the power translation process team);
- Other native speakers from a variety of regions who are independent of the survey.

Make sure that one committee member speaks **only** the non-English language.(68) Please note: Omitting this step is a frequently occurring mistake. If all committee members are bilingual, they will be bringing perspectives gained through their use of multiple languages. Bilingual individuals are fundamentally different than those individuals who speak only one language. To get the clearest perspective on cultural interpretation and translation, guarantee the attendance of a monolingual representative.

Step 4: Committee reviews the translations and, in the case of predominantly non-English speaking committee members, shares the translated survey with family members for validation.(67)

Step 5: Committee members reconcile differences between the English and translated versions and decide on a draft version.(68)

Step 6: Back translate the draft survey. The back-translation may reveal language irregularities. In Berkanovic's study of language translation in Latino health surveys, the results illustrated that while "the intent of the questions would be understood by most respondents" the translator perceived that respondents would be "amused by the lack of facility with which the language was used." Berkanovic suggests, "The unidiomatic choice of wording in Spanish would result in Spanish speaking Latinos perceiving the overall interview situation differently, possibly taking the interview less seriously." (Berkanovic, 1980, AJPH p. 1275) These findings suggest that care needs to be taken that any translation achieves a level of language usage that is equivalent to the original source. Otherwise

between-group differences may reflect differences in the adequacy with which different languages are used. Back-translation by translators who have not viewed the original English survey is strongly recommended.(69)

Step 7: Depending on the respondent population, develop a dual-language tool; one that includes alternative acceptable wording in parentheses within the text and that places English phrasing beneath other language text to allow respondents to consult both versions to promote comprehensive understanding of the questions.(67) This method is particularly useful when in written surveys and those dealing with a large variance in language skills and literacy in both English and the non-English language. Hendrickson's research shows that the dual language instrument is a successful strategy when working with immigrant groups because it allows respondents who are bilingual or monolingual with moderate fluency in one of the two languages to double-check their understanding of the statement. Individuals who are not comfortable with either language due to dialect or contextual differences, are able to look at both selections to develop a combined understanding of the statement. Or, they may seek the help of a family or friend who is comfortable in one of the languages.

Step 8: Community members are used to pre-test survey instrument.

Participatory Research: The Minnesota Department of Health in conjunction with the CDC is working within Somali immigrant communities to improve health status. Using participatory mechanisms of research, MDH staff are training Somali to be focus group moderators, instead of having a moderator who is English-speaking and needs to use a translator. This will build local capacity to conduct other research among this growing refugee group. Any involvement of the community of interest in the development of the survey instrument will only strengthen the reliability and validity of the data collected.

Interviewer Characteristics: Key informants used interviewers who were immigrants with differing numbers of years spent living in the U.S. They were located through referrals made by community organizations and other survey administrator networks.

Informants encouraged researchers to hire interviewers from the appropriate country and heritage for the accompanying survey respondent group. For example, Latinos all have different cultural experiences that should be accounted for in the survey instrument. An understanding of class diversity and regional dialect differences are important too, as there here are subtleties in the heterogeneity of each ethnic population that need to be taken into account. The questions meaning could be interpreted different ways, depending on country of origin and dialect. It is important to employ interviewers and translators from each community of interest.

Survey Interpretation: Focus groups are extremely helpful in the interpretation of survey results. However, focus groups tend to be comprised of the most highly functioning, acculturated immigrants and refugees. They may not adequately reflect the broader immigrant population of interest. This limitation should be considered when using focus group data.

Part IV. Analysis of 1999 MNHA Data

The Minnesota Health Access survey methodology of 1999 was the impetus for this inquiry into approaches to survey of immigrants. The 1999 survey represents the first year non-English interviews were attempted. As the 1999 surveys were being completed, a list of households that were unable to participate in the survey due to language barriers was compiled. The University of Minnesota School of Public Health contracted with Wilder Research to translate the existing MNHA survey into Hmong and Spanish and to conduct the non-English interviews. Non-English speaking household members were re-contacted and again invited to participate in the survey, this time, when possible, in their native language.

The research methods follow the larger MNHA survey methods, deviating at the final stages when translation and second contact with households occurred. To outline these events, this section will first describe, in detail, survey administration methods used in the general MNHA survey including survey contents. A brief description of the translation and administration process that Wilder Research used for the non-English speaking survey will follow. Finally, a comparison is made between English and non-English Hmong and Latino respondent's insurance status, types of insurance coverage, income and health status. The report concludes with a summary section and lessons learned both in the 1999 survey as well as the through the literature reviewed and key informants interviews summarized in the first segment of the report. Both aspects of this report serve as the connecting point for future data collection in the state.

MNHA Methods: Survey Administration

In 1999, telephone interviews were conducted in households throughout Minnesota using Computer Assisted Telephone Interviewing (CATI), which enables interviewers to clearly follow skip patterns in the survey based on answers to previous questions.

Possible sources of bias include telephone ownership, non-response bias and language barriers. Telephone ownership is not considered to be a significant bias in the study, because, although those without telephones would be unable to participate and may be significantly different than the group that are reached and interviewed, the majority of Minnesotans have telephones. Approximately 97.8 percent of individuals have telephones. This number justifies the use of telephone surveying as a means obtaining quality data.

Non-response bias remained a potential source of bias. Interviewers may have had higher success rates contacting bigger households. With more people living under the same roof, the likelihood that an individual will be home and will answer the phone is increased. While sampled households were weighted to account for this difference, there may have been households that were never reached because only one person lived there. However the distribution of household size in the sample mirrored the Census Bureau projections for the state of Minnesota.

Randomly selected households were called using a random digit-dialing sample generated and purchased from an East-Coast firm. Once a household member was reached, all members of the household were enumerated and one person was selected at random to participate. If that member was under age 18, an adult proxy was asked to answer for them. In 1999, 9,571 surveys were completed, yielding a 79% response rate. The data are weighted to represent the larger MN population. Specifically, the sample data was weighted to account for differences in the probability that a respondent would be selected for the interview based on differences in household size.

Although less than one percent of the interviews could not be completed due to language barriers in 1990 and 1995, there is reason to be concerned that those not fluent in English may be very different than those who are fluent. These differences may be in access to health insurance and health care, the primary focus of the survey. With the increase in immigrant groups and changing demographics within Minnesota, the presence of language barriers is a problem in the administration of surveys. For this reason, the

MNHA was translated into Hmong and Spanish by the Wilder Research Center. The data will allow general comparisons to be made between English speaking and non-English speaking immigrant groups with respect to health care coverage.

Survey Content

All respondents complete the screening interview, which takes about ten minutes. The screening interview obtains information about current health insurance coverage, coverage over the prior year and demographic data. Demographic data includes household composition, zip code, how long the respondent has lived in Minnesota, their age, gender, race, ethnicity, as well as income, marital, education and employment status.

Respondents are asked whether or not they have health insurance coverage in the following categories:

- Medicare, Railroad Retirement Plan
- VA, Military Care, Indian Health Service, CHAMPUS
- MA, Medicaid, GAMC or PMAP
- Minnesota Comprehensive Health Association plan
- MinnesotaCare
- Employer-subsidized insurance (group insured)
- Self-purchased policy

Additionally, they are asked if they had coverage for all of last 12 months. If, on the other hand, they did not have any coverage in the above listed categories, they are asked if they had any health insurance at all in past 12 months. As a final check, respondents are asked: *“Does anyone else pay for your bills when you go to the doctor or hospital?”* This question is directed at respondents who did not report any health insurance coverage. It is intended to avoid any misclassification in responses. For example, some respondents may have misunderstood what qualifies as health insurance or health care benefits and answered that they did not have coverage when in fact they did.

More detailed information is collected for the following four groups of individuals, adding between five and fifteen minutes onto the length of the interview:

- Continuously uninsured (Respondents who were uninsured all of the previous 12 months);
- Intermittently uninsured (Respondents who were uninsured at some point during the previous 12 months);
- Individually insured (Respondents who purchased and were covered by their own insurance policy all of the prior 12 months);
- Group insured (Residents who had health insurance coverage through an employer for all of the previous 12 months).

Translated Survey Instrument

The University of Minnesota Division of Health Services Research and Policy contracted with Wilder Research Center to survey non-English speaking Hmong and Latino households in the state. During the administration of the Minnesota Health Access Survey, interviewers noted households where language was an obstacle to administration. The sample cards from these households were forwarded onto Wilder Research Center staff, who proceeded to administer surveys for these populations.

Wilder used the Minnesota Health Access Survey instrument as the standard from which translations were made into Hmong and Spanish. (See Appendix for English versions of MNHA surveys). The screening interview plus demographics, as well as the continuous and intermittent long forms were translated into Hmong and Spanish. The group and individual long forms were not due to budgetary constraints and desire to focus on access issues among the uninsured.

When asked for details on the translation and survey administration process, the translator working on the Spanish instrument didn't note specific changes, but did speak of difficulties in administering the survey (details below). On the other hand, the translator working on the Hmong instrument, did not note difficulties in administering the survey, but did talk about specific changes that were made in translation. Their

comments are recorded in the following text as are descriptions of changes made to the MNHA survey in the process of translating it into Spanish and Hmong.

Hmong Translations

Responsibility of the Hmong translation and project management went to the Survey Project Coordinator and Supervisor for Wilder Research Center. Many concepts from the original survey did not translate well into Hmong. These items were either omitted or modified based on the ability for Wilder Research Center to conceptually translate the ideas into coherent and meaningful language.

The Hmong screening survey **omitted** the following questions asked in both the English and Spanish version.

Screeener Form, H Series Question:

I am going to read you a list of different types of health insurance. Please tell me if you currently have (has) any of the following, (all of which are very small public programs, therefore bias in omitting these options is negligible at most):

H2. A Railroad Retirement Plan?

H6. The Children's Health Insurance Plan, known as CHIP?

H7. Insurance through the Minnesota Comprehensive Health Association or high risk pool insurance (known as MCHA).

Screeener Form, Question S16B and S17B; ON/OFF Survey, Question T1B;

UNINSURED Survey, Question U4B, U5B (Aside from the lack of gradient concepts [strongly agree to strongly disagree] in Hmong culture, the translator did not feel the distinction between rights and privileges with regard to health care and insurance would have meaning for Hmong respondents.)

How strongly do you agree that access to medical care is a privilege/right?

How strongly do you agree that having health insurance is a privilege/right?

Screeener Form, Question S19; UNINSURED, Question U39;

Are you (Is RESPONDENT) of Spanish or Hispanic origin?

Screener Form, Question S32; ON/OFF Survey, Question T57; UNINSURED, Question U39 (Not applicable)

Is the head of household of Spanish or Hispanic origin?

The following questions were simply **modified** for clearer comprehension. The original (O) appears first, followed by its revised (R) version.

Screener Form, Question S18; UNINSURED, Question U27

(O) Would you say your (RESPONDENT'S) health, in general, is excellent, very good, good, fair or poor?

(R) How satisfied are you with your health in general? (Strongly satisfied, somewhat satisfied, somewhat dissatisfied, strongly dissatisfied, don't know, refused).

ON/OFF Survey, Question GRID1B (Use consistent terminology throughout report.)

(O) And what type of coverage was that?

(R) And what type of insurance was that?

ON/OFF Survey, Question T11 (Simplify language when possible.)

(O) Does the firm you (RESPONDENT) work for offer health insurance as a benefit to any of its employees?

(R) Does the firm you work(s) for offer health insurance to any of its employees?

ON/OFF Survey, Question T14 (Simplify language when possible.)

(O) Does the health insurance benefit you (RESPONDENT) have through your work or union offer a choice of different plans, or is there just one plan? For example, your company might offer insurance through MORE than one CARRIER, like as Medica and HealthPartners. If your company only has insurance through ONE carrier, like HealthPartners, your company might offer one HealthPartners plan at no charge to you, or you could pay a little more and buy a different HealthPartners plan with more benefits.

