Perceived Value of Health Insurance and Enrollment Decision among Low-Income Population

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Abstract

The individual mandate is one of the key features of the Affordable Care Act (ACA) and has contributed to a substantial decrease in the overall uninsured rate. We examined the relationship between the individual's insurance status and his/her attitude towards risk and uncertainty among the nonelderly adults, without employer-sponsored insurance (ESI) sources and who are most likely to benefit from the ACA. A descriptive, cross-sectional study was conducted using the 2014 full-year consolidated data file from the Household Component of the Medical Expenditure Panel Survey-Household Component (MEPS-HC). This study included 4,848 individuals, aged 18–64 years, with incomes between 138–400 % of the Federal Poverty Level (FPL), and without access to public coverage or ESI. We examined the factors associated with the likelihood of being uninsured using a logit model. We found that the proportion of the uninsured among the low-income nonelderly adults without ESI (31.1%) was much higher than the one among the nonelderly adults (14.3%). The uninsured adults were likely to have lower demand for insurance and perceived value of insurance and were less likely to visit a doctor or to fill prescription drugs. More rigorous outreach efforts focusing on increasing perceived value of health insurance could contribute to an increased insurance coverage among low-income populations.

Keywords: Affordable Care Act, health insurance, enrollment, low income, perceived value

Introduction

The Affordable Care Act (ACA) requires people to have a health insurance. Under the law, people who do not have health insurance—either through public programs or employers—must purchase private health insurance in the individual market or otherwise pay a penalty. As of 2016, the penalty for not having health insurance was greater of the following two amounts: either $695 per adult and $347.5 per child, or 2.5% of household income above the tax return filing threshold.[1] Furthermore, the ACA has established a new individual market "marketplace" and offered income-based financial assistance in order to provide an affordable coverage to low- and middle-income populations. While the overall uninsured rate has continuously declined since the ACA was put into effect,[2] there are people who still choose to remain uninsured.

The prospect theory has been used to explain an individual's decision-making in a variety of insurance contexts including property insurance,[3] annuities,[4] and health insurance.[5-7] This theory suggests that people set their own reference points and use them to define expected gains and losses.[8-9] We framed the reference point of insurance enrollment decision as individual's initial wealth, as was done by Eckles and Wise (2011).[6] If people stayed healthy and there are no health care expenditures, the premiums paid will be felt as "losses" with certainty. People would not feel the "gains" until the premiums pay off their

health care expenses, which may or may not happen. The problem is that people weigh the losses more than gains and people value outcomes with certainty more than outcomes with uncertainty.[8] Consequently, people would select to buy health insurance if they are certain that their health care expenses will exceed the premiums they have paid, while insurers can hardly know about the individual's certain losses. Given such an information asymmetry between insurers and beneficiaries, adverse selection can happen.[10]

To mitigate adverse selection in the individual insurance market, the ACA attempts to shift the reference point from initial wealth (i.e., uninsured status) to initial wealth minus premiums (i.e., insured status) by requiring people to have health insurance; in other words, the ACA attempts to switch the default option from being uninsured to being insured. With this new reference point, people will not view premiums as losses the way they did with the previous reference point of initial wealth. With an absence of certain losses, being uninsured is obviously not an attractive option any longer to people at lower risk of having health problems and as a result adverse selection can be reduced. The Massachusetts' health reform has provided evidence on the effect of individual mandate on the reduction in adverse selection.[11]

After the implementation of ACA, a study has found that the hospitalization experience and chronic health problems are associated with more people signing up for insurance among the long-term uninsured residents in South Carolina,[12] but this study population did not exclude the ones eligible for Medicaid and also did not explain the underlying mechanism for this association. We focused our analyses on the populations in poverty, who are neither eligible for public coverage nor for ESI coverage, because they were the most susceptible to adverse

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selection and thus, would be the most benefited from marketplace subsidies. We empirically assessed how these individuals responded to the ACA, using the prospect theory framework. We then described the individuals' attitude towards risk and uncertainty with respect to their insurance status and evaluated if the individuals felt that they earned "losses" or "gains" by buying the health insurance. Previous studies have shown that the attitude towards risk and uncertainty was positively associated with private health insurance coverage among young adults aged 18–24, and also with take-up of employer-sponsored insurance (ESI).[13-14] We also examined the factors that are associated with the likelihood of being uninsured with an emphasis on the attitude towards risk and uncertainty, using a logit model.

Methods

We used a descriptive, cross-sectional study design and analyzed the data from the 2014 full-year consolidated data file from the Medical Expenditure Panel Survey-Household Component (MEPS-HC) released in September 2016. The Medical Expenditure Panel Survey (MEPS) is a nationally representative panel survey sponsored by the Agency for Healthcare Research and Quality (AHRQ). The data for 2014 were collected from MEPS Panels, in Rounds 1, 2, and 3 for Panel 19 and Rounds 3, 4, and 5 for Panel 18.

