Disparities in Health Insurance Coverage between Natives and Immigrants at Older Ages

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Abstract

As the immigrant population grows older and larger, limitations on access to health insurance may create a new subgroup of people who remain outside or on the margin of coverage. Using SIPP data from the 2004 and 2008 panels, we examine the differential dynamics of health insurance coverage for natives and immigrants aged 50 and older relative to the pre- and post-PRWORA policy contexts. We find that health insurance coverage for older immigrants is both less likely and more episodic, with those from Latin America at particular disadvantage, even when compositional differences in assimilation are controlled.   Those arriving post-PRWORA are less likely to have coverage, but more generous state policies can ameliorate these circumstances for new immigrants. However, most states (and all the 'new' destination states) restrict immigrant coverage, which will place older immigrants at higher risk of being uninsured should these immigration patterns and state policy contexts persist.

1. Introduction

Lack of health insurance coverage represents a major challenge for U.S. immigrants, and as the immigrant population grows older, eligibility rules for public assistance, employer plans, and Medicare may create a new class of people who remain outside the umbrella of coverage. Although employment, reaching age 65, or satisfying means tests for low income households are considered to be major avenues of eligibility for health insurance coverage (hereafter HIC), these gateways are not open to all immigrants. Foreign-born adults are more likely to work in jobs that offer no coverage, may be ineligible for Medicaid because of legislative restrictions, and are three times as likely as native-born adults to be uninsured (Buchmueller, et al., 2007). While the eligibility of natives for Medicare at age 65 is near universal, insufficient employment histories in the U.S. can exclude older immigrants from Medicare coverage as well. In this paper, we address the health insurance gap between foreign-born and native-born adults aged 50 and older, a sub-population that has received relatively little attention in past research. We argue that current practices leave a significant minority of older foreign born residents inconsistently covered. Both federal and state policies are important elements in structuring HIC among the older foreign born, making state of residence and year of entry significant considerations. In the absence of policy reform, the changing age structure of the immigrant population will amplify this problem.

2. Background and Significance

2.1 The demography of older immigrants

A growing proportion of our older population is comprised of immigrants. In the past 20 years, the older foreign-born population increased from 2.7 million to 4.6 million (U.S. Census Bureau, 2011). More than three-quarters of immigrants age 65 and older were admitted as immediate relatives of U.S. citizens (U.S. Department of Homeland Security, 2006), and the number of aging parents whose immigration is sponsored by their adult children is likely to continue to grow (Treas and Batalova, 2009).

More than one-third of these parents come from Latin America, and another 30 percent come from Asia (U.S. Department of Homeland Security, 2004). By mid-century, the proportion of foreign-born elderly who are Hispanic or non-Hispanic Asian is expected to increase to about 70 percent (Martin and Midgley, 2010, U.S. Census Bureau, 2003).

When Medicare and Medicaid were passed in 1965, the age structure of the foreign-born population was skewed toward those aged 60 and older, a reflection of the high rates of young European immigrants who came to the U.S. in the early part of the 20th century and the much lower rates of entry during the middle decades of the 20th century. In the same year, the Hart-Cellar Act of 1965 shifted immigration policy away from quotas and toward family reunification. Since then, the number of naturalized citizens who sponsored their parents as new immigrants has increased. In addition, the elimination of quotas resulted in a rapidly growing share of immigrants from Asia and Latin America. By 1990, cohorts of older European immigrants were dying out, but through family sponsorship, the proportion of older immigrants being admitted to the U.S. was increasing.

Even so, new immigrants are most often young adults, and that pattern is reflected in the diamond-shaped age structure of the late 20th century foreign-born population. At the same time, those who were on the leading edge of the post-1965 wave of immigrants have aged into late mid-life or early old age. They merge with a smaller number of older parents who migrated to join their adult children. As a result, the age pyramid for foreign-born residents bulges in mid-life (30s and 40s), with more men than women, then angles in at the bottom as well as the top (see Figure 1). Relatively few foreign-born children and adolescents reflect the prevalence of mixed-nativity families with native-born children of foreign-born parents. The smaller share of the foreign-born population aged 50 and older reflects a ceiling effect on the aging of young adult, post-1965 immigrants and their ability, as U.S. citizens, to sponsor their parents. Even if immigration remains concentrated among young adults, the age pyramid for foreign-born residents will expand at older ages, as the larger cohorts currently in their 40s and 50s

replace the smaller cohorts now in their 60s, 70s and older (Treas and Batalova, 2009). Examining the dynamics of health insurance coverage for immigrants aged 50 and older will reveal the adequacy of our health and poverty programs for this growing segment of the population. At issue is whether older immigrants are able to acquire and keep their health insurance coverage.

2.2 Composition of the older immigrant population

Recent statistics indicate that most foreign-born persons age 65 and older came to the U.S. before 1990, and more than half have lived in the U.S. for 30 or more years. Despite their age at arrival, many older immigrants continue to live on the margins of U.S. society and face more difficulty assimilating to U.S. culture. Not only are they likely to have smaller social networks, but they also tend to have more difficulty speaking and understanding English. Although longer duration in the U.S. is positively associated with greater English proficiency (Bean and Stevens, 2003), older age at arrival predicts less fluency (Alba and Nee, 2003, Jasso and Rosenzweig, 1990). In addition, Spanish is the most common foreign language for older adults, and Spanish speakers are less likely to develop fluency in English than those speaking other languages (Carliner, 2000). Under these circumstances, obtaining citizenship may be especially challenging to older immigrants. Citizenship is not the same as legal status, and most non-citizen older immigrants are legal permanent residents (the average age of documented migrants is 25).

2.3. Personal Responsibility and Work Opportunity Reconciliation Act

The relevance of citizenship was heightened after passage of the Personal Responsibility and Work Opportunity Reconciliation Act (PRWORA) of 1996. Heralded as welfare reform, the legislation clearly targeted immigrants, who were highlighted in discussions leading up to passage as a source of cost savings (Fix and Haskins, 2002). Prior to 1996, legal permanent residents were eligible for public assistance on terms similar to those of citizens (Cohen, 2007). After PRWORA, eligibility was restricted to citizens, with exceptions for refugees and asylees, immigrants who served in the military, and their

families (Fix and Passel, 2002). In addition, PRWORA made most immigrants arriving after August 22, 1996 categorically ineligible for federal public assistance for a 5-year period, with the same exceptions. Thereafter, means testing required that the income claimed must include a portion of the sponsor's income. This constraint of 'sponsor deeming' continues until naturalization or the completion of 40 quarters of employment. States were given the option of extending coverage, an issue we return to later. PRWORA emphasized marriage and employment as pathways to self-sufficiency. The consequence for immigrants was a mixture of criteria for eligibility that involved legal status, citizenship, arrival date, their own and their sponsors' financial characteristics, age, pregnancy status, and their state of residence (Cohen, 2007).