This would mean you have a choice of plans. Do you have (just one plan, choice of plans, not sure, refused).

(R) Does the health insurance benefit you (RESPONDENT) have through your work or union offer a choice of different plans, or is there just one plan? Do you have (just one plan, choice of plans, not sure, refused).

ON/OFF Survey, Question T21 (Simplify language whenever possible)

(O) The Health Insurance Portability and Accountability Act is a new federal law that prohibits your new employer from denying you health insurance coverage due to preexisting health conditions if your COBRA option has expired. IN THE PAST 18 MONTHS have you obtained your health insurance through the Portability Law?

(R) There is a new federal law called “The Health Insurance Portability and Accountability Act” that prohibits...

ON/OFF Survey, Question T25 (Shorten explanations.)

(O) Now I’m going to ask you about a number of public insurance programs available through the state of Minnesota that target those who are uninsured?

What is the main reason you are not covered by any of these programs?

(R) What is the main reason you are not getting any of these programs?

UNINSURED Survey, Question U12 (Use consistent terminology throughout report.)

(O) What is the main reason you are not covered under the Minnesota Comprehensive Health Association plan?

(R) What is the main reason you are not getting health insurance from the Minnesota Comprehensive Health Association plan?

UNINSURED Survey, Question U14 (Simplify language whenever possible.)

(O) Does the firm you work for offer health insurance as a benefit to any of its employees?

(R) Does the firm you work for offer health insurance to any of its employees?

UNINSURED Survey, Question U17 (Simplify language whenever possible.)

(O) The COBRA law is a federal law that allows you to continue your health insurance with your former employer for up to 18 months at your own expense. During the last two years, did you at some point obtain your insurance coverage using the COBRA law?

(R) There is a law called COBRA that allows you to continue your health insurance with your former employer for up to 18 months at your own expense. During the last two years, did you at some point obtain your insurance coverage using the COBRA law?

Spanish Translations

Wilder subcontracted the Spanish survey translation out to an independent translator. The translator said that the Spanish translation directly paralleled the English version's wording. The translation itself posed no apparent problems. For example, there were no questions deleted or change in phrasing to account for cultural differences in concepts. However, she noted that the original English survey instrument was very awkward when not being delivered through a Computer Assisted Telephone Interviewing (CATI) mechanism. The number of Hmong and Spanish surveys required did not make CATI administration cost effective. Skip patterns in the survey questionnaires created awkward pauses as the survey administrator struggled to find the appropriate page. The translator also stated that health insurance questions in general were confusing to many respondents. Many struggled with the meaning of questions about specific health care policies and programs. A question regarding use of COBRA created much confusion, as did questions on the use of MCHA, a Railroad Retirement Plan and Indian Health Services. The translator felt that these unclear terms, paired with the survey administrator's confusion about skip patterns may have created some disturbances and

frustration with the survey. She also said it would be helpful to have question about how long the respondent was living in the United States and another question addressing specifically how long they've lived in Minnesota. These questions were added to the 2001 MNHA.

Data Analysis and Lessons learned

To examine the differences between non-English speaking and English speaking Hmong and Latinos, a combined data set was formed comprised of all Hmong and Latino survey respondents in both the MNHA English speaking sample and the MNHA non-English speaking sample.

The next step was to sort the English speaking Latino and Hmong into a new data set and merge that with the non-English speaking Latino and Hmong, making sure to identify each of these four groups separately. Frequencies and cross-tabs were run with this data to look across language lines within ethnic group for differences.

The overall goal was to compare non-English speaking Latinos with English speaking Latinos and non-English speaking Hmong with English speaking Hmong. A number of the variables were examined including single items (e.g., marital status, employment, education) and combinations of items (e.g., insurance status, household composition etc). These variables required the same attention to detail as the general sample, including attention to setting up the multi-item variables and cleaning the data.

An item-by-item (or construct by construct) comparison of non-response bias was also completed in an effort to uncover any systematic patterns in refusals or missing data by language and ethnicity. This process did not reveal any patterns or differences in data missing by survey language or respondent ethnicity.

After looking for non-response differences and potential biases, the groups were compared in terms of insurance coverage, access, and demographics (household composition, education, income, # of years in MN, residence urban/rural, TC or outside). An analysis was completed in the form of a T-test comparison using the Welsh measures of unequal variance. The Welsh test examines the difference between means using data that violate the assumption of homogenous variance.

Results

As presented in Table 1, the demographic characteristics of the survey respondents vary by both ethnicity (Hmong or Latino) and language (English or non-English speaking). Out of 258 respondents, 201 spoke English and 57 were non-English speakers. The percentage of English to non-English speaking respondents by ethnicity is reversed for Hmong and Latinos: 81% Latinos respondents spoke English while 76% Hmong did not.

Table 1. Distribution of Survey Respondents by Ethnicity and Language

Ethnicity	Non-English Speaking	English Speaking	Total
Hmong	13	14	27
Latino	44	187	231
Total	57	201	258

The estimates of insurance coverage by language are displayed in Table 2. The estimates were calculated by combining Hmong and Latino samples, given the small sample size within the Hmong subsamples. As shown, the levels of uninsurance are significantly higher for non-English speaking respondent than English speaking. These estimates were different for all categories of uninsurance including insurance at the time of the survey, continual uninsurance throughout the year, and periods of uninsurance during the year. While there was no significant difference between the two groups and their enrollment in public programs, English-speaking respondents were also significantly more likely to be enrolled in group insurance. It is unclear from the data whether or not this difference is attributable to English speaking respondents being more likely to gain employment, more likely to understand the concepts of health insurance, or more likely to be in jobs that offer health insurance, or simply more likely to be financially able to “take up” or pay their portion of health insurance premiums.

Table 3. Estimates of Respondents' Insurance Coverage by Language (Hmong and Latinos Combined)

Insurance Status	English	Non-English
Currently uninsured (95% confidence interval)	7% (3.4 – 10.3)	42%* (29 – 55.3)
Continuously uninsured all year (95% confidence interval)	4.5% (1.6 – 7.4)	28%* (16 – 40.1)
Uninsured part year (95% confidence interval)	7.9% (4.2 – 11.7)	19.3%** (8.7 – 30)
Total part and all year uninsured (95% confidence interval)	12.4% (7.8 – 17)	47.4%* (34 – 60.1)
Continuously group insured all year (95% confidence interval)	62.2% (55.4 – 69)	28.1%* (16 – 40.1)
Continuously public insured all year (95% confidence interval)	23.4% (17.4 – 29.3)	22.8% (11.6 – 34)

* All tests of difference between English and non-English speaking respondents are significant at the p<.01 level.

** All tests of difference between English and non-English speaking respondents are significant at the p<.05 level or better.

Table 4 presents data on insurance coverage, this time based on respondent ethnicity. It should be noted that the small Hmong sample size created rather large p-values and confidence intervals, but nonetheless, illustrates significant difference by insurance status. For example, Latino respondents had almost twice the percentage of uninsured respondents than Hmong. While group coverage and public insurance do not indicate significant differences, there are indicators in the data that support the hypothesis that Latino uninsurance rates are consistently higher than those of Hmong.

Table 4. Estimates of Respondents' Insurance Coverage by Ethnicity

Insurance Type	Hmong	Latino
Currently uninsured (95% confidence interval)	11.1 (-1.6-23.8)	15.2% (10.5 – 19.8)
Continuously uninsured all year (95% confidence interval)	7.4% (-3.2 – 18)	9.9% (6.1-13.8)
Uninsured part year (95% confidence interval)	4% (-3.9 – 11.3)	11%*** (7.1 – 15.3)
Total part and all year uninsured (95% confidence interval)	11.1% (-1.6 – 23.8)	21.2% (15.9 – 26.5)
Continuously group insured all year (95% confidence interval)	55.6% (35.5-75.6)	54.5%*** (48 – 61)
Continuously public insured all year (95% confidence interval)	33.3% (14.3 – 52.3)	22.1% (16.7 – 27.5)

***All tests of difference between Hmong and Latino respondents are significant at the p< 0.1 level or better.

Because the sample size was extremely small for Hmong, analysis comparing English and non-English speaking Hmong was not possible. However, this analysis was feasible for the Latino respondent data with notable results. Table 5 illustrates significant differences in English and non-English speaking Latino respondent’s insurance coverage. Non-English Latinos have higher percentages of uninsurance by all definitions (continuously uninsured, uninsured part of the year and these two categories combined for total part and all year uninsurance). Additionally, English-speaking Latinos have higher participation in both group and public insurance than non-English speakers. The survey indicates that English-speaking Latinos have higher rates of enrollment in public programs, but interpretation of this data may vary. For example, this difference could be related to education on the part of counties and health plans, or it could be due to their understanding of the Minnesota health care system and willingness to participate in these programs.

Table 5. Estimates of Latino Respondents’ Insurance Coverage by Language

Insurance Type	Non-English Speaking Latino	English Speaking Latino
Currently uninsured (95% confidence interval)	50% (34.6 – 65.4)	6.9%* (3.3 – 10.6)
Uninsured all year (95% confidence interval)	34.1% (19.5 – 48.7)	4.3%* (1.4 – 7.2)
Uninsured part year (95% confidence interval)	22.7% (9.8 – 3.6)	8.6%** (4.5 – 12.6)
Total uninsured at any time during the year (95% confidence interval)	56.8% (42 – 72.1)	12.8%* (8 - 17.7)
Group ins. all year (95% confidence interval)	25% (11.7 – 38.3)	61.5%* (54.5 – 68.5)
Public ins. all year (95% confidence interval)	15.9% (4.7 – 27.2)	23.5% (17.4 – 29.7)

* All tests of difference between English and non-English speaking respondents are significant at the $p < .01$ level.

** All tests of difference between English and non-English speaking respondents are significant at the $p < .05$ level or better.

Information on the respondent’s reported health status was also analyzed. The data were collapsed in order to examine positive health status and report the top two of a 5-point health status scale. The analysis produced some interesting figures (Table 6) indicating a

possible correlation between language (or acculturation) and perceived health status for Latinos in the sample (again, sample size prohibits this analysis among the Hmong).

Non-English speaking Latinos are very different from English speaking Latinos in their perceived health status. Very few non-English speaking Latinos classified their health status as good as compared to the English speaking Latinos. This may be a result of higher socio-economic status within the English speaking Latinos, as well as better living conditions leading to better health status. Additionally, these statistics may indicate that yeh-saying and fatalism may not be as prevalent within the non-English speaking respondents as anticipated. However, researchers and health policy analysts may need to be concerned about the type of health status that is interpreted as “good” among English speaking Latinos. Because literature often points to the strengths of Latino health (such as higher birth weights compared to non-Hispanic black Americans and lower infant mortality compared to non-Hispanic white Americans(41)) lawmakers may believe that Latinos are healthy regardless of insurance status. However, this assumption may be false based on overall health status.

Table 6. Percent of Respondents’ reporting Excellent to Good Health Status

Non-English Speaking	English Speaking
73.1% (67 – 79.3)	38.6%* (25.6 – 51.6)
Latino (Eng. & Non-English)	Hmong (Eng. & Non-English)
88.9% (76.2 – 100)	62.8%* (56.5 – 69.1)
Non-English Latino	English Latino
22.7% (9.8 – 35.6)	72.2%* (65.7-78.7)

* All tests of difference between English and non-English speaking respondents are significant at the p<.01 level.

Sixty-eight percent of the non-English speaking respondents supplied interviewers with income data (39/57), compared to 86 percent of English speaking respondents. This is always a challenging area of data collection. Although the high level of missing data constrains our confidence in drawing conclusions, the data revealed several trends.

