

ABSTRACT

Hispanic Assimilation to American Health Insurance

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Policy makers, insurance companies, physicians, healthcare administrators, and especially patients have acknowledged the need for healthcare reform. Some economists speculate high healthcare costs arise from charging *paying* patients enough to cover patients whom are unable to pay, the majority of those being uninsured. Hispanics maintain the highest percentage of uninsured, thirty percent; therefore are the main focus of this study. I hypothesize that assimilation and race, compared to many common factors play a significant role in health insurance. Not only do the results show Hispanics to be significantly less likely to have health insurance than blacks or whites, but immigrants are less likely to be insured than the first generation resident or subsequent generations. Specifically, Hispanic immigrants are less likely to be insured than white immigrants from 1980-1990. This study concludes that assimilation is a significant determinant of the percentage of the United States population that is uninsured.

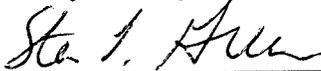
Hispanic Assimilation to American Health Insurance

by

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A Thesis

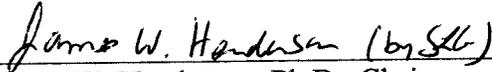
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Steven L. Green, Ph.D. Chairperson

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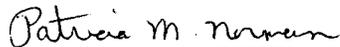
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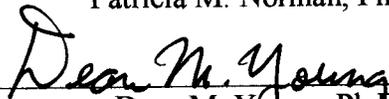
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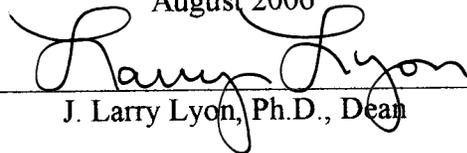
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TABLE OF CONTENTS

CHAPTER ONE	
Introduction	1
CHAPTER TWO	
Literature Review	11
CHAPTER THREE	
Concepts, Models, and Methods	
Conceptual or Theoretical Framework	22
Econometric Models and Estimation Methods	23
CHAPTER FOUR	
Data and Results	27
CHAPTER FIVE	
Discussion and Conclusion	32
APPENDIX	
Tables, Regressions, and Results	39
BIBLIOGRAPHY	48

LIST OF FIGURES

Figure 1: Number Uninsured and Uninsured Rate: 1987 to 2004

3

LIST OF TABLES

Table 1. CPS 2005 Report, Top 10 Uninsured States	7
Table 2. CPS 2005 Report: Composition of Uninsured by Race and Nativity	9
Table 3. CPS 2005 Report, Uninsured Children by Race	9
Table 4. Percent Children (0-16 years) Uninsured and Publicly Insured	14
Table 5. Understanding Percent Differences	29
Table A.1. List of Variables	40
Table A.2. Summary Statistics for All Ages	41
Table A.3. Summary Statistics for Ages 15-64 Years Old	42
Table A.4. Regression of All Ages	43
Table A.5. Regression of Ages 15-64 years	44
Table A.6. Results	45
Table A.7. Wald Test I	46
Table A.8. Wald Test II	47

LIST OF ABBREVIATIONS

AVG	Average
CEB	Children Ever Born
CPS	Current Population Survey
HOH	Head of the Household
NCPA	National Center for Policy Analysis
PRWORA	Personal Responsibility and Work Opportunity Reconciliation Act
U.S.	United States
X^2	Chi-squared

CHAPTER ONE

Introduction

Compared to Australia, Canada, France, Germany, Italy, Spain, Sweden, and the United Kingdom in 2001, the United States had the highest per capita spending (\$4,887) as well as the highest percentage of GDP spent on healthcare (13.9%) (Anderson 2003). Many claim that although the United States spends more money, we get what we pay for in better or more plentiful services. These individuals base this perception on the fact that people come from all over the world, seeking American-trained physicians and hospitals. Based on this information alone, we might say that American standards and the level of competition in America might contribute the advanced level of care. On the other hand, the Organization of Economic Cooperation and Development reported that the United States had the lowest life expectancy and highest infant mortality rate among the same countries in 2001 (Anderson 2003). Although the U.S. may have more comprehensive and accurate data, U.S. citizens cannot help but wonder if they really are getting enough value for their money.

The United States prides itself on innovation and efficiency, but the healthcare industry is in dire need of significant reform. One vital issue is the desire for universal care -- providing healthcare whether or not the individual can afford it. Many people like the idea that a physician would treat every patient that enters the emergency room. Some even classify proper healthcare under our forefathers' *pursuit of happiness*. Unfortunately, the rest of the country must foot the bill for those that are uninsured or under-insured. As a means of paying for indigent care, hospitals and insurance

companies employ cost-shifting, charity, and government funds. All of these methods of funding make a full circle back to the paying citizens in the form of higher costs. As a result, a hospital administrator will continue to operate a costly emergency room in order to serve the entire community. Whether citizens consider the U.S. healthcare system to be “worth it” or not, however, it is imperative to consider the inefficiencies in the system and the vast number of uninsured in order to make effective long-term reforms.

This study hypothesizes that the immigrant assimilation rate is a significant cause of the high uninsured rates in the United States. This idea of immigrant “assimilation” and a “melting pot” of customs are some of America’s most outstanding attributes. Many immigrants may need to assimilate into the American culture sufficiently before they value health insurance enough to seek coverage actively. Unfortunately, Hispanic immigrants may face a lower assimilation rate than other immigrants have in the past. Because their home countries are so close to the United States, many Hispanic immigrants are able to access homeland resources more readily. For example, the proximity of Hispanic countries to bordering states such as Texas, California, Arizona and New Mexico allow Hispanic immigrants to maintain family ties, language, and customs. Some individuals migrate to predominantly Hispanic neighborhoods, which works to prevent assimilation. Therefore, regardless of government assistance and special programs, many immigrants remain uninsured for the majority of their lifetimes. As a result, these uninsured rely on emergency care, consequently, increasing the cost of insurance for the insured. I hypothesize that the insured rates of this group and their subsequent generations converge with native individuals of the same race or ethnicity over time, but Hispanics’ assimilation rate is lower than others. If data confirm this

prediction, America may need to develop policies targeted at improving the assimilation rate of immigrants, especially of Hispanics, or find a way to hold the uninsured somewhat financially responsible.

Figure 1 illustrates the number of uninsured in the United States from 1987 to 2004. The percentage peaked in 1998 (16.3%), leveled off during the next two years (14.2%), and finally climbed back up to the current level in 2004 (15.7%). From 2003

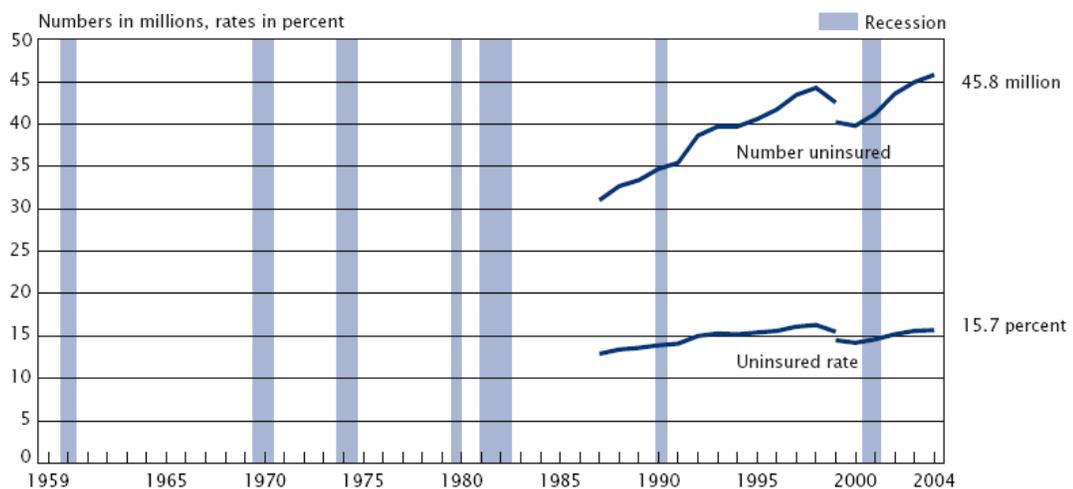


Fig.1. Number Uninsured and Uninsured Rate: 1987 to 2004. Figure extracted from 2005 Consumer Population Survey Report.

to 2004, the number of *insured* increased to 245.3 million (2 million increase), and the number of *uninsured* increased to 45.8 million (800,000 increase), so the percentage *uninsured* slightly *increased* from 15.6 percent to 15.7 percent. The percentage of people covered by employment-based health insurance *decreased* from 60.4 percent to 59.9 percent; the percentage of people covered through private insurance *decreased* from 68.6 percent to 68.1 percent; and the percentage covered through government programs *increased* from 26.6 percent to 27.2 percent. Although the United States currently is not at the highest percentage of uninsured in history, the percentage is far too high to ignore.