Whereas the impact of PRWORA on immigrants' access to welfare has been documented, less is known about its implications for their Medicaid and health insurance coverage. After passage of PRWORA, the number of immigrants on public assistance declined precipitously. Approximately 935,000 noncitizens lost benefits (Fix and Passel, 2002). The impact on noncitizens appeared to be more severe than on their naturalized counterparts (Gerst and Burr, 2011). The lost Medicaid coverage has not been replaced by other sources of health insurance. Rather, the size of the uninsured population has increased by about 4.5% among legal permanent residents (Fix and Passel, 2002), an increase that cannot be entirely explained by labor market reductions (Lofstrom and Bean, 2002). In addition, the impact may be harsher for less educated migrants (Kaestner and Kaushal, 2005)and for newly arrived older immigrants (Choi, 2006).

The reduction in non-citizen public assistance may result from changes in immigrants' naturalization rates, since the rate of naturalization increased post welfare reform (Van Hook, 2003). However, naturalization does not account for noncitizen exits from public assistance rolls (Fix and Passel, 2002, Fix and Passel, 1999). In addition, the connection between naturalization and entitlement to public assistance may not be clear cut, since immigrants who receive benefits are not more likely to

naturalize. Pursuit of naturalization also depends on social contextual factors or the reception of immigrants in their states of residence (Van Hook, et al., 2006). Prevailing policies in sending countries may also be responsible for increased naturalization. For example, in the case of some Latin American countries (e.g., Colombia, Dominican Republic, Ecuador, Costa Rica, and Brazil), citizenship policies were changed so that they now allow immigrants to the United States to hold dual citizenship (Mazzolari, 2011).

2.4 State of residence

Because Medicaid is a joint federal-state program, eligibility can be extended to categories of beneficiaries at the state's discretion so long as the costs are covered by state revenues, which places a greater burden on state and local governments to address these issues (Okafor, 2009). Some states use state revenues to provide health insurance to immigrants who do not qualify for federal benefits; however, access to coverage varies substantially by state (Ellwood and Ku, 1998, Zimmermann and Tumlin, 1999). With the exception of California, the states with the largest immigrant populations provide very limited aid to immigrants during their initial 5 years of residence. Although even undocumented immigrants are eligible for emergency Medicaid (Dinan, 2005), the question for older immigrants is whether they have routine access to health care and preventative screening.

Without health insurance, access to medical care—particularly preventive care—is more limited (Zuvekas and Taliaferro, 2003). Lack of coverage is associated with worse health, and it places a heavy financial burden on families who must cover the costs (Bovbjerg and Hadley, 2007). While waiting for the 5-year ban to expire, older immigrants may forego doctor visits and routine screening. The incidence of chronic disease and non-acute diseases such as cancer increases with age. Early diagnoses and timely treatment can reduce cause-specific mortality as well as overall health care costs through early intervention (Maciosek, et al., 2010, Miller, et al., 2004, Wilper, et al., 2009).   For example, studies demonstrate that gaining Medicare coverage increases the detection of cancers with recommended

screening tests, particularly among those either intermittently or continuously uninsured before age 65 (Card, et al., 2008, Strumf, 2012).

Whereas all but one state extended Medicaid to pre-1996 immigrants (Wyoming was the exception), fewer states chose to provide newly-arrived adult immigrants with coverage (Dinan, 2005). Six states—California, Florida, Illinois, New Jersey, New York and Texas—have historically attracted immigrants. Of these states, only California and New York addressed the PRWORA-induced gap in coverage. In contrast, New Jersey has seen an increase in older uninsured 'charity' patients in hospital emergency rooms (DeLia, 2006). Of the four states with the fastest growing foreign-born populations— Arkansas, Georgia, Nevada, and North Carolina—none offer supplemental Medicaid programs to older adult immigrants (Dinan, 2005). In general, emergency Medicaid expenditures for recent and undocumented immigrants are rising rapidly (DuBard and Massing, 2007).

2.5 Economic Factors

PRWORA emphasizes the importance of work and financial autonomy for immigrants and native-born alike; however, for those born in the U.S., education provides a major pathway to these outcomes. Immigrants who arrive at older ages are unlikely to accumulate sufficient quarters of covered employment to entitle them to Social Security, or Medicare, or pension income (Treas and Batalova, 2009); as many as one-fourth of older immigrants do not qualify for Medicare (Friedland and Henry, 1997). Even immigrants who have lived here for decades are unlikely to qualify for employer pensions (Treas and Batalova, 2007). But not all immigrant groups are equally disadvantaged. For example, compared to other immigrant groups, Asian immigrants are more educated, have higher household income, and are more likely to work in jobs that offer private insurance (Schur and Feldman, 2001). In contrast, immigrants from Latin America are more likely to be high school drop outs, work in personal and household service jobs or small businesses that do not offer coverage, and have relatively

low earnings (Alegría, et al., 2006). In addition, those who migrate at older ages may not enter paid employment after arrival.

We expect the health insurance disadvantage of older immigrants to be visible in several ways. First, because of the connection between health insurance and certain types of jobs, we expect older immigrants not only to have lower rates of coverage than native-born, but also to be more likely to lose and less likely to gain coverage even after we control for employment status. Further, we expect employment to be a less effective avenue to HIC for immigrants compared to natives. Second, to the extent that immigrants from different regions experience different levels of disadvantage, we expect older Asian immigrants to exhibit the smallest gap in coverage when compared to the native-born and for immigrants from Latin America to exhibit the largest gap. Third, given the connection between employment history and Medicare eligibility, we expect that avenue to coverage, indicated by turning age 65, to operate somewhat less effectively for older immigrants than for older native born. In general, we also expect that the coverage gap between immigrants and natives to be larger when respondents are younger than age 65. When they reach age 65, the level of coverage will increase for both groups; however, we expect a coverage gap to continue even at these older ages. Fourth, once we control for differences among immigrants, such as citizenship and proficiency with English, we expect that gap to narrow, but not disappear. Finally, we expect that policy differences will matter—that older immigrants arriving after 1996 will have more difficulty getting and retaining coverage, and that those who live in states with supplemental coverage will have higher rates of coverage at first observation, higher rates of uptake, and lower rates of loss than immigrants living in states without this coverage; however, because of the mismatch between states offering supplemental coverage and those states that receive the most older immigrants, state policy will have little impact on the coverage gap between older native-born and foreign-born persons.