Focusing first of the differences between non-English speaking and English speaking respondents (see Table 7), we find that there are more families (“family” means with children) with children in poverty among non-English speaking groups. None of the non-English speaking families had incomes greater than 275% of Federal Poverty Level (FPL), whereas 49 out of the 172 English speaking respondents had incomes above 275% FPL . Almost 44% of non-English speaking families fell below the 133% FPL guidelines, accompanied by almost 13 percent of single adults who were non-English speaking. The analysis on middle ranges of poverty (less than 135-175 FPL for a single adult or couple without children and 133-275% FPL for a family) were not statistically significant.

Cross ethnic comparisons are also presented in Table 7. Although confidence intervals are wide, the data shows a statistically significant difference between the 72 percent of Hmong families with an income less than 135% family versus the 14.5 percent of Latinos. Additionally, 26 percent of Latino single adults/couples without children had incomes above 175%.

To summarize, non-English speaking respondents providing income data are more concentrated at the lower end of the income distribution. In addition, according to available data, Hmong respondents (English and Non-English combined) are less affluent than Latino respondents.

Table 7. Respondents' Income Data by Language and Ethnicity

A. Language	English	Non-English
Single/couple w/o dependents<135% fpl (95% confidence interval)	2.9% (.37 – 5.4)	12.8% *** (1.8 – 23.8)
Family <133% fpl (95% confidence interval)	14% (8.7 – 19.2)	43.6% * (27.3 – 59.8)
Single/Couple w/o dependents<135% -175% fpl (95% confidence interval)	4.7% (1.5 – 7.8)	5.1% (-2.1 – 12.4)
Family 133-275% fpl (95% confidence interval)	25% (18.5 – 31.5)	33.3% (17.9 – 48.8)
Single/Couple w/o dependents>175% fpl	28.5% (21.7 – 35.3)	5.1% * (-2.1 – 12.4)
Family >275% (95% confidence interval)	25% (18.4 – 31.5)	0% *
B. Ethnicity	Hmong (Eng. & Non-Eng.)	Latino (Eng. & Non Eng.)
Single/couple w/o dependents<135% fpl (95% confidence interval)	0	5.2% * (2 – 8.3)
Family <133% fpl (95% confidence interval)	72.2 (49.3 – 95.1)	14.5% * (9.5 – 19.%)
Single/Couple w/o dependents<135% -175% fpl (95% confidence interval)	0	5.2% * (2 – 8.3)
Family 133-275% fpl (95% confidence interval)	28% (4.9 – 5.1)	26.4% (20.1 – 32.7)
Single/Couple w/o dependents>175% fpl	0	26.4% * (20 – 32.7)
Family >275% (95% confidence interval)	0	22.3% * (16.3 – 28.2)

* All tests of difference between English and non-English speaking respondents are significant at the p<.01 level.

** All tests of difference between English and non-English speaking respondents are significant at the p<.05 level or better.

***All tests of difference between English and non-English speaking respondents are significant at the p<0.1 level or better.

1999 MNHA Study Highlights and Application

The following are highlights from the MNHA data. These results are key indicators of areas needing further study or refined data collection instruments.

- Levels of uninsurance are significantly higher for non-English speaking respondents than English speaking. *Conclusion: Command of the English language and the familiarity with health insurance this brings may provide increased potential for obtaining health care access.*
- English speaking respondents are more likely to have group coverage. *Conclusion: English speaking respondents may be more likely to obtain employment, more likely to understand the concept of insurance and more likely to have jobs that offer health insurance coverage and salaries that permit take up. These are all issue that could be explored in conjunction with insurance status.*
- A higher number of Latinos (both English and non-English speaking) than Hmong respondents were uninsured. *Conclusion: Is insurance coverage a matter of cultural belief or understanding? It is possible that Latinos are culturally opposed to obtaining services through the government, are weary of spending their money on premiums, or believe that they only need medical care in emergency situations. These issues are best explored through focus groups.*
- A higher number of Hmong (both English and non-English speaking) than Latino respondents are low income (less than 135% FPL for adults without dependents; less than 133% FPL for families). *Conclusion: Hmong may have a greater cultural gap to bridge and may not find employment as easily.*
- 72 % of English speaking Latinos rated their health as “excellent” to “very good” compared with 23% of non-English Speaking Latinos.

Conclusion: English speaking Latinos may be better off financially and advantaged in terms of their health than their non-English speaking counterparts..

Limits of the Study

The study was conducted on a small number of respondents who were unable to participate in the full MNHA survey due to language barriers. There was no stratification or oversampling of these populations in the statewide sample design to increase the sample size of these subpopulations. Additionally, the nativity of respondents was not asked, limiting the ability to look at the relationship between country of birth, language, ethnicity and access health insurance. Issues such as question interpretation, judgment, response editing and assimilation would require a different data collection venue or follow-up after the survey.

Strengths of the Study

The translated survey paralleled the original English survey in as many areas as were possible, given the translation mechanisms, small sample size and budget of the study. Data including nativity, length of time in the U.S. and employer related issues were not included in the 1999 survey, but were incorporated in the 2001 survey.

Part V. Summary and Conclusions

Because of low English usage, high mobility and a variety of cultural considerations, immigrant communities are often difficult to sample and include in health service research. However, a more thorough examination of their health insurance and barriers to access is essential to the health and well being of our Minnesota communities.

Such examination may take a variety of forms, both qualitative and quantitative. A variety of approaches will produce the clearest picture of problems and potential solutions. Because the Minnesota Health Access Survey has in the past been based on probability sampling and telephone interviews, it is this form of data collection that deserves the most attention if we are to develop a true picture of the health insurance status of our immigrant communities. Gaining a clearer understanding of the barriers to obtaining insurance may be better served through one-on-one interviews and focus groups using non-probability sampling.

Data Collection with Immigrants

In order to improve the rates of health insurance in Minnesota, we need to look at the whole populations, including the increasing number of individuals who do not speak English. The effect of such a comprehensive level of analysis may be profound. Minnesota may, in fact, find that it has a much higher level of uninsurance than originally calculated. In order to address these possibilities, data collection efforts need to be perfected with regard to non-English speaking respondents.

Three areas of consideration emerge when data collection strategies are closely examined. These areas include coverage issues, data quality issues as well as various guidelines for non-probability or probability design that are particular to immigrants and minorities. Summarized, they are as follows:

- Data Quality Issues – When creating a survey, researchers need to examine issues of nativity, linguistic issues and potential interpretation and judgment concerns prior to developing a survey instrument. Additionally, when choosing a method of sampling, attention should be given to population subgroups as well as overall ethnicities. For example, Cubans and Puerto Ricans may be very different from Mexicans in their enrollment in health insurance programs. Also under the rubric of data quality issues are response patterns; understanding of culturally related response patterns may be helpful in question development and interpretation. For example, some cultures inherently dislike conflict and will always try to answer in ways that agree or “yeh-say” with the dominant culture. Other cultures have trouble understanding measurement scales and conditionalities. For these cultures, specific questions should be formatted to best capture their perceptions and experiences with the health care system. Finally, understanding different levels of acculturation is essential in data collection because immigrants differ in their perceptions and understanding of U.S. culture and health care systems depending on the length of time they have resided in the United States. This length of time must be considered if researchers hope to discover which groups are less likely to enroll in health insurance programs or if health program administrators seek to improve the overall rates of take up. All of these issues measure differences between individuals that, ultimately, are indicators of where and how health program administrators can impact the overall uninsurance rates.
- Recommendations for Non-Probability Design – Community support was a key factor that repeatedly arose in both the literature search and the key actor interviews. Support from the community of interest not only makes instrument development, sampling, and recruiting of interviewers easier, but also assures that appropriate cultural issues and concerns are addressed by the research. There are various guidelines and recommendations outlined in the Non-Probability Design section of this report (p. 26) including tips on ways to access the Hmong for quota, convenience or snowball sampling, as well as the importance of building relationship so as to build

trust within the communities and increase the likelihood that the results will be put to use by the communities of interest.

- Recommendations for Probability Design and Structured Interview Data Collection Methods – There are very well examined processes and protocol that should be used when developing a survey tool and administering it. These especially apply to probability design methods used with immigrant communities, to eliminate biases in the result. For example, translation is a very sensitive aspect of survey development. A variety of tips and strategies can make the translated survey instrument much more reliable. To see a list of translation tips, please refer to the survey development protocol listed in the Probability Design section of the report (p. 32). Other issues addressed in the report include the possibility that data collection is challenged by illegal immigrant issues. Finally, considerations for recruitment and training of interviewers are addressed, including issues of dialect and cultural context of the surveyors and their effects on data collection.

The items listed above may help researchers more fully examine the health insurance status of increasing number of immigrants in Minnesota. Our initial comparison of English speaking immigrants to those who are non-English speaking indicates significant differences in rates of coverage and types health insurance. Application of these considerations may lead to a more thorough investigation of differences and patterns between these two groups. Highlights of the study findings include:

- Fifty percent of non-English speaking Latinos reported being uninsured sometime during the calendar year, while only 7% of their English speaking counterparts reported “point-in-time” lack of insurance.
- 42% of non-English speaking respondents were currently uninsured compared to 7% of English speaking respondents (based on Hmong and Latino combined data);
- English speaking Latinos estimates of group coverage were 65.4% compared to 25% of non-English speaking Latinos;

- A higher number of Hmong (both English and non-English speaking) than Latino respondents are low income (less than 135% FPL for adults without dependents; less than 133% FPL for families).

Future Steps and Considerations

Given evidence of significant differences between English and non-English counterparts, it may be time to consider more research dollars placed specifically towards finding ways to study these populations. Our policy makers must pay attention to our changing demographics when health program expansions are considered. While recent expansions have produced minimal amounts of change in enrollment on public health care programs, strategies involving outreach and community buy-in may be fundamental to reaching these communities. Research that not only involves the community, but comes from within the community is known to be the most effective. It is through this type of participatory research that Minnesota's health care system may truly find itself reaching out to its newest citizens.

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Appendix

Article Summaries

Author: Aday, Lu Ann et al.

Title: Methodological Issues in Health Care Surveys of the Spanish Heritage Population

Publication: American Journal of Public Health, April 1980, Vol 70, No.4, pp. 367-374

Connections to grant:

Methodology used in development of a survey designed for non-English speaking respondents.

Objective:

“This paper examines national survey data on access to medical care to explore methodological issues associated with conducting health care surveys of Spanish-heritage persons. These include problems of identifying and sampling such groups, achieving respondent cooperation, designing valid interview protocols (such as preparation of field materials and recruitment and training of staff for the conduct of interviews with non-English speaking respondents), and controlling biases that may result from the cultural specificity of the concepts being studied.”

Methodology:

“The RWJ Foundation commissioned the Center for Health Administration Studies of the University of Chicago to include a special sample of the Spanish heritage population of the Southwest U.S. as part of a national survey of access to medical care conducted in 1975-76. The national sample involved interviews with 5432 families. In each household, one adult and one child were randomly chosen, yielding a sample of 7787 people. In addition, the sample included over sampling of persons experiencing episodes of illness, rural South Blacks, and people of Spanish heritage residing in the Southwest portion of the U.S. The data were then assigned weights to be used to correct for oversampling and to allow the calculation of estimates for the total population.”

Sampling:

“The investigators applied the U.S. Census definition of Spanish heritage to oversample Spanish-heritage persons.” (Due to confusion in the literature concerning the proper terminology to apply to this group...Latino, Chicano, Hispanic, Mexican, and the association of these terms with political and social consciousness ... the investigators chose the Census term “Spanish-heritage”). “The U.S. Census considers a variety of approaches to identifying Spanish-heritage individuals. These include determining 1) the birthplace of the individual and his/her parents; 2) whether the family has a Spanish surname; 3) whether or not Spanish was spoken in the person’s home in early childhood; or 4) if the person claims to be of Mexican, Puerto Rican, Cuban, Central or South American or other Spanish heritage.”