Longer emergency room waits, higher insurance costs, burned out physicians and even more difficulty in making primary physician appointments signal to Americans that our healthcare system needs to be reformed. People seem to be depending slightly less on employers and slightly more on government programs. With limited funds for social security, Medicare, Medicaid, and welfare, U.S. tax payers are feeling the pressure to fix inefficiencies in the system.

A healthy college graduate without any dependents may pay nearly 1,000 dollars for one year of private insurance, which may only provide limited coverage. Why is insurance so expensive? And, why are prices rising? “Friedman is right to decry excessive hospital charges to low-income, uninsured patients as a moral failure. Such patients are hapless victims of our collective decision not to extend them the coverage and financial access they need. . . but the court cases brought against not-for-profit hospitals bear vivid testimony to the schizophrenic views that underlie America’s uninsured problem” (Curtis 2005). Because the U.S. system entertains the desire to provide everyone with coverage but no one the responsibility of cost, state budgets are stuck between the rock of decreasing employer-provided coverage and the hard place of emergency care. Not only are government-funded programs suffering, but hospitals and insurance companies also bear some of the burden. When patients cannot pay the bill and/or government programs refuse to pay the full extent of the bill, hospitals categorize the loss as “charity.” As a result, the hospitals shift the cost to other individuals, who *do* have insurance and/or *are* able to pay the full extent of the bill. When the hospital passes on the bill to the insurance company, the company realizes that it must increase its rates if it plans on surviving. Now comes the end of line. The insured taxpayer bears the cost of,

not only his/her own healthcare but also the healthcare of the uninsured. What compounds this frustration is that fact that the typical insured person will face difficulty in the emergency room when he/she needs emergent care. As a result of overuse, some critical care services actually close their doors to trauma, a situation that may cause an insured person his/her life.

Now that the uninsured have been identified as a considerable cost and a major source of stress, the next step will be to analyze the composition of the uninsured so that the root of the problem can be identified. In 1998, 32.4 percent of people with an immigrant acting as head of the household (HOH) were uninsured, compared to 13.9 percent of people with native HOHs (Center for Immigration Studies 2000). Therefore, individuals in households with immigrant HOHs were over twice as likely to be uninsured. The study goes on to compare length of stay in the U.S. with uninsured status as a means of determining if time is a major factor in being uninsured. As one would predict, the longer that the immigrant had been in the United States, the more likely he/she was to obtain health insurance. Interestingly, the results show that although the typical immigrant was more likely to obtain health insurance the longer that he or she remained in the United States, a significant percentage of immigrants never assimilated in this way -- meaning that they never obtain health insurance. Although arriving in the 1980's meant that the immigrant had a minimum of nine years in America prior to the 1999 survey, 35.8 percent living with an immigrant HOH were still uninsured. In addition, of those that arrived in the 1970's and had acquired from 20-29 years of residency, 29 percent of those with an immigrant HOH were still uninsured. Some believe that legal status plays a large role in whether an immigrant would seek

government assistance, but 1999 data estimate that 27.5 percent of the legal people in a legal immigrant household are uninsured. Therefore, even if illegal immigrants are excluded, the percentage of uninsured people in legal immigrant HOHs (27.5%) was still twice the percentage of uninsured people in native HOHs (13.9%) (Center for Immigration Studies 2000).

To recap, immigrants seem to be significantly more uninsured than natives, even after residing in the U.S. for nearly 20 years. It is difficult to gear programs toward immigrants if they are unlikely to obtain health insurance even when Medicaid or Medicare *would* provide for them. Therefore, one may look for other aspects of the uninsured population in hopes of finding other useful predictors of health insurance status. Since 1987, the number of uninsured Hispanics doubled to 11.2 million in 1998, nearly a quarter of America's 44 million uninsured. While 24 percent of Blacks, 14 percent of Whites, and 18 percent of the total population in 1998 were uninsured, Hispanics outweighed the others with a staggering 37 percent uninsured (Quinn 2000). Therefore, being Hispanic or being an immigrant makes one more likely to be uninsured, but does one attribute cause the other? In other words, are many immigrants uninsured because they are Hispanic or vice versa? Or are the two factors related at all?

One would expect bordering states to be more uninsured than enclosed states if immigration is a major player in uninsured rates. The March 1998 data show that a majority of the uninsured under 65 years old lie in California (13%), Texas (8%), New York (7%), and Florida (5%) (Quinn 2000). Table 1 lists the top ten states with the highest 2003-2004 average percent uninsured. Texas leads the pack with 24.8 percent, but Montana, interestingly, had the largest increase (1.90 percent). As of the latest CPS

(Consumer Population Survey reported in August 2005) data, Texas, Hawaii, New Mexico, California, and the District of Columbia are all majority-minority (all but non-Hispanic whites are considered minorities) states, with Maryland, Mississippi, Georgia, New York, and Arizona following closely behind. California contains the largest population (12.4 million) of Hispanics, while New Mexico has the largest percent

Table 1. CPS 2005 Report, Top 10 Uninsured States

State	2002-03 Average %	2003-04 Average %	% Change
Texas	25.2	24.8	-0.40
New	21.6	21.5	-0.01
Oklahoma	18.8	20.1	1.30
Montana	17.3	19.2	1.90
Florida	17.7	19.0	1.30
Louisiana	19.5	18.9	-0.60
Nevada	19.3	18.7	-0.60
California	18.3	18.5	0.02
Louisiana	19.5	18.9	-0.06
Alaska	18.8	18.0	-0.80
Mississippi	17.3	18.5	1.20
Total	15.4	15.7	0.30

(43 percent). New York has the largest population of blacks (13.5 million), while Florida has the largest percentage (59 percent). Lastly, California has the largest population of Asians (4.8 million), while Hawaii has the largest percentage (58 percent) (Bernstein). In August of 2000, the NCPA (National Center for Policy Analysis) published a study reporting: out of the 19.6 million people in Texas, 4.8 million were uninsured, with 50 percent of those 4.8 million uninsured being Hispanic (2.4 million) and 19 percent of those uninsured being non-citizens. Regardless of the facts that Texas provides many federal healthcare service programs and requires many its counties to provide programs for the “medically indigent,” it still ranks second in our nations most uninsured. The

Texas Comptroller reported that the state spent about \$1,000 per uninsured person per year, an amount sufficient to *buy* private health insurance. “Public and private organizations spend approximately \$1,000 per uninsured individual per year, on the average, on charity care. That equals \$4,000 for a family of four- an amount that would buy adequate private insurance in almost all Texas cities.” In fact, several Texas ambulance services actually purchase private health insurance for some “frequent flyers” because it costs the company less to buy private insurance than it does to continuously use ambulance resources without *any* compensation (Bauman 2000).

These Texas programs are only helpful if individuals can obtain access to the programs and are also willing to undergo the “bureaucratic hassles.” Obviously, Medicaid renders some significant advantages over self-pay, but many realize that they will receive the same emergency room care, without the fear of being deported, whether they possess Medicaid or not. Undeniably, Texas has a deep-rooted problem with healthcare in establishing financial coverage for its residents. When individuals read these statistics, especially about the Hispanic population in Texas, many are quick to point a finger at immigrants. Therefore, starting with an assessment of immigrant habits is most logical place to begin investigating (Bauman 2000).

Last August (2005), the US Census Bureau published a set of health insurance statistics from the Consumer Population Survey (DeNavas-Walt 2004). Table 2 displays the results from the survey. As reported previously, the overall percentage of uninsured in the United States remained steady at 15.7 percent, down from 18 percent in 1998. The

Table 2. CPS 2005 Report: Composition of Uninsured by Race and Nativity

	Uninsured in 2003		Uninsured in 2004		% Change
	Count	Percent	Count	Percent	
Race					
White	21,582	11.1	21,983	11.3	0.2
Black	7,080	19.6	7,186	19.7	0.1
Asian	2,228	18.8	2,070	16.8	-2.0
Hispanic	13,237	32.7	13,678	32.7	0.0
Total	44,127	82.2	44,917	80.5	-
Nativity					
Native	33,146	13.0	33,962	13.3	0.3
Naturalized	2,243	17.1	2,317	17.2	0.1
Non-citizen	9,571	45.3	9,542	44.1	-1.2
Total	44,960	75.4	45,821	74.6	-

Hispanic population still holds the highest percentage of uninsured (32.7%) among the ethnicities, which is almost double that of the total percentage, but it also seems to be down from 37 percent in 1998. Non-citizens hold the highest percentage of uninsured (44.1%) in the nativity category. The Census also provides interesting data on children. Judging by the calculated statistics in table 3, healthcare policies should target the non-citizen populations, especially in states bordering Mexico.

Table 3. CPS Report 2005, Uninsured Children (under 18) by Race

Race	Percent
White	7.6
Black	13.0
Asian	9.4
Hispanic	21.1
All Children	11.2

In order to rectify these inequalities, the most significant causes of uninsured status must be identified. This study predicts one's likelihood to obtain U.S. health insurance based on the degree to which one assimilates, particularly the degree to which

Hispanics assimilate to the United States. This study aims to answer the following questions: Does assimilation play a significant role in Hispanics' acquisition of health insurance? If so, how significant is that role compared to the obvious alternative factors, such as age, education, income, and marital status? In addition, does assimilation play a more significant role in some ethnicities than others? Identifying the causes of Hispanics' outstanding uninsured rates will provide information that may be of use to healthcare policy makers and insurance companies in their quest for an effective healthcare reform.