3. Data and Design

3.1 Data

We use the pooled 2004 and 2008 panels of the Survey of Income and Program Participation (SIPP), a longitudinal survey based on separate, independent samples of respondents who are interviewed every four months for up to four years. The 2004 respondents were interviewed a total of 12 times, over a span of 4 years. Data from the 2008 panel are available through the 10th interview, collected in August 2011. Because questions about migration history and immigration status are asked of each set of respondents in the second interview (4 months into the survey), we begin our observation period at that time.[1]

SIPP has a number of strengths for studying changes in health insurance coverage. Respondents are followed over time regardless of whether they remain in the original households or leave to form new ones. They also provide both retrospective and prospective longitudinal information on their health insurance coverage, which allows us to determine the length of time the respondent has been with or without coverage. Second, because of the large size of the SIPP samples, the number of older immigrants is sufficient for subpopulation comparisons, including comparisons among immigrants by region of origin. Compared to almost 55,000 native born respondents, we identified 5,842 immigrants aged 50 and older: 1,773 from Latin America, 1,673 from Asia, and 2,396 from elsewhere.[2]

3.2 Dependent Variables

Our primary interest is in the stability of health insurance coverage, but to examine the rate at which respondents gain or lose coverage requires that we initially sort respondents into those with and without coverage. The dependent variables for the three sets of models (first observation HI status,

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[1] We also estimated models that included the 2001 panel, which added 8 additional observations spaced 4-months apart. Because the 2001 SIPP did not collect information that allowed us to compute the length of ongoing spells of being with our without coverage, we did not include this panel in our final estimations. However, the set of results from models that exclude this duration information are consistent with the results we report here.

[2] We understand that grouping immigrants by broad regions masks considerable heterogeneity in their circumstances; however, because of the distribution of respondents across origin countries, we have insufficient data to support a country-by-country comparison.

gaining, and losing coverage) are constructed from the monthly reports of HIC for each respondent. This dichotomous variable, coded '0' for no HIC in the reference month, and '1' if the respondent has HIC, is the dependent variable in our first set of binary logit models predicting HIC at first observation. The final model in this initial series also provides the basis for our adjustments for unobserved heterogeneity in our discrete time hazard models. For the two sets of hazard models, we divide the sample by coverage at first observation. For those with HI at first observation, we model discontinuous coverage by analyzing the rate at which HI coverage is lost. For those without HI at first observation, we model the rate at which HI coverage is gained.

3.3 Independent Variables

We expect health insurance coverage to be sensitive to a number of factors, such as country of origin; number of years in the U.S.; citizenship; arrival pre- or post- 1996; employment, age and marital status; household income; and state of residence. These features reflect three relevant domains for immigrants' health insurance coverage—policy contexts, economic factors, and indicators of assimilation. We therefore organize the independent variables into four categories: time-related variables to address the underlying hazard; immigrant characteristics as indicators of assimilation; immigrant health insurance policy in state of residence (policy contexts); and demographic and SES control variables. Time is measured in two ways in the longitudinal analysis. We use the log of the elapsed time (in months) to specify the baseline hazard rate. We also control for the calendar year of interview, which ranges from 2004-2011.

Immigrants are grouped into a trio of dummy variables based on region of birth, as in Latin American, Asian, and Other immigrants (comprised primarily of countries in Europe[3]); natives serve as the reference group. We define a dichotomous variable coded '1' for those who arrived in or after 1996 and '0' for those who arrived before 1996 (the year PRWORA was implemented). We also include a

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[3] The top 5 regions in this category—Northern Europe, Southern Europe, Caribbean, Canada, and Africa—account for 97 percent of 'other' immigrants.

dummy variable to indicate immigrants who arrived after PRWORA, but have been in the U.S. fewer than 5 years. For those who have been in the U.S. for longer than 5 years, we include the number of years in the United States; natives are coded '0' on these variables. Citizenship is indicated for immigrants, coded '1' for immigrants who are naturalized citizens and '0' for natives and immigrants who are not citizens. English language ability is a variable indicating a self assessment of "not well" or "not very well" in response to the question: "How well does ... speak English?"

State Medicaid Policy is a dichotomous variable to indicate states offering supplemental coverage for immigrants who do not meet the 5-year federal residency requirement. It is coded '1' for immigrants who live in states with 'new' immigrant coverage, and '0' for immigrants living in states that do not supplement; natives are also coded as '0'.[4] The states that offer supplemental Medicaid coverage to immigrants are California, Delaware, Hawaii, Maine, Massachusetts, Minnesota, Nebraska, New York, and Pennsylvania.[5] In addition, we want to control for immigrant relocations that involve a change in policy context. Therefore, we include an indicator of state-to-state mobility for respondents moving from a generous state to a non-generous state in the hazard model of losing health insurance. Because so few immigrants move from a non-generous state to a generous state, mobility between state policy regimes is not included in hazard models for gaining health insurance.

Our demographic control variables include age, measured as age at last birthday. Since our sample consists of those aged 50 and older, we rescale age by subtracting 50. Because of the importance of Medicare, we also include a dichotomous variable indicating if the respondent is age 65 and older. Female is coded '1' for women and '0' men. Marital status is a dichotomous variable coded '1'

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[4] The series of independent variables that apply to immigrants only (arrival, duration in U.S., citizenship, language facility, and state policy context) essentially operate as interaction terms, since we have included dummy variables for immigrant status (region of origin) in the specifications. Coefficients therefore apply only to immigrants and estimate the effect of X (e.g., language facility) on the hazard of gain or loss of HIC among immigrants.

[5] These states opted to include Medicaid to all means-tested eligible legal immigrants without the residency requirement required for federal eligibility. This designation is based on a review of state welfare guidelines (see, Nam, 2011).

for currently married and '0' for all other statuses. Education is measured using a seven-category ordinal scale of the highest level of education achieved; it ranges from less than a 6th grade education (coded '1') to having a high school diploma (coded '3'), a 4-year (Bachelor's) degree (coded '6'), or an advanced degree (coded '7'). We use SIPP's measure of income as the raw total personal income (in constant dollars) and include the natural log transform of income in our analyses. Employment indicates full time work in a wage-and-salary job, which is coded '1,' and the self-employed are indicated separately.