Sampling problems included application of the Spanish heritage definition. The definition captured a small number of people in the Spanish-heritage category who did not consider their origin or descent to be Spanish (Anglos whose family may have spoken Spanish even though they did not think of themselves as Spanish heritage). This group comprised 7 percent of the

sample.

Another problem concerned the “variant concentration of Spanish heritage persons in the area of the sample universe. Some counties or census tracts had high proportions of Spanish-heritage persons and other quite low. The cost-efficiency of a design intended to capture a reasonably large sample was greatly increased if areas in which the group was clustered were sampled at higher rates. What this reflects is how the stratified cluster nature of the Spanish oversample departs from that of a simple random sample.”

Non-Response Rates:

The small amount of available data suggests that ethnicity, per se, does not necessarily contribute directly to lower response rates.

Data Collection Instrument Design:

One challenge was the instrument and concerns about difference in language. “People whose primary language is Spanish, for example, may not necessarily have had formal schooling in that language. Further, dialects vary greatly among the general category of people who consider themselves ‘Spanish speaking.’”

The questionnaire was translated by a firm with considerable experience in conducting interviews in Spanish-speaking communities. A Chicano interviewer with formal language training in Spanish retranslated the Spanish version to English. A committee composed of the original translator, the retranslator, a Central American whose native tongue was Spanish and an Anglo with formal training and considerable work experience in Spanish reconciled difference and arrived at a consensus on wording.

“The questionnaire was pretested in areas in which it was to be administered and changes suggested by the pretest were incorporated.” Bilingual interviewers were recruited. “Some concerns expressed during the hiring and training process were that Spanish-heritage male respondents might be reluctant to provide information to female interviewers.” However these concerns did not develop once the instrument was applied in the field.

Data Biases:

“Among the Spanish heritage sample, there was a tendency for the proportion of missing values to be higher for those with whom the interview was mainly conducted in Spanish, compared to those with whom English was the main language spoken. The language in which the interview was conducted undoubtedly provides some indication of the integration of the respondent into the American culture and, hence his or her ability to understand the questions about health care practices that may differ from those in the country of origin.”

“Accuracy and cooperation in the Spanish heritage sample was often similar to the majority White population. There have been suggestion that minorities tend to agree to please the dominant group or interviewer. To the extent that respondents tended to agree with pairs of positively and negatively worded phrasings of the same underlying attitude, a tendency toward yea-saying did exist. Analysis showed that 14 percent of the U.S. population demonstrated yea-saying, while 24 percent of the Spanish heritage population demonstrated this effect.”

“Additionally, Spanish-heritage persons tended to underestimate the rates of hospital admission while the opposite tendency was the case for the general population.”

Findings:

“The findings suggest that more attention should be given to the following in designing health care surveys of Spanish-heritage individuals: cultural and economic heterogeneity of "Spanish-heritage" grouping, validity studies of health care utilization (analysis suggests that for some services measurement effort may be a particular problem among this group but confirmation is required along with consideration of methods to improve the accuracy of reporting), and year-saying tendencies related to health care attitude items. Given that there is a paucity of information available on methodological problems associated with health care surveys of Spanish-heritage persons, these analyses should serve to inform researchers of issues to be taken into account in designing such studies and to suggest useful hypotheses to explore in evaluating the validity of social survey data on minority (especially non-English speaking) populations' health care practices.”

Author: Chavez, L. R. et al.

Title: The Influence of Fatalism on Self-Reported Use of Papanicolaou Smears

Publication: The American Journal of Preventive Medicine, 1997, Vol. 13, number 5, pp. 418 – 424

Connections to grant:

Issue that may affect accuracy and validity of data collection with ethnic and immigrant groups, specifically around use of health services.

Objective:

“Fatalism is a general outlook on life founded on the belief that life events are inevitable and that one’s destiny is not in one’s own hands. Fatalism puts the locus of control outside of the individual. Some analysts suggest that, because of these characteristics, fatalism is a major cause of non-compliance with use of preventive services. The objective was to examine the demographic and other predictors of fatalistic beliefs among Latinas (Hispanic women) and Anglo (non-Hispanic Caucasian) women and to assess the impact of these beliefs on the use of cervical cancer screening services. “

Methods:

“Investigators used ethnographic interviews and a cross-sectional telephone survey in Orange County, California. The sample included 94 Latinas and 27 Anglo women selected through organization-based network sampling for the ethnographic interviews and 803 Latinas and 422 Anglo women randomly selected for the telephone survey.”

Results:

“Latina immigrants (Latinas born outside the United States) were more likely than U.S.-born Latinas or Anglo women to have fatalistic beliefs. Immigration, education levels, and insurance status predicted fatalistic beliefs. Fatalistic beliefs were independent predictors of Pap smear use by Latinas but not Anglo women. For example, after adjusting for potentially confounding variables, Latinas who believed that fate was a risk factor for cervical cancer (odds ratio {OR} =

.58), that they would rather not know if they had the disease (OR = .58), and that there is nothing one can do to prevent it (OR = .45) were less likely than others to report that they have had a Pap smear within the prior three years. Health insurance status, marital status, and immigration also predicted use of Pap smears. Insured Latinas were more likely than uninsured Latinas (OR = 2.89) to report having a Pap smear within the prior three years. In addition, married Latinas (OR = 2.32) and Anglo women (OR = 3.09) were more likely than unmarried women to report having appropriate cervical cancer screening. Finally, Latina immigrants were less likely than other Latinas to report having a Pap smear (OR = .26).”

Conclusions:

“Investigators conclude that fatalistic beliefs are among the factors that negatively influence Latinas' use of Pap smears and that it is important for health care professionals to address those beliefs. Continued efforts are also necessary to decrease the economic and structural barriers to cervical cancer screening.”

Author: Ren, XS

Title: Racial and Ethnic Disparities in Self-assessed Health Status: Evidence from the National Survey of Families and Households.

Publication: Ethnicity and Health, 1996; 1(3): 293-303

Connection:

Methodology in minority and ethnic group data collection; heterogeneity of many ethnic groups; self-ratings of health status and predictive strengths.

Objective:

Examination of racial and ethnic disparities in health assessment and functional limitations among whites, blacks and Hispanics and within Hispanic origin among Mexicans, Puerto Ricans, Cubans and others. The study seeks to “strengthen understanding of the interrelationships between SES and self-assessed health status (e.g. global health assessment and functional limitations of daily activities) among white, blacks and Hispanics.” The study also “explores the importance of intra-ethnic difference in our understanding of racial disparities in health and disease.”

Methods:

“The data for the analyses came from the National Survey of Families and Households (NSFH) conducted in 1987-1988 by the Center for Demography and Ecology at the University of Wisconsin. (Multistage, stratified probability sample of noninstitutionalized US adults aged 19 years or more) One adult was randomly selected from each household to be the primary respondent. While a face-to-face interview was conducted with each respondent, several portions of the main interview were self-administered to facilitate the collection of sensitive information. The interview was conducted in either English or Spanish. The initial translation was pretested among Puerto Ricans in New York and also reviewed by persons familiar with Mexican American usage. Bilingual interviewers were hired. A total of 259 interviews (2% of the total sample) were conducted in Spanish. The NSFH included 13017 respondents with a main sample of 9643 respondents and an oversample of 3374 minorities and households containing single-parent families, stepfamilies, recently married couples and cohabiting

couples.”

Measures:

“Two dependent variables were analyzed in the study, first global health assessment and secondly functional limitations of daily activities. Global health assessment was measured by asking ‘Compared with other people your age, how would you describe your health?’ The survey provided five response categories, ‘very good’, ‘good’, ‘fair’, ‘poor’ and ‘very poor’. Functional limitations of daily activities was measured by asking ‘How long has a physical or mental health condition limited your daily activities?’”

“There are two reasons to use these different measure of health in the study. The first is that a number of studies have found that self-ratings of health status, are a powerful predictor of morbidity, mortality and health care utilization patterns. The second is that few studies have shown that global health assessment and functional limitations are not necessarily interdependent health dimensions. There exists variability in the reporting and interpretation of different measures of self-assessed health among different ethnic groups.”

Statistical Analysis:

Two primary methods of analysis were used, cross-tabulation analysis and multivariate logistic regression.

Results:

“Whites were significantly less likely to report poor global health than were blacks. Hispanics were more likely than both blacks and whites to report poor global health.” Consistent with this measure was the assessment of functional limitations of daily activities: whites less likely than blacks. “However in contrast to the global health assessment, Hispanics were significantly less likely than blacks to report having functional limitations of daily activities.”

There were also intra-ethnic difference within the Hispanic subgroup. “Compared with Cubans and the ‘other’ category, Mexicans and Puerto Ricans were more likely to have obtained fewer years of education. Similarly, there were more Mexicans and Puerto Ricans than Cubans and other Hispanics with annual incomes below US\$5000. Puerto Ricans also had the lowest proportion of married respondents. Although the same percentage of Mexicans and Puerto Ricans reported poor global health, more Puerto Ricans reported functional limitations than did Mexicans.”

Discussion:

“Ethnicity is a complex indicator of biological, cultural, socioeconomic and socio-political conditions as well as racism. There is variability in reporting global health assessment and functional limitation of daily activities across ethnic groups.”

“Results seem to suggest that the poorer health of blacks compared with whites may be caused by poverty as well as social factors such as institutional racism . Among the less-educated blacks, poverty may be a stronger predictor whereas among the more-educated blacks, institutional racism may be a more salient predictor. For the black poor, the constant struggle to get out of poverty may have more strongly influenced their global health and functional

limitations. It is possible, however, that as they move out of poverty, the effects of institutional racism may come to the force. They may well be educated, but a good education does not automatically gain black individuals acceptance or respect within society.”

“The study revealed that a considerable diversity existed within the Hispanic subgroup in self-assessment of health status. Among the four Hispanic groups, Mexicans were at an increased risk of reporting poor health than whites; whereas Puerto Ricans were more likely than whites to report having functional limitations of daily activities. This intra-ethnic variability in self-assessed health status points to a strong need to further stratify within each racial group in studying the relationship between race and health. Each racial group is diverse and possesses unique health problems. The importance of such differences is likely to be understated by analysis grouping these heterogeneous subgroups together. More exploration is needed of cultural difference in the meaning and interpretation of health within each ethnic group.”

Author: Trevino, F. M., et al.

Title: : Health Insurance Coverage and Utilization of Health Services by Mexican Americans, Mainland Puerto Ricans, and Cuban Americans

Publication: JAMA, January 9, 1991 – Vol. 265, No. 2, pp. 233-237

Connection:

Methodology in minority and ethnic group data collection; heterogeneity of many ethnic groups; self-ratings of health status and predictive strengths.

Objective:

“This investigation examines data on 13,000 Mexican Americans, Puerto Ricans, and Cuban Americans between 6 months and 74 years of age who were interviewed from 1982 through 1984 in the Hispanic Health and Nutrition Examination Survey. In addition, data from the 1989 Current Population Survey (N = 145,000) conducted by the US Bureau of the Census are presented for the white and black non-Hispanic populations as well as the three Hispanic national origin groups.”

“Surveys that examined access to medical care and health insurance coverage among Hispanic populations have been hampered by several limitations. First, some studies incorporated relatively small regional samples that were generalizable only for Mexican Americans and not for other Hispanics. Second, some studies reported findings for Hispanics as a whole, but do not provide data specific to the Hispanic national origin groups.” The work of Trevino and Moss has illustrated that difference in health services utilization and health insurance coverage of Hispanics among the different Hispanic national origin populations. In addition, “few of the previous surveys translated their questionnaires into Spanish and most of these surveys did not employ bilingual interviews. The validity and reliability of the findings is then limited due to possible overestimation of the comprehension of the questions. Finally, the different survey methods that were employed in these surveys (e.g. telephone vs. face-to-face interviews) limit their comparability and the ability to make generalizations about Hispanics.”