CHAPTER TWO

Literature Review

A major inefficiency in the U.S. healthcare system is that many individuals are unable to acquire sufficient access to healthcare, specifically due to the inability to afford health insurance. If the government's aim is to encourage company-provided health insurance through tax incentives, it seems contradictory to reform healthcare by leveling the incentives between individual- and company-purchased insurance now. On the other hand, we can see through President Bush's last State of Union Address (2006) that U.S. citizens are becoming increasingly concerned about the affordability of healthcare, whether it is obtained publicly, privately or through their place of employment.

The majority of US citizens obtain their health insurance through their employers, their spouse's employer, or their parents' employer. With that in mind, consider the following percentages extracted from the Commonwealth Fund in 2000: in companies containing one hundred or fewer workers, thirty-eight percent of Hispanic workers compared to sixty-eight percent of white workers had employment-based benefits. It is easy to understand how one could turn to emergency medicine when one is faced with nearly nonexistent employer-provided insurance, overwhelming private insurance prices, and publicly-provided insurance convoluted with red-tape. The U.S. does not need to eliminate all benefits for employer-based insurance, but may need to offer breaks to other sectors of society. With that, these are five suggestions De Posada offers to reduce the uninsured Hispanic rates: 1) Establish tax credits to help the uninsured purchase health insurance, 2) Promote pooling and the creation of health insurance supermarkets,

3) Allow individuals and families to get at least the tax breaks available in employer-based plans for their purchase of health coverage through fraternal and community-based organizations, 4) Overhaul federal tax law to promote affordable private and portable health insurance, and 5) Don't make things worse for families by increasing health care costs and making insurance even less affordable. In summary, "tax credits" for taxpayers and "vouchers" for those without taxable incomes may be effective techniques for leveling the playing field (De Posada 1999). For example, if the individual does not work enough at his/her part-time job to qualify for health insurance, he/she will receive a voucher toward obtaining private insurance. Addressing employer-based coverage is important because many believe that immigrants are uninsured because they do not qualify through their employers. Although De Posada believes this to be true and submits some suggestions to rectify the problem, the study in the following paragraph attacks the issue from a different view: What factors contribute to one's ability to qualify through their employers?

Is Immigration Responsible for the Growth in the Number of Uninsured?

Because many speculate the substantial increase in immigrants significantly contributed to the increase in uninsured from 1994 to 1998, this group used 1995 and 1999 CPS data to test the hypothesis. The data from 1994 and 1998 were especially important because the 1996 federal welfare reform increased the federal aid eligibility requirements, potentially damaging immigrants' insurance rates. Individuals, excluding those 65 years and older, were categorized into four groups: native citizens, naturalized citizens, "earlier" non-citizens, and "recent" non-citizens (those that arrived in the U.S. after the 1996 initiation). Note that children were classified according to their parents'

immigration status. The study found that uninsured native citizens increased by 1.9 million, from 16.3 to 17.2 percent. Not only did uninsured “recent” immigrants increase by an *insignificant* amount, from 48.9 to 50.8 percent, but their Medicaid participation decreased by 300,000 people. In addition, “recent” immigrants’ employer-based insurance rates increased by 6.5 percent, while natives only increased by 1.1 percent. Even with the 1996 welfare reform act, the “recent” immigrants only make-up 20 percent of the uninsured in 1998. Some policymakers suggest the law change stimulated immigrants to seek and acquire health insurance through other means, most likely through employers-based insurance judging by the increased rates. Overall, natives show higher insurance rates than “earlier” immigrants, which are higher than “recent” immigrants, but these numbers may heavily correlate with employment rates and employer-based insurance. Although the study shows that “recent” immigrants have not caused a majority of the increase from 1994 to 1998 and they do not make-up a majority of the uninsured in 1998, it also shows that a significant percentage of immigrants *are* uninsured in the United States (Holahan).

One of the most healthcare-deprived groups in the United States is Hispanics. The study excludes the employment factor by examining only children, ages two months to sixteen years old. The accessibility of healthcare to Mexican Americans and non-Hispanic white natives children were compared while controlling for health insurance status and socioeconomic status. The study employs data from the Third National Health and Nutrition Examination Survey (1988 to 1994), a survey conducted by the National Center for Health Statistics of the Centers for Disease Control and Prevention. Their sample size was 4372 Mexican American Children (519 in the first generation, which

included those born in Mexico with at least one parent born outside of the United States, 2257 in the second generation, which included children born in the U.S. with at least one parent born outside the United States, and 1606 in the third generation, which included those born in the U.S. as well as both parents born in the U.S.), 4138 non-Hispanic black children, and 4594 non-Hispanic white children. The study used age, ethnicity, generation, residence location, type of health insurance if present, as well as care-giver's income, marital status, educational status and employment status as independent variables. Dependent variables included health status, healthcare access, and healthcare utilization. Healthcare access was defined by the combination of: the number of contacts with physician in a year, ability to use prescription medications, and the presence of hearing and vision evaluations. The results in table 4 show that more than two-thirds of first generation Mexican American children are "poor," uninsured, and have low care-giver-educational attainment. In addition, more than one-fourth of the "poor" children are deemed to have poor health, with one half not having seen a doctor in the last year.

Table 4. Percent Children (0-16 years) Uninsured and Publicly Insured

	1 st Gen	2 nd Gen	3 rd Gen	Native	Native
Insured Type	Hispanic	Hispanic	Hispanic	Black	White
Uninsured	64.2	25.4	15.9	10.0	7.5
Publicly Insured	16.0	35.8	25.8	34.4	10.0
Total of the Two	80.2	61.2	41.7	44.4	17.5

In conclusion, the first generation of Hispanic children fared worse than second generation or third generation. Although the percent of publicly-insured decreased for the third generation Hispanics, we conclude that the decrease stems from an increase in affordability as opposed to the first generation's inability to qualify or lack of desire to obtain insurance. The following limitations are important to note when interpreting the

results. The study classifies Puerto Ricans as Mexicans but they are classified as U.S. citizens in similar studies. In addition, the data were collected more than ten years ago, the statistics are cross-sectional, unverified interviews were used to collect information, and there was no adjustment for dominant household language. There are some obvious disadvantages to snapshot data collected more than ten years ago, as this study's cross-sectional data were. The data were collected through interviews; therefore they are prone to subjectivity. Although dominant household language played a significant role, this study did not include it because of the high degree of colinearity between language and generational status. In other words, including language would be essentially redundant to the classification of generation because the length of time in the U.S. and the ability to speak English correlate very closely. Regardless, this study of children excludes the factor of employment-based insurance, and its results imply that Hispanics on the whole are more uninsured than black as well as white children. Even more relevant, from the immigrant to the 1st offspring, the uninsured percentage drops 38.8 percentage points; and from 1st offspring to 2nd set, the uninsured percentage drops 9.5 percentage points. It seems that although Hispanics are more uninsured, the more generations that ensue, the more likely the last generation is to obtain health insurance.

Although Hispanics are the most uninsured ethnicity in the United States, it is important to analyze the ramifications of a growing uninsured population and how these ramifications will stress the need for a U.S. healthcare reform. Whitney W. Addington, President of American College of Physicians-American Society of Internal Medicine, explains a consensus of 115,000 physicians. This article discusses the current lack of health insurance in the Latino community and physicians' concern for the growing group.

In 1998, Latinos represented 11.7 percent of the total population but 25.3 percent of the total uninsured population. At that time, Latinos were predicted to be largest minority group in the United States by 2005, with an estimated number of 36.1 million. Logically, even if the *percentage* of uninsured Latinos remained constant, the *number* of uninsured would rise when the number of Latinos increases.

Today, the forecast for a larger Latino population has materialized. In addition to a rapidly growing population, Latinos are at a greater risk for contracting certain serious diseases, such as diabetes and renal failure, which may result in permanent disabilities or premature death if these illnesses are not promptly addressed. Without sufficient access to care, many will either live close enough to the Mexican border that they are able to obtain healthcare from Mexico or they will completely avoid medical attention until absolutely necessary. The latter method tends to increase the cost of emergency care and eventually leads to an overall increase in the cost of health insurance. With an expected Latino population growth rate of 2 percent, the number of uninsured will continue to increase; therefore healthcare costs and insurance rates will continue to rise (American College of Physicians 2000).