3.4 Duration of spells of (non)coverage, Left Truncation, and Selection

Because our two analysis samples are restricted to those who either have or do not have HIC at our first observation, we have a classic case of left truncated spells, which can introduce sample selection bias in estimates of the underlying hazard, as the shorter spells of (non) coverage have already ended by our first observation. One recommended strategy for dealing with left truncated data is to drop all spells that are ongoing at the first observation (Allison, 1995); however, this approach would severely restrict our observations of changes in coverage. An alternative approach is to adjust the duration variable so that it measures the length of current (non) coverage from when coverage was started or stopped rather than from the beginning of the survey, thereby incorporating otherwise unmeasured duration heterogeneity into the model (Guo, 1993).

For our models to assess the dynamics of HIC, we must calculate the length of time HIC has been in place before it is lost and the length of time someone has been uncovered before coverage is regained. Those at risk of losing HI are defined by those with coverage at our first observation; those at risk of gaining HI are defined as those without coverage at our first observation. Respondents are asked to report the month and year that coverage started or stopped; in some cases, respondents reported 'always' or 'never' having had HI.

We compared results across several strategies that address left truncation. Our substantive results were consistent regardless of the approach. The results we report utilize the approach we

believe to be most transparent.[6] First, we include the number of months observed as the basis for the

underlying hazard function and our estimates of the average rates of gaining or losing coverage once the

observation window opens. To adjust for spell length, we include two additional variables: a dummy

variable coded '1' for those who have had HIC at some point in the past (in modeling loss) or '1' for

those who have been without HIC at some point in the past (in modeling gain); and a count of the

months of (non)coverage leading up to the start of the observation window. A negative coefficient (risk

ratio<1) for the dummy variable ('ever had insurance') in the 'gaining' model means that never-insured

respondents gain coverage at a slower rate than those who were covered at some point in the past. A

risk ratio smaller than 1 for the length of the uninsured spell ('time since last insured') means that

among those with some history of HIC, the rate of gaining coverage gets slower as the duration of non-

coverage increases.

Because our hazard models are necessarily conditioned on initially sorting respondents into

those with and without HIC, we need to address a second source of potential bias from sample

selection. If unobserved factors influencing that initial sorting process are correlated with unobserved

factors influencing the hazards of gaining or losing coverage, our estimates for the coefficients of

variables of interest could be biased. We use results from our second model (from Table 2) that predicts

HIC at first observation to estimate the sample selection term, lambda; by including this additional

covariate, we adjust subsequent estimates for sample selection bias (Heckman, 1978, Winship, 1986).

3.5 Models

We use maximum-likelihood discrete-time hazard models (Allison, 1995)to estimate risk ratios

of changes in HIC and a binary logit model to estimate the likelihood of having (or not having) HIC at first

observation.   In the former models, our units of analysis are the person-interviews, which are spaced

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[6] We adjusted the elapsed time measure to capture the length of the (non)coverage spell. We also tried truncating
these durations at a maximum of 10 years (120 months), since quantifying 'always' and 'never' required some set
of assumptions. The major difference was in whether we addressed the heterogeneity in unobserved duration on
the left side versus the right side of the equation.

four-months apart, with people remaining in the risk set until they either gain (lose) coverage or are lost to follow-up. Our analysis sample includes 347,094 person-interviews overall (reflecting 60,815 people), 326,982 (56,327 people) for those at risk of losing HI, and 20,112 (4,488 people) for those at risk of gaining HI. We use logistic regression to model transitions in coverage (HI_{it}) as a function of the underlying hazard, immigrant (I_t) characteristics, demographic controls (SEScvs), state policy regime (SP_t), the controls for 'always/never' responses, length of pre-survey spells, and unobserved heterogeneity (D_k and λ) as in:

$$log(h_{it})=\alpha+\delta^{'}time_{kt}+\beta I_{it}+\phi SEScvs_{kit}+\delta SP_{kt}+\eta D_{kit}+\phi\lambda$$ (1)

If the risk ratios (exponentiated coefficients) associated with immigrants are less than 1 in the model for gaining, greater than 1 in the model for losing, and the odds are less than 1 in the model at first observation, we will have evidence that immigrants are at a consistent disadvantage in terms of HIC and that their coverage is more episodic than coverage for the native born, even at older ages. If γ is positive for gaining, negative for losing, and positive at first observation, then the more generous state policies are providing significant benefits to older immigrants. In addition, we test for differential effects of being age 65 or older for immigrants versus natives. If the risk ratio for this interaction term is less than 1, then the conventional pathway to HIC—Medicare-eligibility—is a less effective avenue to coverage for immigrants.

4. Results

In Table 1, we include weighted descriptive statistics for the SIPP respondents included in our analysis. We report this information for the overall sample as well as for natives and immigrant subgroups (those from Latin America, Asia, and Other regions of the world) by pre and post-PROWRA (1996) arrival. Our sample includes close to 6,000 immigrants, with 60 percent of immigrants evenly divided between Latin American and Asian regions of origin and about one-quarter arriving after

PROWRA. For this 50 and older sample, rates of HIC are upward of 90 percent for natives and Asian and Other immigrants who arrived pre-PROWRA. Coverage rates for pre-PROWRA Latin American immigrants are significantly lower, more closely resembling coverage for Asian and Other immigrants *after* PROWRA. Post-PROWRA Latin American immigrants have the lowest rates of coverage, with barely more than half having HIC.

[Table 1 about here]

The typical respondent is in her early 60s, married, and employed. Immigrants from Latin America were somewhat younger, less educated, with lower incomes, less likely to be citizens, and less proficient in English. In contrast, immigrants from Asia were only slightly younger and had similar educational attainment compared to natives. They also had higher citizenship rates, better English skills, and were more likely to live in a state with supplemental coverage (although not more likely to live in California) than immigrants from Latin America. Immigrants from other regions were very similar to those from Asia, with longer durations in the U.S., better English skills, and were less likely to live in states with supplemental coverage.

4.1 HI Coverage at First Observation

Our first set of models addresses how respondents were sorted into those with and without health insurance at first observation. These estimates not only illustrate how predictors correlate with that initial distinction, they also provide the basis for our subsequent adjustment for sample selection into those at risk of gaining or losing health insurance during the observation period. Table 2 reports results for these models. Older respondents, particularly those aged 65 and older, were more likely to have health insurance coverage, consistent with initial eligibility for Medicare. Women and the married also had higher odds of coverage, as did respondents with more education and higher incomes. Each additional level of educational attainment increased the odds of health insurance coverage by 30%. In this population of people 50 and older, being employed lowers the odds of health insurance coverage.

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Although employment typically increases the odds of health insurance coverage through employer-provided plans, at older ages many have retired and those still working may be working in jobs without benefits. We tested to see if the negative effect of employment differed before versus after the age 65 threshold (see last coefficient in Model 2 Table 3). Between ages 50 and 64, the odds of coverage are 21 percent lower for the employed, and after age 65, that gap almost triples, with the odds of coverage being 56 percent lower for those still working.