Methods:

Analysis of recent indicators of health insurance coverage from the March 1989 Current

Population Survey (CPS) and data from the Hispanic Health and Nutrition Examination Survey (HHANES). The 1989 CPS sample consisted of approximately 60,000 households containing just under 145,000 individuals.

“The CPS did not use a translated Spanish-language questionnaire. If a CPS interviewer did not speak Spanish and no one in the household spoke English, the interviewer was instructed to contact the regional office. The regional office then either attempted to send a Spanish-speaking interviewer to the household or attempted to conduct a telephone interview using the best available translator. Even when a Spanish-speaking interviewer was available the lack of a translated questionnaire meant that the translator had to translate the questionnaire as the interview was being conducted. This may limit the validity and reliability of findings for Hispanics.”

Findings:

“The study revealed that over one third of the Mexican-American population, one fifth of the Puerto Rican population, and one fourth of the Cuban-American population is uninsured for medical expenditures compared with one fifth of the black, non-Hispanic population and one tenth of the white, non-Hispanic population. Furthermore, compared with Hispanics with private health insurance, uninsured Hispanics are less likely to have a regular source of health care, less likely to have visited a physician in the past year, less likely to have had a routine physical examination, and less likely to rate their health status as excellent or very good.”

Author: Turner, C. F., et al

Title: Improving Representation of Linguistic Minorities in Health Surveys

Publication: Public Health Reports, May/June 1996, Volume III, pp. 276-279

Connection:

Test of a computer assisted self-interviewing technique

Objective: “Audio-CASI uses a laptop personal computer with a digital audio interface to administer survey questionnaires. In an Audio-CASI interview, respondents listen to digitally recorded questions through headphones connected to a laptop computer and enter answers using the keyboard. Previous research and preliminary results from two national surveys indicate that Audio-CASI is well accepted by English-speaking survey respondents in the US and is preferred over interviewer-administered questionnaires that include items on sensitive subjects. Since Audio-CASI questionnaires can be recorded in any spoken language, this system could permit routine inclusion of other linguistic minorities in future health surveys.”

Methods: “**The Audio-CASI questionnaire consisted of 42 questions taken from several major federal health surveys.**” The questions were translated into Spanish by a native speaker. At the end the subjects were asked to evaluate the Audio-CASI system. “**To test the reliability, follow up telephone interviews were conducted in Spanish by a Hispanic interviewer (two weeks after initial questionnaire).**”

Results: “Results indicated that English-speaking interviews can successfully administered a health survey using multilingual Audio-CASI and that Audi-CASI can be used successfully by respondents with limited English language skills. Few problems were noted in comprehension of questions or use of the computer, virtually none of the respondents reported difficulty in using

the technology. Audio-CASI technology with elderly Korean immigrants suggest that reactions to the technology do not vary across immigrant groups – although hearing loss may present more problems when interviewing elderly respondents. Reliability was generally acceptable.”

Author: Feinleib, M.

Title: Data Needed for Improving the Health of Minorities

Publication: AEP, Vol. 3, No 2, March 1993: 199-202

Connection: Substantiates need for more data.

Abstract:

“Identified needs for minority health data, obstacles in obtaining the data, and potential solutions are reviewed. Vital statistics for whites and blacks have been available by states for many years. Recent revisions provide data on Hispanics, and new resolutions will provide data on Asian and Pacific Islander subgroups. But limitations persist in providing accurate statistics for minority subgroups. A major obstacle is the inadequacy of census denominator estimates, due to differential undercounts, paucity of postcensal estimates for states and localities, and the validity of the race and ethnicity data. Important issues revolve around quality, comparability, and intraperson variability of self-identification in determining race and ethnicity, versus external assessment. National survey data have oversampled for black and Hispanic minorities, but not others. The Disadvantaged Minority Health Improvement Act of 1990 provides some solutions, including an extramural grants program to strengthen minority statistics, which the National Center for Health Statistics has implemented to improve minority health assessment at all levels.”

Author: Ross, Jon

Title: Hispanic Americans: Who are they, where are they and how do we talk to them?

Publication: Hospitals and Health Networks, October 5, 1995, pp.65-68

Connection:

Communication tools to use with Hispanic Americans, could be translated into marketing survey instrument.

Summary:

Many different cultural difference were noted in the article, namely:

- “Most Hispanics aren’t used to a competitive health care market, so many are unaware of the programs that exist. A survey noted in the article found that while many Hispanics are likely to believe that the U.S. health care system is superior to that of their country of origin, they also believe private insurance and hospitals are only for the rich. And the survey shows that Hispanics are generally unfamiliar with the HMO concept. In fact, only 25 percent of LA are Hispanics are even aware that managed care exists.”
- “Solid communication, building relationships, good care and top-quality services are best ways to keep their business. A poll noted in the article states that while Hispanics want care from providers who speak Spanish and understand their culture, they’re less concerned about whether caregivers are Hispanic or even Spanish speaking than they are about neatness, cleanliness, courtesy and interpersonal skills.”

- “Understanding Hispanic culture is key to getting your message across: Where and how Hispanics live, shop and congregate; knowing they are fond of speaking their native tongue (a huge number watch or listen to Spanish-language media shows, and 40 percent read Spanish language papers).” Making events and materials family oriented because the support of the entire family is crucial to gaining an keeping business, attention and cooperation.
- “Hispanics don’t like direct main; they prefer broadcast and as Hispanics because more American, it is harder to find them by surname.”

Author: Hughes, A. O.

Title: Strategies for sampling black and ethnic minority populations

Publication: Journal of Public Health Medicine, Vol. 17, No. 2, pp. 187-192

Connection:

Alternative design and sampling methods to conduct data collection on minority and ethnic groups; interviewer recruiting and training, sampling (snowball method effectiveness).

Objective:

“The objective of the study was to describe the design and sampling methods used to carry out face-to-face interviews with a sample of the black and ethnic minority population of the area.” Additionally, the study sought to assess the health status of these groups. “This study was conducted in the city of Bristol, England (part of Bristol and District Health Authority).”

Methods:

“The sample was based on up to 1000, personal interviews with black Caribbean/African, South Asian and Far-East Asian residents. The design of the study focuses on the problems of definition of the appropriate group to sample and the various sampling techniques that were necessary to procure the interviews.” Bilingual interviews were necessary. Care was taken to avoid jargon, colloquialisms and sayings which are idiosyncratic to the English language. The concept behind each question had to be as simple and unambiguous as possible. The initial step was to formulate the interview questionnaire in English, then translated it into one of seven further languages by staff.. The resulting instruments were used in training additional interviews and confirmation was obtained that the translation was linguistically and culturally correct.

“From early in the research planning, a steering group was established which included representation from Bristol Race Equality Council and representatives of a number of the community organizations with a focus in the black or minority ethnic populations. They were able to keep the research, which was managed by white middle-class academics, in touch with the views of Bristol ethnic groups and to provide a sounding board for discussion of the subject matter for inclusion in the interview schedule.”

Interviewer Recruitment and Training:

“Interviewers were recruited by advertisements in the Bristol Race Equality Council newsletter and the Avon Race Equality Forum newsletter. A detailed training program was carried out for all interviewers before work in the community commenced and regular meeting with them were

held throughout the fieldwork. The training period (three evening sessions of two or three hours each) consisted of familiarization with the objectives of the survey, teaching on interview technique emphasizing the necessity for a uniform approach to all interviews and adherence to the working of the interview schedule (in the appropriate language), a role play session and a talk by an experienced interviewer on the difficulties that could be faced in the field.”

Sampling Approaches:

“Possibilities for sampling included name spotting, affiliation listings, and ‘snowball’ sampling. It was necessary to involve each of these approaches to achieve the desired result in this survey.”

“For the last three months of interviewing, the snowball method was used to contact Caribbean/African origin respondents. At the end of the interview, respondents were asked if they knew of other people who might agree to take part. A random selection of these people were then contacted for interviews. A few respondents were contacted through community organizations, but this proved to be an unsatisfactory method. Community organizations are concerned with protecting the confidentiality of their members and are reluctant to consent to use of their membership lists.”

“The most significant difference between the snowball method and the registers such as the Electoral Register or the Family Health Services Authority (FHSA) lists was the proportion of unsuccessful visits. Selections by the snowball method were three times more likely to yield a completed interview – a major factor to maintain the enthusiasm and morale of a fieldwork team.”

Results:

“A total of 574 interviews were carried out by bilingual interviewers matched for sex and ethnicity of the respondent, thereby allowing analysis that would be beneficial to the Health Authority in its planning and decision-making.”

Conclusions:

“The use of name spotting and 'snowball' sampling proved the most productive. The Electoral Register was preferred to the Family Health Services Authority lists. Interviewers must be carefully selected and adequately trained to work in this difficult area. The questionnaire must be culturally and linguistically acceptable across all the ethnic groups.”

Author: Urrutia-Rojas, X. and Lu Ann Aday

Title: A Framework for Community Assessment: Designing and Conducting a Survey in a Hispanic Immigrant and Refugee Community

Publication: Public Health Nursing, Vol. 8, No. 1, pp. 20-26

Connection:

Demonstration that a strong design of a non-English survey can deliver applicable data; good examples of framework, methodology and design.

Objective:

“This article introduces a framework for the study of access to medical care that has been used

extensively in national and local surveys, and demonstrates its application to an assessment of health and health care needs in a Hispanic immigrant and refugee community. The presentation of the framework, study design, findings, and implications for research and planning points out the utility of this framework for organizing systematic community assessment data-gathering activities; demonstrates how such an assessment could be incorporated into a public health nursing curriculum or readily adopted by public health nurse professionals in their communities; illustrates the potential for effective partnerships between public health practitioners and academics in conducting and disseminating the findings; and provides a broader conceptual, empirical, and policy-oriented context in which to view local community-assessment activities and their relevance for health policy and program development.”

“In the Aday and Anderson framework, characteristics of the population at risk are grouped into predisposing, enabling and need components. Data on these components are usually gathered through surveys of community residents using personal or telephone interviews or mailed questionnaires.” For the purpose of this study, a personal interview survey was used.

“Measurement of the population’s realized access to health care was based on individual’s report of physician contacts; use of hospitals, health clinics and other sources of health care; as well as subjective reports.” The purpose of the survey was to gather information to document systematically whether expanded public health services were needed in the area and, if so, what types of services.”

Methods:

“A probability sample of Hispanic residents in the community was selected and divided into clusters. Within the 1605 selected units, a knowledgeable household members was identified and asked whether anyone of Hispanic origin lived there. In all, 365 Hispanic households were identified, and 250 families agreed to be interviewed, yielding a response rate of 66%.”

Interviewers, all of whom were bilingual, were students volunteers from the University of Texas School of Public health. They participated in a training session and learned how to inform the interviewee of the study’s purpose, assure confidentiality and request oral consent, in addition to learning a standardize way of question delivery.

“Most questions were adapted from those asked in a 1976 survey of access to medical care (Aday et al., 1980) and from a survey conducted in the lower Rio Grande Valley of Texas (University of Texas School of Public Health, 1987). Both English and Spanish versions of the questionnaire were developed and pre-tested. In the final study, all of the interviews were conducted in Spanish.”

The classification of health problems was based on codes developed by the National Center for Health Statistics (1979).

Implications and Contributions:

“The study demonstrates the applicability of well-established survey research, based on a conceptual and empirical approach for measuring access, to a public health oriented community needs assessment activity.”

“The study also demonstrated that the development, implementation and detailed documentation of a survey package, including the study methodology and English-and Spanish-language versions of the questionnaire, can be adopted and used... in carrying out a needs assessment in comparable Spanish-speaking immigrant and refugee communities.”

Author: Warnecke, R et al.