Now that a significant issue in healthcare has been isolated, the next step is to search for causes of the relevant phenomena. March 1994-2003 CPS data were used to study the assimilation of Hispanic immigrants through gender and employment status. The methods include extracting CPS data on Hispanics and splitting the subjects into “immigrants,” “second generation” (Hispanics with at least one parent being an immigrant), and “third generation.” Not only does the “third generation” include Hispanics with both parents born in the US, but it also may include fourth and subsequent

generations. Two regression specifications were estimated: one with the first-generation being eighteen or older, and the other including all ages. The two specifications account for the fact that first-generation immigrants may assimilate as fast as the second generation if they immigrate at a young enough age. A group of third generation, native non-Hispanic whites served as a control in order to establish a basis for comparison. Blau and his colleagues state that they considered a strictly time-series or a strictly cross-sectional study, as opposed to a combination of the two. A time-series study may reflect changes in culture through modifications in law or society if these factors are not accounted for, but a cross-sectional study may “yield a biased estimate of intergenerational assimilation if unmeasured immigrant cohort characteristics have changed” (Blau 2005). Therefore, the study employs ten consecutive years of subjects, somewhat of a middle-ground between the strict time-series or cross-sectional study.

Blau’s regression shows that both male and female immigrants in the U.S. have relatively lower levels of education and employment rates than females in Mexico. Male immigrants may not have been able to obtain employment in the native country, possibly due somewhat to lack of education; therefore they immigrate to the U.S. seeking employment. The lack of female education and employment can be explained by the facts that many accompany male immigrants and maintain their country’s custom of staying at home even when in the United States. Although the level of educational attainment increases between the immigrant and the second generation, the assimilation factor breaks down at the second-generation level, meaning that the change between the second and third generation is not significant. As to be expected, Hispanic immigrant women have a higher fertility rate than those of the non-Hispanic, native women when

they arrive in the United States. When the study evaluated the results of assimilation, the labor market showed the most significant values, especially over the *immigrants'* lifetime: "The 1971-80 cohort of Mexican women has a *ceteris paribus* shortfall of 455 hours relative to non-Hispanic whites; this fell to 219 hours after ten years of residence and 31 hours after twenty years. The gap remained small in the second and third generations" (Blau 2005). Although female immigrants initially lacked in the number of hours worked, the gap has sufficiently closed after twenty years of residence. Contrary to rapid female assimilation, male immigrants seem to have more of a "moderate assimilation" of labor supply. It seems that females are more likely to *adopt* a desire to work once in the U.S. than a male immigrant. Unfortunately, the wage assimilation factor is not as friendly to women as is the labor supply factor. While men seem to have a moderately declining wage gap, there is not significant evidence for positive female wage assimilation past the second generation (offspring of the immigrant). Overall, the results show that Hispanic immigrants seem to have a significant positive labor supply assimilation factor, with female immigrants being more positive than males.

The changes in immigrant labor supply have attracted even more attention in recent studies, especially changes that coincide with the 1996 adoption of the Personal Responsibility and Work Opportunity Reconciliation Act (PRWORA). Essentially, PRWORA increased the federal aid eligibility requirements for immigrants arriving after the signing of the 1996 welfare reform act. With about one million legal immigrants and 300,000 illegal immigrants entering the country per year, U.S. government worried that this cutback would have extreme effects on future immigrant insurance rates. Current Population Survey (CPS) data from 1995 to 2001 were used to compare the effects of

PRWORA in immigrant and native households (Borjas 2003). Because some children are born to two immigrants whom make family decisions for all individuals in the household, individuals are categorized based on the head of household: groups: natives, immigrants, non-citizens, and naturalized citizens. The study is restricted to individuals under the age of 65, who do not live in “group quarters.” The linear regression analysis of pooled data accounts for state of residence, if the state provided beyond federal aid, type of insurance if any, if the data was extracted post-PRWORA, citizenship status, as well as several socioeconomic factors.

Contrary to expectations, while the number of federally insured immigrants decreased, the fraction of uninsured immigrants actually remained relatively stable. From 1994 to 2001, the immigrants enrolled in Medicaid declined by 3.6 percentage points, as opposed to the 1.9 percentage decrease for natives. In the same time period, immigrant insured percentage rose by 1.9 points, while the native insured percentage rose by 2.9 points. In addition, the employer-sponsored insurance percentage rose by 5.8 points for immigrants and only 4.3 points for natives. Borjas proposes that this combination of events materialized due to the fact that many immigrants increased their “labor supply, thereby raising the probability of being covered by employer-sponsored health insurance” (Borjas). In other words, the welfare reform act might have actually sparked an increase in labor supply by increasing the demand of employer-provided health insurance. The results also imply that “state programs were unnecessary” because they did not make a significant effect on the immigrants’ probability of being insured. From the results, one can conclude that the targeted immigrants fended for themselves in the absence of the previously available programs. The implications from this study beg

the question: while *less* assistance may not have significantly decreased immigrants' insured rates, would *different* programs make a significant improvement, or is this feat best left up to the supply and demand of the market? (Borjas).

After obtaining special permission to access internal (non-public) files, Hill's fertility study employs 1995 and 1998 CPS data as well as the 1990 decennial census to present a relatively sound method for analyzing fertility assimilation patterns of immigrants. The 1990 decennial data provided neighborhood information, which was tied to the nativity status in CPS data. Hispanic women, of Central American or Mexican decent, were analyzed because this group had the largest population. Note that Puerto Rican- and Cuban-born women were excluded because their socioeconomic characteristics and settlement patterns were not sufficiently similar to the individuals to the immigrant group. Women 15 to 44 were asked how many live births they have had to date in order to designate the dependent variable: "children ever born (CEB)." Generation "1.0" distinguished the immigrants arriving at the age of 10 or older. Generation "1.5" included those that arrived earlier than the age of 10 years old. This method of categorizing accounted for the American influence on the very young immigrants. Second generation included individuals with at least one parent born outside of the United States. Third generation encompassed those with both two native parents, including subsequent generations. Although several socioeconomic characteristics (age, marital status, dominant language spoken in the household, education, ethnicity, time in the United States, family-level poverty, and a dummy variable controlling for Californian residency status) were used, women's income and employment status are not used due the endogenous nature of these variables with fertility. The ordinary least squares and

generalized Poisson regressions were used to analyze the influence of assimilation on fertility, controlling for the many independent variables. Results show a decrease in CEB from generation 1.0 to 2.0, but a 0.4 of a child increase between the second and third generation. The authors attempted to explain the increase by stating there was a lack of ancestral information. Third generation individuals with one immigrant grandparent had a lower fertility rates than two; therefore the third generation category is flawed. Overall, Hill's study sets up an excellent model for assimilation estimation.

The supplemented literature provides the necessary background to study Hispanic assimilation and its effects on U.S. healthcare. I hypothesize that assimilation plays a significant role in Hispanics' ability to obtain health insurance in the United States; therefore the healthcare industry should consider addressing this issue in future healthcare reforms. Once the results are analyzed, suggestions for reform will be provided in the conclusion.

CHAPTER THREE

Concepts, Models, and Methods

Conceptual or Theoretical Framework

The assimilation of Hispanics to the United States may play a large role in whether or not they have insurance. Assimilation is the degree or process by which a minority group conforms to a prevailing culture through adopting attitudes, behaviors, and/or customs. Psychology and sociology have established the presence of assimilation in many life situations, ranging from infant learning capabilities to marine animal environmental adaptation. Econometric techniques may be used to test the theory that obtaining health insurance is another way immigrants and their children assimilate to the United States. The longer immigrants and their subsequent generations are in the United States, the more likely they will be to secure health insurance. Therefore, controlling for socioeconomic characteristics, the assimilation factor should significantly affect an individual's likelihood to have insurance.

If this hypothesis has empirical support, policy makers may be able to improve coverage in our healthcare system. For example, if a majority of the problem resides in the immigrant population, then policy makers may consider creating government programs, similar to Medicare and Medicaid, to target immigrants. By having access to a healthcare plan, the immigrant and his/her children will be more likely to make use of preventive medicine, thereby lowering healthcare costs in the long run. With a greater percentage of the population insured, the need for charity care will decrease, causing prices for any *one* healthcare service to decline, subsequently resulting in lower

insurance rates for subscribers overall. In addition, the extra acquisition of purchasers will spread the costs over a greater paying population, will increase revenue, and will lower risk due to an increase in the company's knowledge of its consumer composition.

Econometric Models and Estimation Methods

This study attempts to answer the following questions: Does assimilation play a significant role in the acquisition of health insurance by Hispanics? If so, how significant is that role compared to the more obvious alternative factors, such as age, education, income and marital status? How does Hispanic assimilation compare to non-Hispanic Black or non-Hispanic White assimilation with respect to health insurance coverage rates?

Health insurance status serves as the dependent binary variable while several independent variables represent influential factors: household income, personal income, sex, marital status, age, education level, year of immigration, and generation. Employer-provided health insurance was mentioned earlier in order to discuss possible causes for the high costs in healthcare, but my study deems individuals with any type of insurance to be "insured."

Household income gauges income level more accurately than personal income because everyone in the household typically has access to the incoming funds. I predict that the subjects with greater disposable income will have the means to pay for health insurance; therefore are more likely to employ the service. The study includes both household income and personal income for completeness.