[Table 2 about here]

The HI disadvantage of older immigrants can be seen in their lower odds of coverage compared to natives, with immigrants from Latin America having the lowest odds of coverage--86% lower than natives. Among immigrants, being unable to speak English well reduced the odds of HIC by 40%. The impact of PRWORA was evident for those arriving after its enactment in 1996; their odds of coverage were 42% lower than those arriving before 1996, even controlling for all the demographic and socioeconomic variables in the model.   Additionally, passing the 5-year residency mark increased the odds of coverage by 95% for immigrants who arrived after 1996, which highlights the consequences of the 5-year period of imposed ineligibility. Each additional year beyond the 5th also increased the odds of coverage, but only slightly. Finally, the state differences in policy contexts had important implications for HI coverage among immigrants. Immigrants who live in states that offer supplemental coverage were more likely to be insured. In fact, living in a more generous state increased the odds of health insurance coverage by 49%.

4.2 Health Insurance Transitions

For those aged 50 and older, the vast majority of respondents report having HI at first observation, with less than 8 percent uninsured. However, more than 10 percent of respondents experience a change in HI coverage during the observation period. Those whose HI status changed were more likely to lose than gain coverage, and slightly more than one-third of those who gained coverage

were again uncovered by the end of the survey. On the other hand, half of those who lost coverage

were able to regain it within our time window. Our analysis focuses on the first of these transitions as

an indicator of intermittent coverage and therefore inconsistent access to routine medical care.

[Figure 2 about here]

Figure 2 illustrates these transitions for those born inside (natives on the left) and outside (immigrants

on the right) the U.S. The lighter color corresponds to those who had health insurance at first

observation; the darker color references those without coverage. Among the native-born, 88 percent

have consistent HI coverage for the span of the survey. Of the remaining 12 percent, roughly one-

quarter are consistently uninsured, one-third gain coverage, and somewhat more than two-fifths lose

coverage. Among immigrants, 70 percent are consistently insured, with the remainder almost equally

divided across gainers, losers, and the persistently uninsured. Not only are the rates of coverage lower

for immigrants, but the proportion of those who remain uninsured is three times as high for immigrants

as natives. Although we examine the first transition of health insurance change, less than 5%

experiences a second transition. Additionally, previous research has shown that individuals with

intermittent health insurance coverage have an increased risk of mortality compared to those who are

continuously covered (Baker et al 2006).

[Table 3 about here]

4.2.1 Gaining HI Coverage

We begin with the subset of respondents who were uninsured at first observation and estimate

a discrete time hazard model predicting transitions into coverage. The left panel of Table 3 reports our

results for two models. Model 1 assumes the effects of employment and being age 65 or older are the

same for those born inside and outside the U.S. Model 2 tests that assumption. In addition, given that

being married increases the odds of HIC at first observation, we anticipated that currently unmarried

respondents in this subsample may have been covered in the past through spousal benefits, which

would have been lost when the marriage dissolved. In this case, we would expect the marriage-advantage would have already been registered through coverage at first observation; therefore being married would not improve the odds of gaining HIC. However, respondents who were divorced, separated or widowed with previous coverage would be less likely to gain. We include an interaction term between marital status and ever having HIC to test that hypothesis. We report the risk ratios (exponentiated coefficients) and their standard errors in Table 3.[7]

The coefficients for the three regions of origin indicate that native-born respondents gain coverage more rapidly than immigrants. Although Asian immigrants appear to gain coverage at a faster rate than those from Latin America or other regions, this difference is not significant at conventional levels. Second, indicators of assimilation, such as citizenship and English proficiency increase the rate at which coverage is gained (e.g., those with poor English skills gain at slightly more than half the rate of those with better language skills). For immigrants arriving post-1996, being in the U.S. for more than 5 years has no effect on gaining coverage, but for those arriving pre-PRWORA, each additional year spent in the U.S. has a small positive effect on the rate of uptake in coverage. Third, state policy clearly matters. Immigrants who live in states that offer supplemental Medicaid coverage to new arrivals are 50 percent more likely to gain coverage within our time frame.[8]

The set of demographic variables operate largely as expected. Aging into the 65 and older group increased the rate of gaining coverage substantially—by a factor of almost 14—reflecting the profound impact of the Medicare program. Once that is controlled, however, older respondents gain coverage at an ever slower rate. Women, those with more education and higher incomes, and married respondents gain coverage more rapidly than their counterparts. Also, wage-and-salary workers gain coverage at

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[7] We tested the proportionality assumption with regard to immigrant status as well as immigrants by region and could not reject the assumption.

[8] Because some respondents in SIPP move to different states, we looked to see if we could find evidence that immigrants were moving into states with supplemental Medicaid programs to gain coverage; however, the number of immigrants making such a move was small and not significant.

about half the rate of those not working, which likely reflects how people are sorted into jobs that do or do not offer HIC and retirement. Wage-and-salary workers without coverage at first observation, as they must be to be included in this part of the analysis, are unlikely to gain coverage as time passes, since their employment in jobs without coverage has already been established. In contrast, those who are not employed or leave employment during the survey period may be more likely to gain coverage through disability, social insurance, or public assistance programs.

Finally, neither 'everhi,' which is coded '1' if the respondent had HI coverage at some point in the past, or the time since having coverage are significant. Lambda, which was estimated on the basis of coverage at first observation, has a strong positive effect. Higher values on lambda indicate a greater mismatch between the characteristics associated with no HIC and the traits of any particular respondent. In this case, were we to attempt a substantive interpretation of the lambda coefficient, we would say that respondents who look atypical of those without coverage but are, nevertheless, without HIC at first observation gain coverage fairly quickly.

Results for Model 2 reproduce the overall pattern, if not exactly the same coefficients, add three new insights. In this model we tested whether being age 65 or older increased the odds of gaining coverage as much for immigrants as for natives. It did not. In fact, the risk ratio for gaining coverage for being at least age 65 is half the size for immigrants as for natives. Second, we test whether being employed leads to coverage at the same rates for immigrants as for natives. Full-time work at older ages is about two-thirds as effective for immigrants as for natives. Finally, we tested whether currently unmarried respondents could regain HIC at the same rate as married respondents. The failure to regain coverage appears to be located primarily among divorced respondents younger than age 65 and may reflect the discontinuation of spousal coverage.