Title: Improving Question Wording in Surveys of Culturally Diverse Populations

Publication: Annals of Epidemiology, July 1997, Vol. 7, No. 5, pp334-342

Summary:

“The purpose of this paper is to briefly describe a theoretical model articulating cognitive theory and sources of potential response bias resulting from racial or ethnic cultural experience to survey questions that deal with health behavior. The theory components are then evaluated using questions obtained from national health surveys conducted by the National Center for Health Statistics and Centers for Disease Control and Prevention. The analysis explores the effects of four cognitive tasks involved in responding to questions as specified by the model: question interpretation, information retrieval from memory, judgment formation, and response editing. Implications for epidemiological research are considered. “

- Interpretation: “Cross-cultural scholars distinguish between *etic* constructs, which are thought to be universal and understood in a common manner across all cultural groups, and *emic* constructs, which are cultural specific and have important meaning within certain cultural groups, but are understood either differently or not at all by other cultural groups. In multicultural societies, such as the U.S, a so-called “standard question” presumed to be *etic* may in fact be *emic* and , hence, answered differently by respondents of varying educational, racial or ethnic backgrounds. When constructs that are *emic* are treated as *etic*, a category fallacy results, the practical significance of which may constitute a problem in generalizing data across respondents and/or a failure of the respondent to answer the question being asked by the investigator.”
- Memory Retrieval: “Information may be retrieved either episodically, as discrete events, or semantically, in the form of schemas or generalizations. Episodic data are stored as detailed, specific, or unique information; schemas are generic descriptions of classes of events and area stored with little or no detail about specific episodes. Thus, frequent routine, or regularly re-occurring events are more likely to be reported as schemas than are unique, unusual, or otherwise remarkable events. Frequently, schemas are also culturally conditioned and are reported as representative events of the respondent’s community or cultural tradition.”
- Judgment Formation: “Forming judgment is influenced by cues contained in the question. The range of a scale for example, may indicate to the respondent the investigator’s expectations about frequency. The choices made by respondents to the metric in a scale may be culturally influenced, for example, African American and Hispanic survey respondents are less likely to qualify their responses than are non-Hispanic whites and use of modifiers by Hispanics may increase with acculturation. In contrast, Asians tend to avoid extreme responses. Such preferences for various forms of response style have been attributed to cultural variation in conversational norms, such as emphasis on sincerity as opposed to

emphasis on modesty in social interaction. Other research suggests that cultural variation in probabilistic thinking (e.g. the ability to express thoughts in terms of the degree of uncertainty) may also affect judgment formation.”

- **Response Editing:** “Available information suggests that definitions of socially desirable behavior vary culturally. Thus, socially desirable response patterns may be compatible with the commonly observed pattern of social interaction in Hispanic cultures referred to as *simpatia*, the expectation that interpersonal relationships will be guided by harmony and the absence of confrontation. Similar expectations have also been found to affect how Asians respond to surveys.

Methods:

“Data were collected from a purposive sample of 423 adults aged 18 through 50 who were recruited to ensure equal numbers of African American, Puerto Rican, Mexican American, and non-Hispanic white respondents, stratified by age, gender, and education. Individual questions were selected for evaluation to ensure variation by topic and question format. Probes related to each of the cognitive tasks were designed to obtain insight into the underlying cognitive processes used by respondents to answer survey questions. All statistical analyses used logistic regression or ordinary least squares multiple regression as appropriate.”

Results:

“Variation by race/ethnicity was found in the way respondents defined physical activity in a series of questions used in the Centers for Disease Control and Prevention Behavioral Risk Factor Surveillance System (BRFSS). Gender and race/ethnicity appeared to influence interpretation in the absence of specific cues in the question format about how to respond. Strategies used to retrieve information from memory did not appear to be influenced by respondent culture; however, frequency of the event was associated with the recall strategy in that more frequent or regular events were more likely to result in estimates about frequency, whereas unusual or seldom occurring events were counted. Effects of race/ethnicity on judgment formation seem to be reflected in the propensity of respondents' willingness to use extreme response categories. Most effects due to race/ethnicity were found in respondent editing of answers. Race/ethnicity was found to be associated with a social desirability trait; with willingness to disclose socially undesirable behavior, particularly to interviews from racial or ethnic groups that differed from the respondent; and with the tendency to over-report socially desirable behavior.”

Conclusions:

“ Overall, the results of this research suggest several ways in which the validity of questions about risk behavior can be improved. In designing such questions, the investigator should envision the interview as a structured conversation in which ordinary conversational norms apply. Thus, questions that might request redundant information or that are threatening to the respondent need to be asked in ways that minimize these effects. Using interviewers of the same racial or ethnic group is important. Attending to the order of questions to ensure that redundant information is not requested is important. Writing questions to ensure that where response cues occur they lead the respondent to answer in unbiased ways is also important. Testing questions for potential racial or ethnic bias before using them is also important, even if the questions have been used successfully with population groups other than that or those included in a study.”

Author: Patrick Cotter, et al.

Title: Race-of-Interviewer Effects in Telephone Interviews

Publication: The Public Opinion Quarterly, 1982, 46, 2, summer, 278-284.

Connection:

Consideration in question formation and methodology of non-English and minority survey work.

Abstract:

“Previous studies have found a race-of-interviewer effect on survey questions dealing with racial issues. This effect has been found in both personal interviews & on questionnaires filled out in the presence of an interviewer. Examined here is whether a race-of-interviewer effect is also present in telephone interviews. Data from 548 telephone interviews with adults show that a race-of-interviewer effect does occur in telephone interviews on racial questions. However, results of the analysis show that race of interviewer generally has no effect on responses to nonracial questions for both black and white respondents.”

Author: Reese, Stephen D.; Danielson, Wayne A.; Shoemaker, Pamela J.; Chang, Tsan-Kuo; Hsu, Huei-Ling

Title: **Ethnicity-of-Interviewer Effects among Mexican-Americans and Anglos**

Publication: The Public Opinion Quarterly, 1986, 50, 4, winter, 563-572

Connection:

Effects to consider in survey development for non-English groups, potential bias in income and education related data.

Abstract:

“A general interpersonal deference explanation for ethnicity-of-interviewer effects was tested in a random telephone survey of Anglos & Mexican Americans in Tex (total N = 1,076) using Anglo & Hispanic interviewers & questions related to Mexican-American culture. An additional 142 telephone interviews were conducted with a sub-sample of persons with Hispanic surnames. The theory was most clearly supported among Anglo respondents. The mixed support found among Mexican Americans suggest that deference is strongest when questions deal with the culture represented by the interviewer, rather than the respondents.”

“In other words, according to the general deference theory we would expect respondents to over-report ethnic behavior when interviewed by someone from the same ethnic background and underreport it when interviewed by someone else.”

The study also discussed the “halo” effect of cultural affinity in survey responses. “This phenomenon represents, perhaps, an effort to appear more like the ethnic group represented by the interviewer, which calls for either enhancing or diminishing reported ethnic characteristics, depending on who asks the question. Although not overtly cultural, education and income questions may also be said to produce responses resulting from this process. Mexican-

Americans are no doubt aware of the socioeconomic disparity between themselves and Anglo society and may shade their status to more closely match the perceived status of the interviewer.”

Author: Marin, Gerardo; Gamba, Raymond J.; Marin, Barbara V.

Title: **Extreme Response Style and Acquiescence among Hispanics: The Role of Acculturation and Education**

Publication: Journal of Cross-Cultural Psychology, 1992, 23, 4, Dec, 498-509.

Connection:

Effects to consider in survey development for non-English groups, potential cultural bias in survey formation.

Abstract:

“Questionnaire & interview data collected in 4 previous 1,908 Hispanics & 14,425 non-Hispanic whites are drawn on to compare their response styles. Results consistently demonstrate that Hispanics prefer extreme responses to a greater extent than do non-Hispanic whites, & in general, tend to agree with a given item more. Two significant variables affect the rate at which these response styles are chosen: (1) with greater acculturation, the level of extreme & acquiescent responses chosen by Hispanics decreases; & (2) less-educated respondents tend to make more extreme choices than do those with at least a secondary education. Gender does not affect these response sets in a consistent fashion.”

Author: McGraw SA. McKinlay JB. Crawford SA. Costa LA. Cohen DL.

Title: Health survey methods with minority populations: Some lessons from recent experience.

Publication: Ethnicity & Disease. 2(3):273-87, 1992 Summer.

Connection:

Survey methodology (sampling and attrition); mention of instrument translation and reliability/validity of responses, but nothing new compared with other articles in this summary.

Abstract:

“Until recently, minority populations have been inadequately or inaccurately represented in health research. Researchers are now recognizing the need to improve the validity and reliability of data on the health status and health-related behaviors of minorities. This paper discusses important methodological issues in conducting health survey research in minority communities: construction of an appropriate sampling frame, response rates, attrition from panel studies, and response patterns. These themes are illustrated with data from three field studies at the New England Research Institute. Two of these studies focus on inner-city Puerto Rican youth, a group rapidly increasing in size. The extent and multiplicity of problems experienced by this group affect the complexity of survey protocols. The third study is a random-digit-dial telephone survey on health care utilization for coronary heart disease by black and white adults from three inner-city neighborhoods in Boston. The conclusions drawn from the Institute's experience are corroborated by other scientific studies. First, the socio-cultural characteristics of the community or group selected for study must be considered in planning and implementing any survey research on minority populations. Second, ensuring the quality of field work with minority groups may be expensive because of high residential mobility and lack of preexisting sampling

frames. Third, there is no reason to expect any diminution of data quality with minority groups, provided the resources for data collection are adequate. The quality of data is undoubtedly proportional to the field efforts expended, but the costs of high-quality survey work are often not appreciated. The paper questions the utility of the term ‘minority research,’ for it disregards the considerable variation between and within minority groups and subcultures.”

Sampling:

“To improve cost effectiveness in sampling, the investigators considered three approaches to devising a sample frame for identifying Puerto Rican teens: 1) using existing population lists, 2) using census data, or 3) using census data supplemented by information obtained from local sources.” The third option was chosen.

The investigators “employed census data as a starting point, but because of concerned about accuracy, supplemented these data with qualitative information about the location of Puerto Rican households from shopkeepers, community agency staff, clergy and residents. The overall strategy was one of disproportionate sampling, an approach suggested by Kalton and Anderson to increase the cost efficiency of sampling rare populations. This method was similar to that used in the Hispanic HANES.”

“Target neighborhoods were selected by identifying areas that were described by local informants as Puerto Rican neighborhoods. Within target neighborhoods, census blocks were the primary sampling units. In the majority of cases, interviewers had to return to complete the interviews after the enumeration. On average, the interviews required 3.6 contacts. Making simultaneous use of key informant and census information to identify these high-density areas helps to avoid missing large portions of a population that may have migrated since the last census count.”

Attrition:

“To reduce attrition due to the inability to contact respondents at follow-up, efforts were made to maintain accurate addresses for respondents from baseline through follow-up, an average period of 19 months. These efforts included a series of recontact phases carried out at 3-month intervals. In each recontact phase, a newsletter was mailed along with a require to provide current address and phone numbers on a self-addressed, stamped postcard. Three weeks after the mailing, telephone tracing began for any respondent who had not turned in the postcard. If the respondent could not be reached, calls were made to contact persons provided by the respondent at baseline. Recontact efforts led to an average success rate of 94.8%. This analysis suggests that the single most important method for maintaining a sample over time (while minimizing field work) is to collect as many contact names, addresses and phone numbers at baseline as possible.”

Author: Warnecke, R.

Title: Measuring Quality of Life in Culturally Diverse Populations

Publication: Journal of the National Cancer Institute Monographs, No. 20, 1996pp. 29-38

Connection:

Survey development issues.

Abstract:

“Culturally mediated differences in cognition and interpretation are now regarded as responsible for many of the systematic differences that have been observed in cross-cultural surveys. The investigators note that Triandis and Marin proposed a strategy that emphasizes distinguishing between culturally specific measures (*emic*) and those that are universally relevant (*etic*). They called for using probes designed to assess and understand when unique aspects of the culture influence interpretation and response to questions and when the concept underlying the question is culturally transcendent. The “*emic+etic*” methodology avoids the pitfalls of the pseudoetic approaches that adversely affect questionnaire design. This is the approach used in this study.