Our study population included nonelderly adults with incomes between 138–400% of federal poverty level (FPL) and who were without ESI coverage. Among these nonelderly adults (aged 18–64 years as of December 31, 2014), we identified individuals who were eligible for marketplace financial assistance (incomes 138–400% of FPL) using a poverty level summary variable (POVLEV14) and then excluded those individuals who were offered continuous health insurance, throughout the year, by their employers. These selected people were eligible for marketplace financial assistance regardless of their residing states adopting Medicaid expansion.

We used 2014 summary variables to represent the insurance status (UNINS14, individuals who were insured throughout a year equal to 1 and others equal to 0), age (AGE14X), household income (FAMINC14), and census region (REGION14). We created several binary variables to represent the employment status (individuals who were continuously employed for 2014 equal to 1 and others equal to 0), employers offering health insurance (individuals who were continuously provided health insurance from their employers for 2014 equal to 1 and other equal to 0), Hispanic ethnicity (individuals with Hispanic ethnicity equal to 1 and others equal to 0), and education (individuals who received education less than high school or received high school diploma equal to 1 and others equal to 0). We also formulated binary variables to represent office-based provider's visits (individuals without provider visit equal to 1 and others equal to 0) and prescription refills (individuals

without refills equal to 1 and others equal to 0). The estimates were weighted to represent U.S. population using the person-level composite weight variable of Panels 18 and 19 (PERWT14F) to account for the complex sampling design.

Three attitudinal variables in a self-administered questionnaire (SAQ) were used to measure the respondents' attitude towards risk and uncertainty. The respondents were asked to rate their agreements on following statements: 1) I'm healthy enough that I really don't need health insurance; 2) Health insurance is not worth the money its costs; and 3) I'm more likely to take risks than the average person. The first statement measures the demand for health insurance and the second statement measures its perceived value, determined on the basis of the trade-off between loss and gain associated with purchasing the product.[15] These variables measure how much individuals felt "loss" from buying health insurance. The third statement measures the individual's risk preferences. The estimates were weighted using the SAQ weight variable (SAQWT14F).

All three variables used five-point Likert scale (strongly disagree, somewhat disagree, uncertain, somewhat agree, strongly agree). We grouped strongly and somewhat disagree into "disagreed" and strongly and somewhat agree into "agreed". The percentage of people in each group was presented by insurance status.

Observations with missing values for any variable were not included in the analyses. Difference in all socio-demographic and attitudinal variables were analyzed between the uninsured and the insured groups, using chi-square test. P-values were adjusted for multiple comparisons using the Bonferroni correction. The binary variable of insurance status was regressed on three attitudinal variables and socio-demographic characteristics using a logit model. The odds ratios (OR) with 95% confidence interval were reported. All analyses were performed using SAS version 9.4 (SAS Institute, Cary, NC, USA).

Results

The data included 34,875 individuals, of which 20,898 were nonelderly adults who were 18 to 64 years old. About four in ten of nonelderly adults earned income with 138 to 400% of FPL, thereby being eligible for marketplace premium subsidies (n=9,162). Final sample had 4,848 individuals after excluding those who were provided with health insurance from their employers and those with public insurance (Figure 1).

The uninsured rates varied across the populations. Weighted to represent the U.S. population, the estimated percentage of the uninsured for all individuals (n=34,875) was 9.8% and went up to 14.3% for nonelderly adults (n=20,898). The rate increased to 17.2% for nonelderly adults eligible for marketplace federal subsidies (n=9,162) and further increased to 31.1% for those who were eligible neither public coverage nor ESI (n=4,848)

(Figure 1). The uninsured rate among children was 3.5% (n=9,300).

Table 1 shows the characteristics of the study sample by insurance status. Weighted to represent the U.S. population, nearly a quarter belonged to the Hispanic ethnicity (23.9%). About four in ten individuals were between 25–44 years old (43.7%), earned income between $44,725 and $82,006 (43.2%), lived in South region (41.9%), and did not have an office-based provider's visit (40.4%) within the past 12 months. About half of the sample were females (51.6%), continuously employed within the past 12 months (55.2%), received high school degree or less than high school education (46.9%), and did not refill prescription medications (48.8%) within the past 12 months. Six in ten of individuals rated their health status as very good or excellent (60.2%).

The rates of uninsured adults were significantly different from the rates of insured adults in all the demographic categories and health utilization patterns. Substantially higher proportion of the uninsured adults than the insured ones belonged to Hispanic ethnicity (41.7% vs 15.8%; p<0.001). About half the uninsured adults (51.9%) belonged to the age group between from 25 to 44 years, as compared to 40.0% for the insured ones. About 65.2% of the uninsured adults were employed, compared to 50.7% for the insured group. Significantly higher proportion of the uninsured adults (62.2%) than the insured adults (40.0%) received education less than high school or graduated from high school (p<0.001). Also, substantially higher proportion of the uninsured adults (61.4%) than the insured ones (30.9%) did not visit an office-based provider (p<0.001) and nearly seven in ten of the uninsured adults did not refill prescription drugs (68.0%) within the past 12 months. Higher proportion of the insured adults (62.0%) rated their health status as very good or excellent than the uninsured ones (56.0%) and this difference was found to be significant as well (p<0.001).