4.2.2 Losing HI Coverage

In the right panel of Table 3, we report results of the hazard models of losing HIC for those who are insured at the initial observation. The variables in these models include the same or analogous measures to the previous models; we test one interaction (between age 65 and immigrant status), and we include an additional indicator of cross-state residential mobility. Immigrants lose their HIC at twice (or more) the rate of natives. In contrast to the previous analysis, assimilation factors appear not to significantly shape this process, although the coefficients are in the expected direction. Once again, state policy matters. Immigrants who live in states offering the supplemental coverage are more than 20 percent less likely to lose their coverage. But to the extent that immigrants move from one state to another, their moves appear to increase their risk of losing coverage. Those who moved from a state offering supplemental coverage to one with no such program had risk ratios of loss that were twice those of other immigrants. Turning to the demographics, those who are older, particularly aged 65 and older are highly unlikely to lose coverage, as are women, the married, and those with more education and higher incomes. Wage-and-salary employees have lower risks and the self-employed have higher risks of losing coverage than those not working. Similar to our earlier observation, wage-and-salary workers who have HI and remain employed are unlikely to lose what is (probably) employer-sponsored HI.

To address the left truncation, we again include two control variables, all of which have significant effects. Those who have had discontinuous HIC have much higher of rates of losing it again, but as the duration of their current coverage spell increases, the rate of loss declines. Finally, the coefficient for lambda is negative, indicating that respondents whose coverage runs counter to prediction are less likely to lose that coverage. A finding that initially may appear counterintuitive may reflect the impact of Medicare and Medicaid in providing HIC for those unlikely to gain coverage through employers or privately purchased policies. Model 2 includes the interaction term between immigrant

status and age 65. Reaching age 65 is protective for both natives and immigrants, but it offers twice the level of protection for natives as it does for immigrants.

5. Conclusions

Recognition of unaddressed social concerns overlaps with the visibility of the problem. Growing numbers of people affected, their political organization, or the widespread distribution of human interest stories that capture public attention can mobilize efforts that support solutions. The population of older immigrants and policy responses to the anticipated rapid rate of growth in the size of that population continue to live at the margins of our social consciousness. Changes in immigration policy that favored family reunification, changes in social welfare policies that were more restrictive, and growing concern over the rising costs of social insurance programs that target the elderly have made older immigrants both insiders and outsiders. They are permanent residents of the U.S., often having lived here for decades, but a significant proportion are not citizens, have not worked in covered employment, and have limited English. Although the effect of PRWORA on the health and health care access of immigrants who were infants, children, and pregnant women has been studied, we know much less about its effect on older immigrants. Our study addresses this gap.

Using longitudinal data from two SIPP panels allowed us to focus not only on those who have HI coverage at one point in time but also on the processes of losing and gaining health insurance over a multi-year period. Consistent with previous research, we found a sizeable coverage gap between natives and the foreign-born. We also found that the policy impact of PRWORA was evident in sorting individuals into having and not having health insurance at first observation. Those arriving before 1996 were more likely to have coverage as were those who passed the five year residency requirement. State differences in offering supplemental health insurance were also an important factor in dividing respondents into insured and uninsured statuses, but in contrast to post-PRWORA arrival, states with supplemental programs were also associated with gaining and losing health insurance coverage. Given

that most of the new destinations for immigrants are in states that do not offer this supplemental

coverage, state policy differences may play a protective role for a declining proportion of older

immigrants if the residential diversification of new immigrants continues. In addition, immigrants

moving from a state that offers the supplemental coverage to a state that copies federal regulations lose

their health insurance coverage more quickly.

Although immigrants overall are less likely than natives to have or gain and more likely to lose

health insurance, immigrants from Latin America were the most disadvantaged from the start. They

were least likely to have health insurance at first observation, and those who were initially insured were

the most likely to lose coverage. Assimilation factors were part of this story. Immigrants from Latin

America are less educated, less likely to be citizens, and are less fluent in English; however, the gap in

coverage between Latin American immigrants and other immigrants persisted despite these controls.

Further, to the extent that assimilation factors effectively sorted older immigrants into initial coverage

and increased the rate of gaining coverage, being a citizen and having proficiency in English had no

impact on losing health insurance, indicating the continuing disadvantage of this less assimilated subset

of older immigrants.

As the foreign-born portion of the older population grows, research on issues at the intersection

of aging, immigration, poverty and health care will continue to expand.   Passage of PROWRA tried to

address an immigration issue by reforming welfare programs without acknowledging the new realities of

immigration, particularly the increasing number of older foreign-born persons in the U.S. Designed to

promote marriage and employment, these requirements fail to consider that for modern families, family

reunification can mean adult children sponsoring their aging parents for whom remarriage may not be

desired and employment may be unlikely. Further, older parents may be unpaid workers in small family

businesses or contributing to households through home production and child care. None of these

activities leads to HIC, leaving older immigrants particularly reliant on state decisions regarding

immigrants' access to HIC.

Tables and Figures

<center>**Table 1: Sample Characteristics by Nativity and Arrival**</center>

			Latin Americans		Asians		Other	
	Total	**Natives**	**Before 96**	**After 96**	**Before 96**	**After 96**	**Before 96**	**After 96**
Health insurance	92.4%	93.7%	75.0%	51.9%	90.8%	74.7%	91.9%	79.4%
Age	64	64	61	59	62	61	65	63
Age 65+ (%)	41.1%	41.7%	28.2%	23.1%	34.6%	33.1%	47.8%	37.6%
Female (%)	53.9%	53.7%	54.1%	51.8%	55.3%	54.3%	58.2%	55.6%
Married (%)	63.2%	62.8%	64.8%	64.7%	75.3%	74.6%	62.2%	58.1%
Education (1-7)	4.23	4.29	2.73	2.70	4.49	4.00	4.24	4.23
Logged income	0.42	0.45	0.01	-0.01	0.23	0.01	0.26	0.21
Employed (%)	47.5%	47.4%	47.7%	48.4%	53.6%	46.4%	45.4%	50.6%
Self-employed (%)	9.6%	9.5%	8.0%	6.4%	12.6%	8.8%	10.7%	8.8%
Immigrant Specific								
Citizens (%)			62.1%	41.8%	84.9%	54.2%	79.3%	60.9%
Duration (years)			31.1	5.3	27.9	5.6	34.4	5.7
Poor English (%)			47.7%	61.0%	23.5%	38.7%	13.8%	25.8%
Supplemental Health Insurance State (%)			47.2%	38.1%	60.4%	51.8%	36.8%	31.8%
N	60,815	54,973	1294	479	1,219	454	1,838	558