Previous studies, such as those conducted by the National Center for Policy Analysis and the U.S. Census Bureau, have shown females to be more likely to obtain

insurance. Some studies predict females to be naturally less reckless and more likely to be cautious.

Past results from the American Psychological Association have shown marriage and children to positively influence one's likelihood of obtaining health insurance because marriage encourages responsibility. Married subjects include those with a current marriage contract, as opposed to never married, widowed, separated, or divorced. Spouses may be present or absent.

Health insurance is expected to increase with age due to increased health issues and the increased tendency to seek medical attention. In addition, older individuals seem to value convenience and reliability more than younger subjects. Because children seem to mirror their parents' habits, I exclude individuals seventeen and younger in a second group.

Ages eighteen and up are of age to work and are in a position to buy health insurance. At the age of eighteen, many individuals can have a high school diploma, where as before eighteen, they do not have the chance. A sample excluding ages younger than twenty-two would allow all individuals the chance to obtain a college degree and might be more accurate for the education variables, but it would exclude many of the key immigrants in this study. Ages sixty-five and older were also excluded because they are not of working age and in general are more likely to seek government aid than the work-age population.

Education level not only influences one's knowledge of insurance, but also the likelihood that he/she will obtain it. A more educated person may realize the importance of insurance and health maintenance. In order to accurately evaluate the information, the

education levels were split into highest attained level: no high school, some high school, high school diploma or an equivalent, some college, graduated college with a Bachelor's or an Associate's degree, and a Master's or Professional school or Doctorate degree.

This study concentrates on the length of time the immigrant has spent in the United States or the generational status of the immigrant's descendants. If time affects assimilation, then the longer one lives in the United States, the more likely he/she should be to obtain health insurance. Logically, one may also assume that subsequent generations should be more likely to obtain health insurance than their immigrant parents or grandparents. For example, a grandson of an immigrant should be more likely to obtain health insurance than his grandfather. The year that the subject immigrated to the United States was split into seven categories based on the decade immigrated: before 1950, 1950-1959, 1960-1969, 1970-1979, 1980-1989, 1990-1997, never immigrated (natives). The generation variable could only be split into three categories due to the available information provided from the CPS data: immigrant, U.S. native with at least one immigrant parent (first generation), and U.S. native with two native parents (second generation). When a few individuals considered themselves immigrants, while both parents were U.S. natives, this study included them in the second generation.

Three ethnicities are used: Hispanic, non-Hispanic black, and non-Hispanic white. The CPS categorized race into White, Black, American Indian, Asian/Pacific Islander, and other. The Black and White groups used in this study were extracted from this section. In order to avoid overlap, all those that categorized themselves as "Hispanic" were deemed "Hispanic" in this section only, leaving the rest that checked "white" or "black" to be categorized as so.

The insured dependent variable designates individuals with any type of health insurance with a one, including private or government supplemented insurance. CPS asked the following question: “Were you covered by ANY type of health insurance plan last week?”

Since health insurance is a binary variable, meaning that the subject can either have insurance (assigned a value of one) or not have insurance (assigned a value of zero), the logit model evaluates the data more accurately than ordinary least squares. Ordinary least squares allows predicted values of the dependent variable to be less than zero or greater than one, while the logit model restricts the predictions to values from zero to one and thereby supports an interpretation of a predicted value as a probability. Because it is impossible for a subject in this sample to have a more than 100% chance or less than a 0% chance of having health insurance, values greater than one or less than zero are not useful. In addition, estimation of the model using least squares would be inefficient because of the well-know heteroscedasticity problems in the linear probability model.

The variables above were regressed with *and* without the difference-in-difference estimates in Eviews for *all ages* and for *adult ages* (18-64 years old). The concise specific explanation for each of these variables can be found in table A.1. The *italicized* variables were the omitted categories used to establish a reference point for the logit model.

CHAPTER FOUR

Data and Results

The Current Population Survey (CPS) is a monthly survey of households conducted by the Census Bureau for the Bureau of Labor Statistics. It provides a comprehensive body of data on the labor force, employment, unemployment, and persons not in the labor force (U.S. Department of Labor 2005). The data used in this study are a one-point-in-time extraction from the March 1997 survey. There are alternative sources of similar information, but of the accessible data sources, CPS best fits this study. All subjects were identified by ethnicity and/or race, but only the Hispanic, non-Hispanic Black, and non-Hispanic White subjects were isolated and used from the survey. The *all ages* sample size included 20,118 Hispanics, 13,082 non-Hispanic Blacks, and 92,762 non-Hispanic Whites, while the *adult-age* sample size included 11,852 Hispanics, 7,396 non-Hispanic Blacks, and 56,293 non-Hispanic Whites. The first regression equation included one left-hand dependent variable (whether or not the subject was insured) and thirty-one right-hand independent variables, eleven of which are interaction terms. The second regression equation excluded the interaction terms, leaving twenty right-hand independent variables.

Table A.1. lists each variable and its description. Table A.2. and A.3. provide the summary statistics for the two samples: all ages, and “adult” ages (18-64 years old). Since there are two samples and two methods, each equation is regressed twice using a logit model in Eviews, resulting in four regressions total. Tables A.4. and A.5. list the values of the coefficients, the standard errors, and the probabilities for each of the four

regressions. The z-statistics associated with the individual coefficient estimates are asymptotically normally distributed. One asterisk identifies significance at the ten-percent level, two at the five-percent level, and three at the one-percent level. Although the year of immigration tends to have some insignificant variables, inconsistently throughout the four regressions, all four regressions agree that the variables accounting for immigration in the 1980's and 1990's are negative. Therefore, compared to native individuals, immigrants arriving in the 80's or 90's (within the last twenty years) tend to be less likely to have health insurance. Except for the 1970's in one out of the four regressions, the remaining immigration coefficients are positive.

The coefficients for household income, personal income, age, married individuals, and the female gender are positive and significant for all regressions at the one percent level. Those that earn more money, are older, married, and/or female are more likely to have health insurance than those that earn less, are younger, single and/or male.

Concerning education, the coefficients are significantly positive and overall increasing except for high school graduation in the all ages regressions. The regression including all ages and interaction terms shows high school education to be insignificant. The all ages group includes those who are too young to have a high school education; therefore this accounts for the blip in significantly increasing terms. Overall, the more education one obtains, the more likely he/she will be to have health insurance.

The variables for Hispanics and blacks are significantly negative in all regressions except for the regression *without interaction terms* in the adult ages population. The interaction terms probably add necessary attributes to the regression, which may cause inaccuracy when they are missing. After looking at the results of the Wald tests, which

show the black and Hispanic variables to be significantly different from each other at the one-percent level and are not equal to one when they are together, whites are more likely to have health insurance than blacks, who in turn are more likely than Hispanics. As one would expect, the first and second generation coefficients are significantly positive and increasing. Along with the results of the Wald test, which tests if the first and second generations are significantly different, the results show that second generation is more likely to have health insurance than first, and the first is more likely than the immigrant.

To provide some insight into the relative magnitude of the estimated coefficients on the qualitative independent variables, the following procedure was employed: The predicted value of the binary dependent variable was calculated using the sample average value of each independent variable except one. Table 5 displays the equations used in each of these steps. The value of a selected variable was first assumed to be zero, then

Table 5. Understanding Percent Differences

General equation and one example
insured= 4.44 +5.55(average hhinc)+6.66(average income)+ 7.77(average age)+8.88(married)+. . .
married0= 4.44 +5.55(avg hhinc)+6.66(avg income)+ 7.77(avg age)+8.88(0)+. . . =9.00
married1= 4.44 +5.55(avg hhinc)+6.66(avg income)+ 7.77(avg age)+8.88(1)+. . . =9.05.
Percent Difference=(9.05-9.00)100=5 percentage point difference

assumed to be one. The difference between the output given with the zero and the one then were multiplied by one hundred to determine the percentage point differences in the predicted probability an individual with otherwise average characteristics would have health insurance.

Table A.6. displays the calculated percentage point differences for each variable. The independent dummy variables are to be read as: “A likelihood of an otherwise

average married individual in the ‘all ages’ sample to have health insurance is 4.79 percentage points higher than that of an otherwise average single individual in the March 1997 survey.”

Similar calculations for the effects of income and household income are based on a one-percent positive increase from the average in that sample: “For a one-percent increase, from the average, in household income, an individual in the ‘all ages’ sample of the March 1997 survey had 0.08 more percentage points in his/her likelihood to have health insurance.” The variable controlling for age is similar to income and household income: “For a one-year increase from the average age, an individual in the ‘all ages’ sample of the March 1997 survey was 0.42 percentage points higher toward having health insurance.” Excluding the interaction terms, an average of the four regressions show the following six variables to have the highest percent differences (with all averages greater than eight percent): Education beyond college, second generation, college graduates, Hispanics, some college education, and first generation. Note that if the all ages group is excluded, the averages for the education variable rise. In other words, excluding the minor individuals might provide a more accurate report of the education data. Morecoll rises from 10.06 to 12.21; collgrad rises from 10.60 to 12.94; somecoll rises from 8.34 to 10.83. Secgen slightly increasing from 10.51, and firstgen slightly decreases from 8.01, but neither change as much as the education variables.