Methods:

The cognitive strategy used in the study closely parallels that outlined in the other Warnecke study.

(Questions interpretation, information retrieval, judgment formation and response editing). One focus that differed from this previous study was the emphasis on measurement scales.

Results:

“Early in the cognitive interview process, it became apparent that the African-American respondents experienced difficulty with the importance and satisfaction scales and the task of recording their judgments using the labeled, six-item, bipolar scales. The labels were presumed to form an equal interval scale that discriminated between levels of satisfaction and importance. Upon further examination, the intervals were not perceived as discrete but rather as overlapping. The respondents did not understand the bipolar scaling that they were being asked to perform.” To assess the nature of the problem, a thermometer scaled from 0-100 was presented to additional African-American and Spanish-speaking respondents. On the thermometer presented to respondents ‘0’ was labeled ‘as unimportant as something could ever be’, ‘100’ was labeled ‘as important as something could ever be,’ and ‘50’ was labeled ‘neither important nor unimportant’. Respondents were given a series of terms that they were asked to place on the thermometer between 0 and 100. The following terms reflected importance: very important, totally important, important, somewhat important, moderately important, a little important, fairly important, slightly important, neither important nor unimportant, not very important, somewhat unimportant, fairly unimportant, moderately unimportant, slightly unimportant, a little unimportant, totally unimportant, unimportant, not at all important and very unimportant.

Two issues became clear from this additional measurement. First of all, there was “considerable overlap in the numeric rating of each descriptor. That is, the range for ‘a little important’ (90-05) overlapped with the range assigned to ‘important’ (100-80).” The same problem could be observed for the various descriptors listed. “The second point is that the respondents did not see ‘very important’ and ‘very unimportant’ as polar opposites on a single scale from 0 to 100. On the contrary, the respondents treated the range of importance and the range of unimportance as two separate and overlapping classes. For example, the range of values assigned to ‘very important’ was 100-90. However the range assigned to ‘very unimportant’ was (0-70) overlapped ‘a little important’ (90-05).” And so on.

“The greatest problems were with question interpretation. In part, these problems resulted from

questions that were written to require a level of verbal comprehension that was too high for the likely respondents. These problems were easily corrected by rewriting the question to require lower levels of verbal comprehension. Other problems of question interpretation came from language. In some instances, the English concept was not meaningful linguistically in Spanish.”

Author: Triandis, Harry C. et al.

Title: *Simpatia* as a Cultural Script of Hispanics

Publication: Journal of Personality and Social Psychology, 1984, vol. 47, No. 6, pp. 1363-1375

Connection:

Potential cultural bias in survey administration.

Abstract:

A cultural script is a pattern of social interaction that is characteristic of a particular cultural group. Data from three samples of Hispanic and non-Hispanic recruits as well as samples of Hispanic monolinguals and bilinguals, suggests that the Hispanics have a cultural script, which we called *simpatia*. Hispanics are more likely than the non-Hispanics to expect high frequencies of positive social behaviors and low frequencies of negative social behaviors. This suggests different levels of adaptation for social behavior in the two cultures. The inattention among non-Hispanics to the presence of this script among Hispanics is likely to lead to misunderstandings when Hispanics and non-Hispanics interact. Hispanics are likely to be perceived as negative behaviors those behaviors that are considered neutral by non-Hispanics; also, behaviors that are perceived as positive by non-Hispanics are likely to be perceived as neutral by the Hispanics.

Background:

The word *simpatia* has no equivalent in English, but refers to a permanent personal quality where an individual is perceived as likeable, attractive, fun to be with and easy-going. An individual who is *simpatico* shows certain levels of conformity and an ability to share in other's feelings, behaves with dignity and respect towards other and seems to strive for harmony in interpersonal relations. This latter characteristic implies a general avoidance of interpersonal conflict and a tendency for positive behaviors to be emphasized in positive situations and negative behaviors to be de-emphasized in negative situations.

Because direct argument or contradiction is considered to be rude, a person will tend not to disagree unless this can be done tactfully. Direct confrontation tends to be interpreted as assaults on the essential dignity of others. Examples of this within different cultural groups include: Puerto Ricans rarely give a directly negative answer if they can avoid it. The awkwardness that results from not being *simpatico* (i.e. being unlikeable, unwitty, disagreeable, etc.) is one of the worse “cultural sins” among Cubans.

When questioned about how they would react to situations that often results in aggression, Anglo-American and Mexican-American children indicated that they would confront the aggressor whereas Mexican children indicated that they would avoid the confrontation.

Conclusion:

It is clear from the data that Hispanics expect much more positive behaviors in positive social

situations than non-Hispanic respondents. The ignorance of these expectancies by other cultural groups brings about discomfort and stress in inter-group relations.

Author: Mendoza, F, et. al

Title: Selected Measures of Health Status for Mexican American, Mainland Puerto Rican and Cuban-American Children

Publication: JAMA, January 9, 1991, Vol. 265, No. 2, pp. 227-232

Connection:

Presents perspective on heterogeneity of Hispanic culture and need for attention in survey development/research.

Abstract:

The 1987 National Vital Statistics System and the Hispanic Health and Nutrition Examination Survey (1982 through 1984) were used to assess the health status of Mexican-American, mainland Puerto Rican and Cuban-American children by examining the prevalences of pregnancy outcomes and chronic medical conditions. The low-birth weight rate among Hispanics (7.0%) compared favorably with that of non-Hispanic whites (7.1%) despite the greater poverty and lower levels of education among Hispanics. When examined by Hispanic subgroup, however, significant differences were present, with mainland Puerto Ricans having the highest prevalences of low-birth-weight infants. Premature births were more common among all three Hispanic subgroups than among non-Hispanic whites. Mexican-American and Cuban-American children had a similar prevalence of (3.9% and 2.5%, respectively) chronic medical conditions compared with non-Hispanic white children; Puerto Rican children had a higher prevalence of chronic medical conditions (6.2%). When assessed by these health status indicators, Hispanic children seem to have a health status similar to non-Hispanic white children. However, mainland Puerto Rican children seem at greater risk for poor health, reflecting the US Hispanic population's heterogeneity. Health programs targeted at US Hispanics should appropriately consider these group differences.

Other Relevant Information:

“This study demonstrates that Mexican-American children have low levels of physician contacts for chronic medical conditions and seem to have a substantial need for medical referral for their conditions. This suggests that although Mexican-American children's health status may be good, access to health services for those with health problems may be limited. Mainland Puerto Ricans, in contrast, have the highest rates of physician contacts among Hispanics for children under 17 years. Moreover, although mainland Puerto Rican families are more likely to be eligible for Medicaid coverage by virtue of their US citizenship. In addition, mainland Puerto Rican families are also more likely to be headed by a single parent than Mexican American families who have a percentage of two-parent families similar to that of non-Hispanic whites. This may increase their access to governmental health programs, particularly programs such as Medicaid and AFDC. These difference in the conditions of poverty between Mexican-Americans and Puerto Ricans may contribute to some of the differences in health status.”

Author: Berkanovic, Emil

Title: **The Effect of Inadequate Language Translation on Hispanics' Responses to Health Surveys**

Publication: American Journal of Public Health, Dec 1980, Vol. 70, No. 12, pp.1273-76

Connection: Consequences of omitting a back-translation in survey design

Objective: To determine the effect of a Spanish translation (developed without back-translation) on Hispanics' responses to indices of health beliefs, with particular attention to levels of reliability as compared to responses to an English version. A back-translation done after the survey was used to identify the source of response differences.

Methods: In 1976, a sample of 1,210 individuals statistically representative of a large West Coast city were interviewed by an academically based survey organization. The 202 individuals who identified themselves as Hispanics were given a choice of an English or Spanish-language version of the questionnaire. 121 Hispanics were interviewed in English, and 86 Hispanics were interviewed in Spanish. While never stated explicitly, it appears that surveys were fielded face-to-face at the respondents' residence. Spanish language interviews were conducted by bilingual, bicultural interviewers. Surveys included several sets of Likert items intended to form indices of health beliefs. These indices were examined for their ability to predict one variable (tendency to delay care) related to the decision to seek medical care. Reliability levels of these indices were also examined separately for Hispanics taking the English and Spanish surveys.

Results: Out of seven indices of health beliefs (acceptability, accessibility, susceptibility, motivation, cost concern, perceived seriousness of illness, and efficacy of care provided by a physician) two (seriousness and efficacy of care) demonstrated large discrepancies between the two Hispanic groups. Reliabilities were much higher among Hispanics responding in English, and similar to those in the entire sample, while reliabilities for Hispanics responding in Spanish were unacceptably low. Item variances for Spanish interviews were not of higher magnitude, which rules out the possibility that reliability was low among Spanish-speaking due to the size of the interitem correlations. The partial correlations between seriousness and efficacy of care indices and the dependent variable of tendency to delay seeking care were then derived. Partial correlations for English speaking Hispanic interviews were measured at -.28, a significant correlation, while Spanish speaking Hispanic interviews were estimated to be low and insignificant, -.06 and .12. This demonstrates how a low reliability within indices can lead to the attenuation of statistical relationships. This in turn would lead to different conclusions for each language group. A bilingual survey researcher with no previous connection to the survey was then asked to back-translate the Spanish questionnaire, with the instruction to provide an English language version that achieved a level of idiomatic usage equivalent to the Spanish language version (reflected the linguistic properties of the Spanish version). The back-translation revealed language irregularities of small magnitude in most of the dependent variables, and more serious anomalies within the two indices showing low reliability among Spanish respondents. While the intent of the questions would be understood by most respondents, the translator perceived that respondents would be amused by the lack of facility with which the language was used. The unidiomatic choice of wording in Spanish would result in Spanish speaking Hispanics perceiving the overall interview situation differently, possibly taking the interview less seriously. A lower percentage of Spanish speaking respondents were rated by the interviewer as very honest in their responses. Differences in level of education were ruled out as an explanation, however there were some mixed indications that bilingual interviewers may have created interviewer effects not

found among English speaking interviews. These findings suggest that care needs to be taken that any translation achieves a level of language usage that is equivalent to the original source. Otherwise between-group differences may be an artifact of differences in the adequacy with which different languages are used. Back-translation by blinded translators is strongly recommended.

Author: Hendricson, William D., Russell, Jon, Prihoda, Thomas J., Jacobson, James M., Rogan, Alice, Bishop, George.

Title: An Approach to Developing a Valid Spanish Language Translation of a Health-Status Questionnaire

Publication: Medical Care, October 1989, Vol. 27, No. 10, pp. 959-966

Connection: Tests the effectiveness of a dual Spanish/English version of the Sickness Impact Profile (SIP), a behaviorally based measure of health status.

Objective:

Develop and test the effectiveness of a health survey containing both English and Spanish translations within the same text, while comparing the effectiveness of a literal, word-for-word Spanish translation, and a conceptual “idiomatic” translation that employs Spanish vocabulary commonly used in the region. This idiomatic translation recognizes that different Hispanic subcultures demonstrate a unique linguistic flavor influenced by migration patterns, country of origin, and characteristically rely on simplified grammatical structures and continuous infusion of “loan words” from the target language of that geographic area.