Appendix: Sample Characteristics of Gainers and Losers

	Uninsured at Baseline			
	Natives	**Latin Americans**	**Asians**	**Other**
Age	56	56	58	58
Age 65+ (%)	2.1%	7.6%	14.7%	10.9%
Female (%)	47.2%	54.4%	51.1%	48.7%
Married (%)	44.6%	65.1%	74.6%	56.4%
Education (1-7)	3.8	2.3	3.7	4.0
Logged income	-0.32	-0.26	-0.31	-0.34
Employed (%)	56.0%	54.7%	57.5%	59.0%
Self-employed (%)	20.5%	12.2%	22.4%	24.3%
Ever had HI	63.8%	22.5%	29.5%	48.8%
Time since Insured	19.5	6.5	5.9	12.7
Immigrant Specific				
Citizens (%)		29.6%	51.6%	46.4%
Duration (years)		17.1	14.4	17.9
Poor English (%)		66.5%	42.2%	28.2%
Supplemental Health Insurance State (%)		39.8%	54.5%	27.8%
N	3,460	554	231	243

	Insured at Baseline			
	Natives	**Latin Americans**	**Asians**	**Other**
Age	64.35	61.95	62.44	65.41
Age 65+ (%)	44.4%	35.6%	37.2%	49.7%
Female (%)	54.2%	53.0%	55.7%	58.7%
Married (%)	64.0%	64.7%	75.2%	61.9%
Education (1-7)	4.32	2.93	4.46	4.26
Logged income	0.51	0.12	0.25	0.32
Employed (%)	46.8%	44.7%	50.9%	45.0%
Self-employed (%)	8.8%	5.5%	9.9%	8.5%
Ever without HI	27.0%	28.0%	25.1%	24.2%
Time since uninsured	23.12	16.67	14.86	15.07
Immigrant Specific				
Citizens (%)		69.0%	80.9%	78.6%
Duration (years)		27.48	23.34	29.16
Poor English (%)		44.3%	25.2%	15.1%
Supplemental Health Insurance State (%)		47.0%	58.8%	36.7%
Movers (%)		3.3%	3.7%	2.8%
N	51,513	1,219	1,442	2,153

Table 2: Logistic Regression of Having Health Insurance at First Observation

	Model 1		Model 2	
Age	1.020***	(0.005)	1.019***	(0.01)
Age 65	13.964***	(1.712)	16.212***	(2.15)
Latin American Origin	0.142***	(0.032)	0.142***	(0.03)
Asian Origin	0.203***	(0.045)	0.202***	(0.05)
Other Origin	0.221***	(0.048)	0.220***	(0.05)
Post-1996	0.576*	(0.133)	0.567*	(0.13)
Years in U.S. [a]	1.022**	(0.007)	1.022**	(0.01)
More than 5 years [b]	1.946***	(0.339)	1.968***	(0.35)
Citizenship	2.420***	(0.264)	2.432***	(0.27)
Poor English	0.599***	(0.065)	0.597***	(0.07)
Supplemental Health Insurance State	1.491***	(0.074)	1.490***	(0.07)
Female	1.602***	(0.067)	1.599***	(0.07)
Married	3.183***	(0.133)	3.187***	(0.13)
Education	1.296***	(0.018)	1.296***	(0.02)
Logged Income	1.341***	(0.015)	1.340***	(0.01)
Employed	0.772***	(0.043)	0.790***	(0.04)
Self-Employed	0.484***	(0.029)	0.485***	(0.03)
Employed*Age 65			0.555**	(0.11)
N		60,815		

Table Notes: Exponentiated coefficients; standard errors in parentheses; * p<.05; ** p<.01; *** p<.001; [a] is the years in the US if greater than 5 years, [b] is Dummy variable of more than 5 years in the US;

Table 3: Discrete-Time Hazards of Gaining and Losing Health Insurance

	Gaining				Losing			
	Model 1		Model 2		Model 1		Model 2	
ln(months observed)	0.249***	(0.015)	0.249***	(0.015)	0.121***	(0.006)	0.121***	(0.006)
Year	1.125***	(0.014)	1.129***	(0.014)	1.135***	(0.015)	1.135***	(0.015)
Latin American Origin	0.337***	(0.073)	0.410**	(0.115)	2.426***	(0.525)	2.410***	(0.514)
Asian Origin	0.505**	(0.117)	0.655+	(0.189)	1.987**	(0.447)	1.974**	(0.441)
Other Origin	0.359***	(0.077)	0.442***	(0.132)	2.083**	(0.475)	2.048**	(0.466)
Years in US[a]	1.015**	(0.006)	1.013*	(0.005)	0.993	(0.005)	0.992	(0.005)
More than 5 years[b]	1.225	(0.244)	1.205	(0.137)	1.078	(0.239)	1.117	(0.244)
Citizenship	1.734***	(0.287)	1.653**	(0.264)	0.738	(0.169)	0.730	(0.166)
Poor English	0.564***	(0.084)	0.584***	(0.085)	1.269	(0.245)	1.252	(0.241)
State Medicaid policy (coverage for new immigrants)	1.510***	(0.153)	1.504***	(0.154)	0.779***	(0.055)	0.777***	(0.055)
Age	0.982*	(0.007)	0.982*	(0.007)	0.980**	(0.007)	0.981**	(0.007)
Age 65	13.887***	(2.500)	16.969***	(3.630)	0.075***	(0.015)	0.066***	(0.013)
Female	1.207*	(0.094)	1.177*	(0.092)	0.616***	(0.038)	0.616***	(0.038)
Married	1.427***	(0.101)	1.126	(0.100)	0.383***	(0.028)	0.384***	(0.028)
Education	1.059*	(0.025)	1.060*	(0.025)	0.841***	(0.018)	0.841***	(0.018)
Income	1.262***	(0.033)	1.255***	(0.032)	0.840***	(0.013)	0.841***	(0.013)
Employed[c]	0.509***	(0.051)	0.561***	(0.061)	0.470***	(0.035)	0.470***	(0.035)
Self-Employed	1.033	(0.107)	1.034	(0.108)	1.388***	(0.096)	1.387***	(0.095)
Ever had Insurance	0.889	(0.087)	0.735*	(0.087)				
Time since Insured	0.998	(0.002)	0.998	(0.002)				
Not always Insured					2.420***	(0.221)	2.414***	(0.220)
Time since Uninsured					0.989***	(0.001)	0.989***	(0.001)
Moving					2.183***	(0.505)	2.156***	(0.490)
Lambda	2.790***	(0.445)	2.636***	(0.437)	0.597*	(0.128)	0.607*	(0.129)
Immigrant X Age 65			0.502*	(0.138)			2.126*	(0.703)
Immigrant X Employed			0.649**	(0.102)				
Ever Had Insurance X Married			1.483**	(0.222)				
N	20,112				326,982			

Table Notes: Exponentiated coefficients; standard errors in parentheses; * p<.05; ** p<.01; *** p<.001;
[a] is the years in the US if greater than 5 years, [b] is Dummy variable of more than 5 years in the US;
[c] Employed in wage and salary job.