Interestingly, blacks have a 4.7 point difference, which is less than marital status, gender, and the immigration decades of the 1990’s or 1980’s. Note that the other variables are at their average points when being black affects the individual’s likelihood

4.7 percentage points. Therefore, this change in points may differ depending on whether the individual is average in every other category or not.

The Wald Test, displayed in Table A.7., tests the significance of the interaction terms. The goal is not only to analyze the assimilation rates of immigrants and Hispanics, but also the assimilation patterns of Hispanic immigrants in comparison to all other immigrants. In other words, this Wald Test asks whether the Hispanic immigrants in a given time period are significantly different from all other immigrants in the sample. The test is repeated to compare black immigrants to all immigrants. Asterisks denote significance of the Chi-squared (X^2). The only interaction terms that are consistently significant in both regressions as well as both Wald Tests are blacks and Hispanics immigrating in the 1990's. The Wald Test shows both interaction terms to be significantly different from zero at the one-percent level.

A second set of Wald tests, displayed in Table A.8., were run to test if Blacks and Hispanics as well as first and second generations are significantly different from each other. The results show blacks and Hispanics to be significantly different from each other and from zero at the one-percent level. First and second generations, ignoring race, are significantly different from each other and from zero at the one-percent level. There is an exception for the first and second generation in the all ages group. The test did not reject the notion that the two variables are equal to each other. An overlap in the generations in the all ages group might account for this result in the Wald test. For clarification, a Wald test was also run to determine if all of the crossed immigration/race variables were equal to zero or to each other. The assumptions are rejected in all cases and in both age groups.

CHAPTER FIVE

Discussion and Conclusion

The results from the CPS data and the logit model easily provide answers to the original questions: Does assimilation play a significant role in acquisition of health insurance by Hispanics? First, let us assume “assimilation” to refer to “generation.” All four regressions show the second generation variable to be significantly positive and more positive than the first generation variable. As a result, we can conclude that subsequent generations are more likely to be insured than the immigrant; therefore assimilation occurs at least from the immigrant through the second generation. The percent differences show the first generation to be about 8.3 percentage points higher and the second generation to be about eleven percentage points (averages of the four regressions) higher than immigrants. As I hypothesized, the percentages are significantly positive, but the magnitude of the percentage differences is enlightening. While the second generation has a higher average percentage, the change from immigrant to first generation is 8.3 points, but the change from first to second generation is only 2.2 points. Therefore, the second generation already experiences decreasing marginal returns. The Wald test concludes that first and second generations are significantly different from zero when they are added and are significantly different from each other except for the group with all ages. Although there is a significant increase from the first to second, that increase is less than that from the immigrant to the first generation.

If we define assimilation by the *time during one’s life*, then an evaluation of the immigration variables will prove more useful. Assume the earlier the immigrant’s

migration, the longer the individual has resided in the United States as opposed to returning to his-her home country for a significant period of time. Although the immigration variables are not consistently significant or insignificant across regressions, all four agree that the 1980's and 1990's to be negative, and most agree the rest to be positive. Individuals with less than about seventeen years of residency are less likely to be insured than those whom have acquired more than seventeen years. Whether assimilation is defined as years or generations, the results of these regressions show significant evidence for correlation between the possession of health insurance and the length of time the individual or the family has resided in the United States, an attribute of assimilation. In conclusion, the data confirm the original hypothesis that assimilation plays a significant role in an individual's likelihood to obtain health insurance in the United States.

Does assimilation play a more significant role in some ethnicities than others? As predicted, the race/ethnicity variables show negative coefficients and percent differences. Not only is the Hispanic variable more negative than the Black variable, but the Wald test shows the Hispanic and Black variables to be significantly different from each other and from zero at the one percent level. In other words, Hispanics are less likely than blacks to have health insurance, who in turn are significantly less likely than whites. Specifically, Hispanics are ten percentage points *less* likely on average than whites, while Blacks are 4.71 percentage points *less* likely on average than whites to have health insurance. Excluding interaction terms, the Hispanic variable lands in the top six most influential percent differences. With regard to the interaction terms, the Wald tests show a significant difference between white and Hispanic immigrants as well as the white and

black immigrants arriving in the 1990's. Of even more interest, both Wald tests, for all ages as well as adult ages, show a significant difference for the Hispanic immigrants arriving in the 1980-1989 time period. Based on the idea that Hispanics remain significantly different from blacks and white for more periods of time, the Hispanic immigrants may assimilate more slowly than black immigrants. This result suggests that a Hispanic or black *immigrant* is less likely to be insured than a white *immigrant* in the corresponding time period.

To answer the original question, the Wald test shows that indeed, Hispanics are less likely than blacks, who in turn are less likely than whites, to have health insurance. In addition, Hispanic immigrants are significantly less likely to be insured for more time periods than black immigrants. Specifically, the average black immigrant takes at least seven years to converge with white immigrants, while the Hispanic immigrant needs at least seventeen years.

How significant is assimilation compared to the obvious alternative factors, such as age, education, income, and marital status? Age, income, and household income have a significant and positive relationship with possession of health insurance. The regressions excluding ages younger than eighteen and older than sixty-four are extremely useful when analyzing income. Married individuals and females are also more likely to have health insurance than singles and males. Lastly, education levels show significantly positive relationships with being insured. Interestingly, the variables for some college, college graduation and education beyond college present in the highest six percentage point differences. The six highest average percentage point differences, excluding interaction terms, are college graduate, second generation, education beyond college,

Hispanic, some college, and first generation in descending order. The only interaction terms that are significant in both age groups and in both Wald tests are the 1990's for black immigrants (10.94) and 1990's for Hispanic immigrants (-9.19). Both are significantly negative when compared to white immigrants in the same time period. It seems that the Hispanic ethnicity, generation status, and higher education influence insured status more than other variables in this regression. Age, income, and household income are difficult to compare to other factors, but among adult working ages, an additional year from the average age increases one's likelihood by 0.34 percentage points, and household income (0.07) has a greater effect than personal income (0.01). Secondary education, being Hispanic, or being in the second or subsequent generation make the largest effect in percentage points. Interestingly, being black has a smaller effect than marital status or gender.

This study aims to improve the state of knowledge about the uninsured population. With the knowledge that many of the same groups are uninsured, policy makers and insurance companies may create laws and insurance plans to account for minorities and/or immigrants. At this point, it is important to note that some researchers and politicians believe the rumor that a majority of immigrants are unlikely to acquire health insurance, even when programs are available. Some research at the Pew Hispanic Center in Washington, D.C. reports that the quality of immigrants has declined from 1960 to 1980. The senior researcher states that the recent immigrants have not significantly affected the penal system in the United States, but they are increasing the dependent population due to a decline in labor force participation (Fry 1996). Another paper discussed 1965 Naturalization and Immigration Act, which began allowing people based

on family ties that were previously excluded. The paper also analyzes the difference in composition of today's Hispanic and Asian immigrants, as opposed to the European immigrants of the 1960's. A confirmation of a decline in entry level earnings suggests that there is a "decline in immigrant transferability" (Orcutt 2000). Because the data in this study were taken in March 1997, meaning the effects of the 1996 healthcare reform have not had a chance to materialize sufficiently, health economists may have a chance to test this rumor in subsequent studies. Whether U.S. law makers use this evidence to encourage programs or *payment* for healthcare, this study may put us one step closer toward uncovering the major causes of America's outrageous healthcare costs and finding a significantly effective solution. Targeting these groups will not only potentially reduce cost through decreasing hospital cost-shifting, but may also improve the health of the nation through increased availability of resources. Holding the uninsured accountable or allotting for their expenses will guarantee that more health insurance holders will pay less and have better access to care when they need it. In turn, this cycle will return to the uninsured in the form of cheaper costs, encouraging them to obtain the more cost-effective health insurance.

Future studies may expand this knowledge by evaluating multiple time periods, cross sections before and after the 1996 healthcare reform, as well as types of health insurance acquired. More comprehensive data, including grandparents' nativity and immigration year, may provide more accurate information about the second and third generations. Lastly, there is room for expansion of ethnicity types and the assessment of living location. Comparison of Hispanic immigrants against Oriental and south Asian immigrants may be of interest. In addition, the towering uninsured status of Texas

compared to other bordering relatively insured states, such as Minnesota, may also contribute to the analysis of costly U.S. healthcare. Hopefully, the results of this assimilation study will allow politicians and insurance companies to reduce costs and improve efficiency for all users of the American healthcare system.

Why should Americans care about the uninsured? Whether these individuals are white, black, Hispanic, another race, immigrants, citizens, poor or rich, they are one major reason that healthcare facilities have adopted the practice of cost-shifting. What the uninsured cannot or will not pay for, the insured are forced to make up the difference. What the insured cannot or will not pay for, our country must through taxes. In other words, the more uninsured people there are in the United States, the higher taxes rise.