Methods:

Two teams of translators worked independently to produce two Spanish language versions of the SIP. One team produced a literal, word-for-word English to Spanish translation. The second team produced a conceptual, “idiomatic” translation to reflect the unique style of language used by Hispanics in the targeted community (South Texas). Back-translations were then produced by other bilingual individuals to verify accuracy. To establish face validity, twelve reviewers critiqued the two translations developed for this project, and two translations developed elsewhere. Reviewers were selected to reflect the characteristics of Hispanics in the region. Reviewers shared the instruments with family members and elicited other opinions about the suitability of each instrument for South Texas. Ten out of 12 reviewers selected the idiomatic translation developed for the project as the best translation. Back-translation was then performed again by reviewers meeting the same criteria. Alternative acceptable wording was included in parentheses within the text. Spanish text was placed beneath the English phrasing to allow respondents to consult both versions to promote comprehensive understanding of the questions. Validation of the survey was conducted with patients enrolled in the Rheumatology Clinic of the University of Texas Health Science Center at San Antonio. The dual-language SIP was mailed to 177 patients in 1987. A second mailing was sent to these responders six weeks later to allow test-retest reliability. In addition, subjects completed two administrations of the Arthritis Impact Measurement Scale, designed in a dual-language format, to allow independent measure of disease severity. A chart review was also conducted by a rheumatologist to tabulate specific medical manifestations of disease in order to allow tests of correlation with self-reported

responses on the SIP.

Results:

Reliability correlations were fairly good for all dimensions, with nonsignificant differences between Anglo and Hispanic subjects in three dimensions. For several individual categories, there were significant differences in reliability between Anglo and Hispanic responders. In measuring construct validity, correlations between the SIP and AIMS instruments were strong on most dimensions. However joint count and ESR in the AIMS survey were both weakly correlated with SIP data for both Anglo and Hispanic subjects. Overall, both internal consistency and construct validity were strong for each subpopulation, with the exception of some clinical manifestations with SIP, which were weaker in some instances for Hispanic subjects. These findings suggest that a dual language strategy may provide an effective Spanish language format. The dual language format may be more effective than a Spanish-only instrument because it allows bilingual responders to “double-check” their understanding of a statement by reading each item a second time in the alternative language. Responders not comfortable with either language may study both versions to produce a better composite understanding of each statement, or provide means for a family member with more proficiency in one language to assist the subject. Researchers attribute the effectiveness of the survey to both the dual-language format and the idiomatic language style. Important guidelines are extracted from the researchers’ experience for others developing translations: seek help from people in the community to identify the dialect most commonly used in the region; select translators conversant in the local dialect and willing to use popular idioms and syntax; employ teams rather than a single individual for translations; encourage idiomatic rather than formal grammatical translations; recruit additional reviewers from the target population to validate the work of the translation team; and provide reviewers with several Spanish versions of the same questionnaire so a clear choice can be made after comparison.

Author: **Hayes, Risa P., and Baker, David W.**

Title: Methodological Problems in Comparing English-Speaking and Spanish-Speaking Patients’ Satisfaction with Interpersonal Aspects of Care

Publication: Medical Care, 1998, Vol. 36, No. 2, pp. 230-236

Connection: Differences in item and scale response distributions between English and Spanish-speaking patients indicate problems using certain types of response formats and the practice of dichotomizing responses from Likert scale response formats in Spanish-speaking patients.

Objective: To examine the reliability and validity of English and Spanish versions of a patient satisfaction measure, the Interpersonal Aspects of Care (IAC) Examiner Scale.

Methods: Surveys were fielded in a face-to-face interview to native English-speaking and Spanish-speaking adults reporting to the Emergency Dept of the Harbor-UCLA Medical Center with non-urgent medical problems in 1993-94. Patients’ were given the choice of which language the interview would be given in. Patients were then contacted by phone 1 week after their visit and interviewed about their satisfaction with the visit. Patients that could not be contacted by phone were visited at their address. A translation-backtranslation method was used to develop the Spanish version of the questionnaire. Further information about translation

procedures is unavailable in this article. The IAC Scale measures patient satisfaction with how well the examiner listened to them, answered their questions, and treated them with respect, level of trust in their examiner, and an overall satisfaction rating. The response set was a scale of excellent, very good, good, fair, and poor. This study does not seem to distinguish in analysis Anglo English speakers and Hispanic English speakers. Given the nature of findings in other studies, these two groups would need to be distinguished for analysis. Most Spanish speakers were Mexican-Americans, limiting the ability to generalize to other Hispanic populations.

Results: Approximately 1% of responses recorded for all patients were recorded as “generalized positive response,” where the patient answered the question with a favorable term but refused to use the response options. These responses were recorded as “good”. A total of 260 English-speaking and 467 Spanish-speaking patients were interviewed. Spanish-speaking patients were asked if an interpreter was used during their visit with the examiner and whether they thought an interpreter should have been used. Many patients who interacted through an interpreter or who said the examiner should have used an interpreter were unable to rate certain satisfaction questions because of language barriers. These cases were eliminated from analysis, so that only native Spanish-speaking patients who did not communicate through an interpreter and indicated an interpreter was unnecessary were included. This process excluded 50% of the Spanish-speaking participants. I believe this is a methodological weakness, which hides the extent to which this survey instrument could not ascertain satisfaction levels among Spanish speakers, and the extent to which Spanish speakers are unable to even assess their experience due to language barriers during the provider-patient interaction. Despite these exclusions, internal consistency for both the English and Spanish versions of the scale were excellent. However, item-total correlations for four components of the scale were significantly lower for Spanish-speaking respondents, resulting in lower reliability coefficients for the Spanish version. Both versions had good convergent validity with global items. However, correlations for the Spanish version were lower than the English version for all three questions. Interviewers expressed concern that some Spanish-speaking patients did not have a clear distinction between “excellent”, “very good,” and “good.” This resulted in a greater likelihood to respond “good”. This has implications for researchers who dichotomize the scale into “excellent’-very good” and “good-poor” or “excellent-good” and “fair-poor”. When the latter dichotomization was used here, Spanish-speakers were more satisfied than English-speaking patients. This analysis did not distinguish between the selection of “good” by the respondent, and those coded as “good” by the interviewer due to refusal to use the response options. So the Spanish version was significantly less reliable and possibly less valid than the English version. Other studies suggest that response sets that vary on 4 points, vary response sets, and use “yes” and “no” prompts at the beginning of each response may help provide additional psychometric comparability. Researchers using excellent-poor response sets should avoid collapsing responses into dichotomous variables, and instead analyze data using nonparametric tests to determine whether there is a shift in the response distributions.

Author: **Deyo, Richard A.**

Title: Pitfalls in Measuring the Health Status of Mexican Americans: Comparative Validity of the English and Spanish Sickness Impact Profile

Publication: American Journal of Public Health, June 1984, Vol. 74, No. 6, pp. 569-573

Connection: Tested reliability and validity of three sets of respondents: non-Hispanic patients, Mexican Americans who used an English SIP, and Mexican Americans who used the Spanish SIP.

Objective: Measure functional health status before and after intervention for low back pain. To determine if differences in responses were due to clinical differences, interviewing, translation problems, or the groups' levels of acculturation, comparing three language and ethnic groups described above.

Methods: Patients were recruited from a walk-in clinic in San Antonio, Texas, where patients tend to be indigent or hold blue collar jobs. Only patients with uncomplicated mechanical low back pain with no other disabling co-morbidity were included. Of 120 enrolled, 109 were interviewed by the same bilingual, Mexican American interviewer. Remaining 11 interviewed by bilingual Anglo interviewers. Patients were then re-examined and interviewed 3 weeks after the walk-in visit, where patient's were asked if pain was better, worse, or unchanged, and the SIP repeated. Interviewers estimated the patient's English fluency on a 5-point ordinal scale, and ethnicity was judged by the interviewer as Anglo, Black, or Hispanic. During examination, physicians rated severity of patients' pain, asked for patient self-rating of pain, and assessed physical manifestations of functional status. Patients were divided into three ethnic groups: Black and Anglo respondents were combined; Mexican Americans were divided into those who took the English SIP and the Spanish SIP. Given known differences in health status and cultural attitudes, I believe it was inappropriate to combine responses from Anglos and Blacks.

Results: In terms of severity of dysfunction and illness, Group I exhibited most severe illness and worst function, Group II was less severe, and Group III was the best. Construct validity was tested by correlating scores of SIP measures with clinical measures of disease severity. While Groups I and II demonstrated acceptable and similar validity coefficients, the range of coefficients for Group III was lower, and three signs were in an unexpected direction. Responses were highly reliable for all three groups.

Mexican-Americans who speak only Spanish are different from bilinguals in that they are older, very poorly educated, less fluent in English, more likely to have learned Spanish as a first language, and less likely to speak English at home. Authors interpret these differences to mean that these patients are less acculturated than Mexican Americans who respond in English and are bilingual. If this is the case, levels of acculturation may explain differences in responses: certain symptoms are not seen as a legitimate reason to limit certain activities among traditional Mexican-Americans; the necessity of performing certain tasks despite illness may vary among ethnic, economic, or age-related subsets of the population; the seriousness with which the survey is perceived may differ across subpopulations, in that Spanish respondents may be less familiar with surveys and research in general, and less familiar with the spirit, intent, and assumptions with which they are administered.

Authors: **Schur, Claudia, Bernstein, Amy B., Berk, Marc L.**

Title: The Importance of Distinguishing Hispanic Subpopulations in the Use of Medical Care

Publication: Medical Care, July 1987, Vol. 25, No. 7, pp. 627-641

Connection: Points out the differences in utilization rates, insurance coverage, and annual expenses between Cubans, Puerto Ricans, and Mexicans. Suggests problems in classifying Hispanics into a single category.

Objective: To use a more comprehensive dataset (NMCES 1978-1979) and multivariate analysis to provide a more thorough and definitive analysis of differences between Hispanic subgroups.

Methods: Data supplied by the NMCES 1978-79, which surveyed 40,000 persons from 14,000 households, as well as medical care providers, employers and insurance carriers. Respondents were interviewed six times over 18 months. 1,830 Hispanics, 295 Puerto Ricans, 947 Mexican-Americans, and 191 Cuban-Americans were interviewed by phone.

Results: Descriptively, these subgroups differed in terms of income, geographical location, tendency to be concentrated in certain cities, marital status, age, and measures of health status, insurance status, medical use, and access to care. If numbers are aggregated, Hispanics are about as likely as the total U.S. population to receive ambulatory care from a physician, obtain a prescription, or to have a hospitalization. However, when subgroups are analyzed, Puerto-Ricans are similar to whites, but Cuban-Americans were less likely to have a physician visit than whites, and Mexican-Americans had utilization patterns similar to blacks. In terms of annual expenses, Cuban-Americans paid substantially more out-of-pocket, while Medicaid paid substantially more expenses incurred by Puerto-Ricans. In terms of insurance, Cubans have the largest proportion privately insured and the largest proportion uninsured. Multivariate analysis of likelihood of a visit and the estimated number of visits suffers from a loss of information when groups are aggregated. Also, the determinants of hospital admission vary across the three subgroups. A caveat in this analysis is that the sample sizes of Cubans and Puerto Ricans are quite small, affecting the ability to detect significance of some variables, and widening standard errors. All of these findings suggest that Hispanics are not a homogeneous group, and that different policy interventions will have widely varying effects on the different Hispanic subgroups. Behavioral measures not included in the NMCES but that would help illuminate causes for differences include nonfinancial barriers to access, such as language barriers, and attitudes toward the efficacy of medicine.

Author: Hui, C. Harry, and Triandis, Harry C.

Title: Effects of Culture and Response Format on Extreme Response Style

Publication: Journal of Cross-Cultural Psychology, September 1989, Vol. 20, No.3, pp. 296-309

Connection:

Potential bias, survey design considerations

Abstract:

“Do cultural and ethnic groups differ in their extreme response style? To answer this question, Hispanic and non-Hispanic subjects were asked to respond to a questionnaire on 5-point or 10-point scales. As predicted, Hispanics were found to exhibit a stronger tendency for extreme

checking (about half the time, on the average) than non-Hispanic, but only when the 5-point scales were used. Use of 10-point scales reduced the extreme responses of the Hispanics to the level of non-Hispanics. Extreme responses of non-Hispanics were not affected by the scales.”

Implications:

The investigator’s data suggests that differences in extreme response style may be due to differences in judgment style across the two cultural groups.