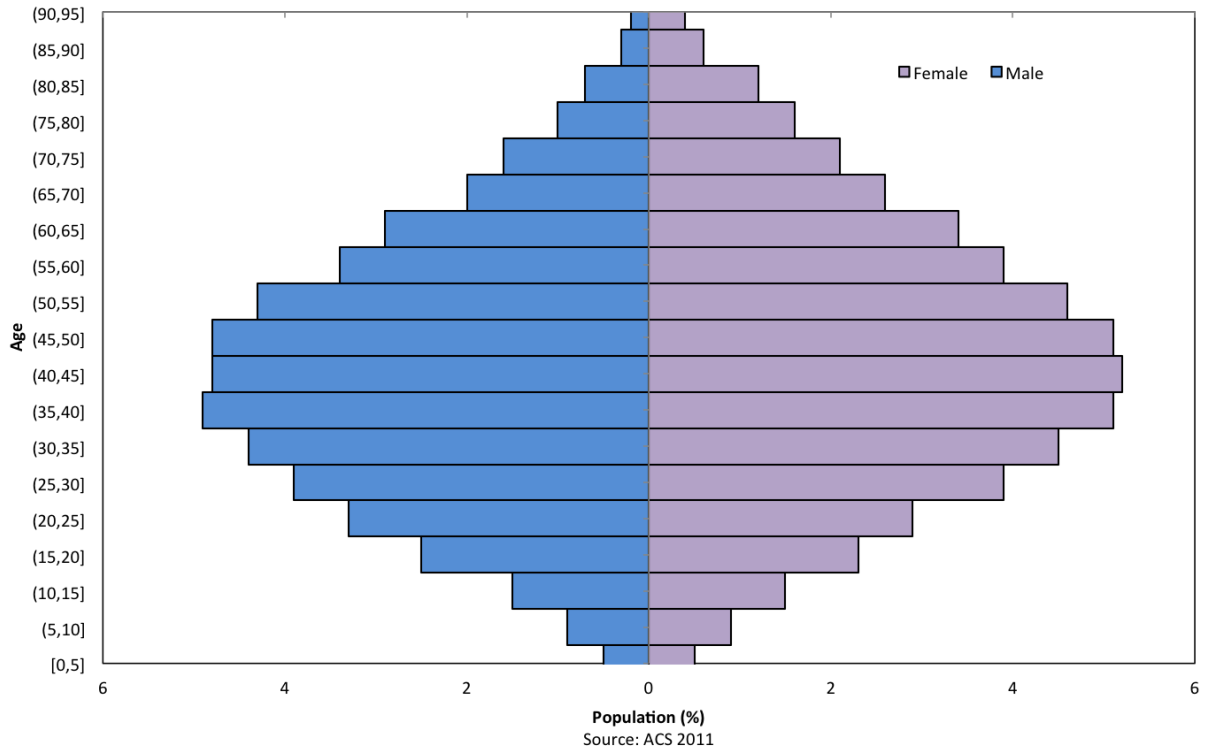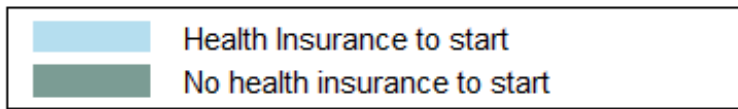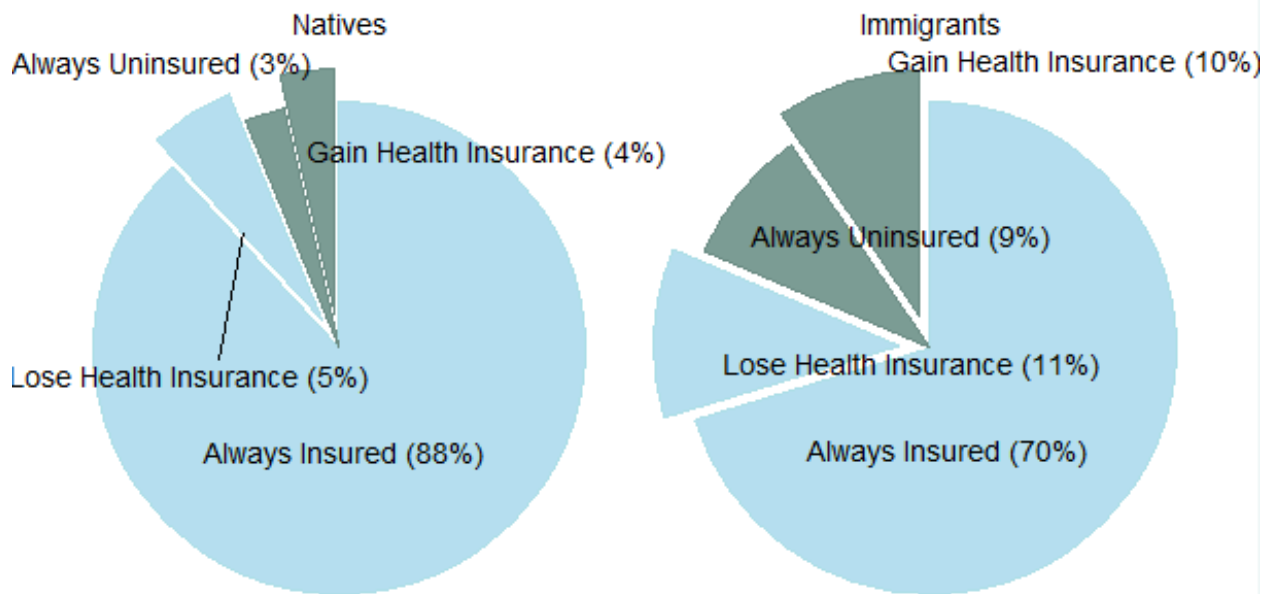**Figure 1: Immigrant Population Pyramid 2011**

Population (%)

Source: ACS 2011

Age

Female   Male

Figure 2: Pie Chart of Health Insurance Transitions

Natives

Always Uninsured (3%)

Gain Health Insurance (4%)

Lose Health Insurance (5%)

Always Insured (88%)

Immigrants

Gain Health Insurance (10%)

Always Uninsured (9%)

Lose Health Insurance (11%)

Always Insured (70%)

Health Insurance to start
No health insurance to start

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