Notably, Americans receive social, physical, and mental benefits from more access to better healthcare. Physically, the more diseases and illnesses in a society, the less likely one is to be healthy. Therefore, it is in an America's interest to have a healthy society. Mentally, Americans are more guilt-free. They are attempting to provide a healthier world for their children. Socially, the divide between the healthy rich and sick poor is smaller, providing for a more congenial society on whole.

If Americans receive benefits, why should they mind paying in extra taxes and higher healthcare prices? The number of people insured through the government will continue to increase as individuals learn that the government will supplement health insurance when they cannot afford it, remembering that the numbers in this study deemed one as insured if they had *any* insurance. As a result, taxes rise or helpful government programs are cut. If the government is forced to cut programs because Americans oppose the tax increases, even more will become uninsured. Subsequently, these unpaid bills

shift toward the insured individual, making it more difficult for this individual to afford healthcare. In an extreme case, the very rich would supplement healthcare for the rest of the country or no one would have healthcare except those that could afford to pay the physician's asking price. Without healthcare for a given majority of the population, the entire country suffers from illness and disability. In summary, it is imperative that the U.S. realizes that healthcare is important for a majority of its population, and a major cause of the rising prices are a result of more individuals becoming uninsured. Therefore, identifying and rectifying the major causes for the uninsured individuals should not only improve costs, but also improve the healthcare industry on whole. Logically, more compensation for services in the healthcare industry will brew more competition for a job in this sector. Finding and fixing the causes of the uninsured could result in new technology, a higher caliber of workers, and better access for lower costs.

APPENDIX

Tables, Regressions, and Results

Table A.1. List of Variables

Variable	Meaning and Unit of Measurement
INSURED	= 1 if insured, 0 otherwise
HHINC	= total household income (dollars)
INCOME	= person's total income (dollars)
AGE	= number of years from birth (years)
MARRIED	= 1 if married, 0 if single
FEMALE	= 1 if female, 0 if male
IMMIGBEFORE50	= 1 if subject immigrated to the U.S. before 1950, 0 otherwise
IMMIG50to59	= 1 if subject immigrated to the U.S. in the 1950's, 0 otherwise
IMMIG60to69	= 1 if subject immigrated to the U.S. in the 1960's, 0 otherwise
IMMIG70to79	= 1 if subject immigrated to the U.S. in the 1970's, 0 otherwise
IMMIG80to89	= 1 if subject immigrated to the U.S. in the 1980's, 0 otherwise
IMMIG90to97	= 1 if subject immigrated to the U.S. in the 1990's, 0 otherwise
<i>IMMIGNEVER</i>	<i>= 1 if subject is native to the U.S., 0 otherwise</i>
<i>LESSHS</i>	<i>= 1 if subject does not have a high school education, 0 otherwise</i>
SOMEHS	= 1 if the subject has taken at least one course in high school without obtaining a high school diploma or equivalent, 0
HSGRAD	= 1 if the subject has obtained a high school diploma or equivalent without receiving any college, 0 otherwise
SOMECOLL	= 1 if the subject has taken at least one course in college without obtaining a degree, 0 otherwise
COLLGRAD	= 1 if the subject has obtained a college degree without seeking further education, 0 otherwise
MORECOLL	= 1 if the subject has obtained degrees past college, 0 otherwise
<i>IMMIGRANT</i>	<i>= 1 if the subject was not born in the United States, 0 otherwise</i>
FIRSTGEN	= 1 if one or both of the subject's parents immigrated, 0 otherwise
SECGEN	= 1 if both of the subject's parents were born in the United States, 0 otherwise
HISPANIC	= 1 if subject is Hispanic, 0 otherwise
BLACK	= 1 if subject is Black, 0 otherwise
<i>WHITE</i>	<i>= 1 if subject is White, 0 otherwise</i>

Table A.2. Summary Statistics for All Ages

Variable	Count	Mean	Median	Maximum	Minimum	Std. Dev.
HHINC	-	51371.61	40254.50	723980.00	-2513.00	50325.99
INCOME	-	17649.57	9100.00	616372.00	-9999.00	29762.29
FEMALE	65343	0.52	1.00	1.00	0.00	0.50
MARRIED	53768	0.43	0.00	1.00	0.00	0.49
AGE	-	34.95	34.00	90.00	0.00	22.33
INSURED	91912	0.73	1.00	1.00	0.00	0.44
WHITE	92762	0.74	1.00	1.00	0.00	0.44
BLACK	13082	0.10	0.00	1.00	0.00	0.31
HISPANIC	20118	0.16	0.00	1.00	0.00	0.37
IMMIGNEVER	112559	0.89	1.00	1.00	0.00	0.31
IMMIGBEFORE50	656	0.01	0.00	1.00	0.00	0.07
IMMIG50TO59	930	0.01	0.00	1.00	0.00	0.09
IMMIG60TO69	1635	0.01	0.00	1.00	0.00	0.11
IMMIG70TO79	2543	0.02	0.00	1.00	0.00	0.14
IMMIG80TO89	4123	0.03	0.00	1.00	0.00	0.18
IMMIG90TO97	3516	0.03	0.00	1.00	0.00	0.16
IMMIGRANT	11344	0.09	0.00	1.00	0.00	0.29
FIRSTGEN	14376	0.11	0.00	1.00	0.00	0.32
SECGEN	100242	0.80	1.00	1.00	0.00	0.40
CHILDREN	29126	0.23	0.00	1.00	0.00	0.42
LESSHS	8507	0.07	0.00	1.00	0.00	0.25
SOMEHS	14973	0.12	0.00	1.00	0.00	0.32
HSGRAD	30572	0.24	0.00	1.00	0.00	0.43
SOMECOLL	17436	0.14	0.00	1.00	0.00	0.35
COLLGRAD	19299	0.15	0.00	1.00	0.00	0.36
MORECOLL	6049	0.05	0.00	1.00	0.00	0.21

Table A.3. Summary Statistics for Ages 18-64 Years Old

Variable	Count	Mean	Median	Maximum	Minimum	Std. Dev.
HHINC		55954.71	45005.00	723980.00	-2513.00	51936.33
INCOME		25713.31	18229.00	616372.00	-9999.00	34233.29
FEMALE	39183	0.52	1	1	0	0.50
MARRIED	45231	0.60	1	1	0	0.49
AGE	2951474	39.07	39	64	18	12.40
INSURED	53580	0.71	1	1	0	0.45
WHITE	56293	0.75	1	1	0	0.44
BLACK	7396	0.10	0	1	0	0.30
HISPANIC	11852	0.16	0	1	0	0.36
IMMIGNEVER	65268	0.86	1	1	0	0.34
IMMIGBEFORE50	136	0	0	1	0	0.04
IMMIG50TO59	631	0.01	0	1	0	0.09
IMMIG60TO69	1372	0.02	0	1	0	0.13
IMMIG70TO79	2378	0.03	0	1	0	0.17
IMMIG80TO89	3381	0.04	0	1	0	0.21
IMMIG90TO97	2375	0.03	0	1	0	0.17
IMMIGRANT	8846	0.12	0	1	0	0.32
FIRSTGEN	5559	0.07	0	1	0	0.26
SECGEN	61136	0.81	1	1	0	0.39
LESSHS	4284	0.06	0	1	0	0.23
SOMEHS	8070	0.11	0	1	0	0.31
HSGRAD	25183	0.33	0	1	0	0.47
SOMECOLL	15426	0.20	0	1	0	0.40
COLLGRAD	17349	0.23	0	1	0	0.42
MORECOLL	5229	0.07	0	1	0	0.25

Table A.4. Regression of All Ages

Variable	With interaction terms		Without interaction terms	
	Coefficient	z-stat	Coefficient	z-stat
log(hhinc)	0.39 (0.01)***	35.05	0.39 (0.01)***	35.00
log(income)	0.04 (0.01)***	6.38	0.04 (0.01)***	6.34
age	0.02 (0)***	37.98	0.02 (0)***	37.87
married	0.24 (0.02)***	13.24	0.24 (0.02)***	13.22
female	0.25 (0.02)***	14.31	0.25 (0.02)***	14.36
immigbefore50	0.34 (0.14)**	2.37	0.25 (0.12)**	2.13
immig50to59	0.35 (0.14)***	2.58	0.04 (0.09)	0.40
immig60to69	0.10 (0.12)	0.85	0.13 (0.08)*	1.67
immig70to79	0.15 (0.11)	1.33	-0.03 (0.07)	-0.41
immig80to89	-0.28 (0.11)***	-2.57	-0.36 (0.07)***	-4.91
immig90to97	-0.16 (0.12)	-1.4	-0.47 (0.08)***	-5.97
somehs	0.18 (0.04)***	4.94	0.19 (0.04)***	5.29
hsgrad	0.04 (0.03)	1.35	0.06 (0.03)*	1.84
somecoll	0.29 (0.04)***	8.07	0.31 (0.04)***	8.60
collgrad	0.43 (0.04)***	11.43	0.44 (0.04)***	11.99
morecoll	0.41 (0.05)***	8.29	0.44 (0.05)***	8.80
firstgen	0.46 (0.07)***	6.61	0.44 (0.07)***	6.44
secgen	0.49 (0.07)***	7.45	0.45 (0.06)***	6.97
hispanic	-0.50 (0.03)***	-14.89	-0.58 (0.03)***	-20.80
black	-0.28 (0.03)***	-9.88	-0.28 (0.03)***	-10.26
hispanic*immigbefore50	-0.25 (0.22)	-1.1		
hispanic*immig50to59	-0.59 (0.17)***	-3.44		
hispanic*immig60to69	0.00 (0.13)	0		
hispanic*immig70to79	-0.27 (0.12)**	-2.3		
hispanic*immig80to89	-0.14 (0.11)	-1.29		
hispanic*immig90to97	-0.44 (0.12)***	-3.72		
black*immig50to59	-0.97 (0.56)*	-1.74		
black*immig60to69	0.40 (0.31)	1.28		
black*immig70to79	-0.02 (0.21)	-0.07		
black*immig80to89	0.11 (0.17)	0.67		
black*immig90to97	-0.49 (0.21)**	-2.26		
Log likelihood	-44999.37		-45017.09	
McFadden R-squared	0.09		0.09	

Table A.5. Regression of Ages 18-64 years

Variable	With interaction terms		Without interaction terms	
	Coefficient	z-stat	Coefficient	z-stat
log(hhinc)	0.37 (0.01)***	29.95	0.37 (0.01)***	29.88
log(income)	0.11 (0.01)***	15.34	0.11 (0.01)***	15.31
age	0.01 (0)***	16.77	0.01 (0)***	16.76
married	0.40 (0.02)***	20.37	0.40 (0.02)***	20.36
female	0.29 (0.02)***	15.49	0.29 (0.02)***	15.54
immigbefore50	0.02 (0.27)	0.06	0.25 (0.22)	1.16
immig50to59	0.30 (0.16)**	1.93	0.09 (0.11)	0.88
immig60to69	0.18 (0.12)	1.49	0.26 (0.09)***	3.03
immig70to79	0.30 (0.12)***	2.49	0.12 (0.08)	1.55
immig80to89	-0.18 (0.12)	-1.51	-0.24 (0.08)***	-3.06
immig90to97	-0.05 (0.12)	-0.45	-0.35 (0.08)***	-4.09
somehs	0.21 (0.05)***	4.59	0.23 (0.05)***	4.90
hsgrad	0.33 (0.04)***	7.87	0.35 (0.04)***	8.34
somecoll	0.62 (0.05)***	13.64	0.63 (0.04)***	14.16
collgrad	0.75 (0.05)***	16.34	0.77 (0.05)***	16.91
morecoll	0.76 (0.06)***	13.04	0.78 (0.06)***	13.55
firstgen	0.44 (0.08)***	5.80	0.44 (0.08)***	5.87
secgen	0.54 (0.07)***	7.46	0.52 (0.07)***	7.34
hispanic	-0.38 (0.04)***	-10.47	-0.44 (0.03)	-14.45
black	-0.17 (0.03)***	-5.48	-0.18 (0.03)	-5.92
hispanic*immigbefore50	0.55 (0.44)	1.27		
hispanic*immig50to59	-0.36 (0.20)**	-1.79		
hispanic*immig60to69	0.09 (0.14)	0.60		
hispanic*immig70to79	-0.26 (0.12)**	-2.11		
hispanic*immig80to89	-0.12 (0.11)	-1.09		
hispanic*immig90to97	-0.42 (0.12)***	-3.41		
black*immig50to59	-1.81 (0.69)***	-2.62		
black*immig60to69	0.18 (0.34)	0.53		
black*immig70to79	-0.11 (0.22)	-0.51		
black*immig80to89	0.06 (0.17)	0.32		
black*immig90to97	-0.52 (0.23)**	-2.31		
Log likelihood	-37276.68		-37291.26	
McFadden R-squared	0.10		0.10	

Table A.6. Logit Coefficient Interpretation

Variable	Percent Difference (%)				Average (%)
	With Interaction Terms		Without Interaction Terms		
	All Ages	Adult Ages	All Ages	Adult Ages	
log(hhinc)	0.08	0.07	0.08	0.07	0.07
log(income)	0.01	0.02	0.01	0.02	0.01
age	0.42	0.26	0.42	0.26	0.34
married	4.79	7.81	4.79	7.80	6.30
female	5.03	5.59	5.06	5.60	5.32
immigbefore50	6.34	0.30	4.79	4.54	3.99
immig50to59	6.60	5.30	0.74	1.74	3.59
immig60to69	1.97	3.33	2.64	4.69	3.16
immig70to79	2.97	5.25	-0.62	2.27	2.47
immig80to89	-6.07	-3.57	-7.82	-4.90	-5.59
immig90to97	-3.38	-1.05	-10.43	-7.11	-5.49
somehs	3.56	3.91	3.79	4.13	3.85
hsgrad	0.91	6.21	1.23	6.50	3.71
somecoll	5.70	10.70	6.02	10.95	8.34
collgrad	8.10	12.81	8.43	13.07	10.60
morecoll	7.72	12.07	8.12	12.35	10.06
firstgen	8.56	7.64	8.22	7.62	8.01
secgen	10.61	11.08	9.68	10.69	10.51
hispanic	-10.84	-7.72	-12.66	-8.93	-10.04
black	-6.00	-3.37	-6.00	-3.50	-4.71
hispanic*immigbefore50	-5.25	9.11			1.93
hispanic*immig50to59	-13.23	-7.45			-10.34
hispanic*immig60to69	0.01	1.60			0.81
hispanic*immig70to79	-5.86	-5.29			-5.57
hispanic*immig80to89	-2.90	-2.43			-2.66
hispanic*immig90to97	-9.63	-8.74			-9.19
black*immig50to59	-22.70	-42.09			-32.39
black*immig60to69	7.36	3.31			5.34
black*immig70to79	-0.31	-2.16			-1.24
black*immig80to89	2.21	1.06			1.64
black*immig90to97	-10.81	-11.07			-10.94

Table A.7. Wald Test I

Ho: Variable + Variable =0	Value	Std Er	X ²	Prob
Ages 18-64 years				
immigbefore50+hispanic*immigbefore50	0.57	0.34	2.75	0.10
immig50to59+hispanic*immig50to59	-0.06	0.14	0.18	0.67
immig60to69+hispanic*immig60to69	0.27	0.11	6.42	0.01
immig70to79+hispanic*immig70to79	0.03	0.09	0.14	0.71
immig80to89+hispanic*immig80to89	-0.30	0.09	12.23	0
immig90to97+hispanic*immig90to97	-0.47	0.10	24.47	0
immig50to59+black*immig50to59	-1.51	0.68	4.97	0.03
immig60to69+black*immig60to69	0.36	0.33	1.22	0.27
immig70to79+black*immig70to79	0.19	0.20	0.85	0.36
immig80to89+black*immig80to89	-0.12	0.16	0.59	0.44
immig90to97+black*immig90to97	-0.57	0.21	7.24	0.01
All Ages				
immigbefore50+hispanic*immigbefore50	0.09	0.19	0.24	0.62
immig50to59+hispanic*immig50to59	-0.23	0.12	3.88	0.05
immig60to69+hispanic*immig60to69	0.10	0.10	1.08	0.30
immig70to79+hispanic*immig70to79	-0.12	0.08	2.14	0.14
immig80to89+hispanic*immig80to89	-0.42	0.08	27.22	0
immig90to97+hispanic*immig90to97	-0.60	0.09	44.29	0
immig50to59+black*immig50to59	-0.62	0.55	1.28	0.26
immig60to69+black*immig60to69	0.50	0.30	2.81	0.09
immig70to79+black*immig70to79	0.14	0.19	0.50	0.48
immig80to89+black*immig80to89	-0.17	0.15	1.27	0.26
immig90to97+black*immig90to97	-0.65	0.20	10.13	0

Table A.8. Wald Test II

	X^2	Prob
Ages 18-64 years		
Hispanic- all equal to zero	20.68	0.00
Hispanic- all equal to each other	12.18	0.03
Black- all equal to zero	12.82	0.03
Black- all equal to each other	10.95	0.03
Firstgen+secgen=0	46.44	0.00
Firstgen=secgen	7.31	0.01
Hispanic+Black=0	119.42	0.00
Hispanic=Black	21.68	0.00
All Ages		
Hispanic- all equal to zero	28.79	0.00
Hispanic- all equal to each other	11.70	0.04
Black- all equal to zero	10.33	0.07
Black- all equal to each other	10.00	0.04
Firstgen+secgen=0	51.87	0.00
Firstgen=secgen	1.46	0.23
Hispanic+Black=0	285.23	0.00
Hispanic=Black	27.25	0.00

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