The uninsured adults agreed or strongly agreed that they do not need health insurance as opposed to the insured ones (28.2% vs 16.3%; p<0.001) and that health insurance is not worth its cost about 10 percentage points more than the insured ones (38.7% vs 27.9%; p<0.001). In addition, the uninsured adults appeared to be more risk takers than the insured ones (27.8% vs 22.1%; p<0.001).

Table 2 presents odds ratio from a logit model associated with likelihood of being uninsured among nonelderly adults living in poverty without ESI coverage. Low demand of health insurance (OR: 1.18, 95% CI: 1.10–1.26) and low perceived value of health insurance (OR: 1.11, 95% CI: 1.04–1.18) were statistically significantly associated with higher likelihood to be uninsured, but risk taking was not found to be a significant factor.

Additionally, individuals who did not visit an office-based provider (OR: 2.51, 95% CI: 2.08–3.03) and did not refill their prescription drugs (OR: 1.59, 95% CI: 2.08–3.03) at all within the past 12 months, were more likely to be uninsured. Furthermore, individuals with poorer health status were more likely to be uninsured (OR: 0.84, 95% CI: 0.77-0.91). Also, the Hispanic ethnicity was found to be strongly associated with the likelihood of being uninsured (OR: 2.53, 95% CI: 2.15–2.98). Moreover, males than females, older adults aged 25–64 years, than younger adults aged 18–24 years, people with lower incomes or lower educational achievements, and the employed than the unemployed; were more likely to be uninsured. The model fitted the data better than the null model (χ^2= 961.4, df=18, p<0.001).

Discussion
This study is the first to estimate the uninsured rate among nonelderly adults living in poverty without employer-sponsored insurance sources—the population of ACA's greatest interest. We found that three in ten of those were continuously uninsured for 2014 despite substantial amount of federal financial assistance that was offered under the ACA. We also found that individuals not much valuing health insurance and rarely utilizing health care were more likely to be uninsured, providing a possible explanation of much higher uninsured rate than overall uninsured rate (9.8%).

The uninsured and the insured adults largely differed in their demographic characteristics and health care utilization patterns. The uninsured were more likely to be Hispanics, employed, younger adults, less educated, earned low incomes, and lived in South, consistent with previous studies.[7,12,13] Our multivariate analyses results also indicated that demographic characteristics were significantly associated with likelihood of being uninsured. In addition, individuals without a provider's visit or prescription refills within the past 12 months and those with lower health status were more likely to be uninsured.

These findings collectively suggest that adverse selection may be happening in the marketplace. Adverse selection occurs when people self-select to purchase health insurance knowing that they are likely to use the insurance in future based on the knowledge of their health status—a greater likelihood of being uninsured among younger and healthier people, who do not use health care, provides a typical example of adverse selection. As our study does not infer causality, one may argue that our results suggest limited access to health care among the uninsured rather than adverse selection. Given that individuals with poor health were also more likely to be uninsured, adverse selection would be a more reasonable approach to interpret our findings.

Adverse selection observed in marketplace indicates that people in poverty hardly responded to the individual mandate

and financial assistance, which was expected to shift their reference point for enrollment decision to initial wealth minus premiums. Consequently, it appears that they still feel premiums as "losses" and hence, decide to remain uninsured. Our results show that a greater proportion of the uninsured adults than the insured adults agreed or strongly agreed that health insurance is not worth its cost.

The weak response by the people in poverty to the new policy is probably because they were unaware of the individual mandate and financial assistance. The Commonwealth Fund ACA Tracking Survey reported that only about half of the respondents were aware of existence of marketplace and financial assistance.[16] Furthermore, the Kaiser report indicated that one in five uninsured adults did not know that having health insurance is now mandatory.[17] Many uninsured have lived without health insurance for years[16] so they might have been excluded of our outreach efforts. Lack of awareness in the early phase of the new policy implementation is not uncommon—nearly half of Medicare beneficiaries had little or no knowledge about Medicare Part D, shortly after it was introduced.[18]

Another explanation could be the limited understanding of health insurance in general. One research of non-institutionalized adults aged 25–64 years showed that only 14% were correct about four basic insurance terms: deductibles, copayments, coinsurance, and maximum out-of-pocket costs,[19] and similar results were found with another study of people with employer-sponsored insurance.[20] Health insurance literacy, "knowledge, ability, and confidence to effectively choose and use health insurance",[21] was recognized as one of key factors that lead to success of the ACA.[22] One study found that the six in ten uninsured did not know the premiums need to be paid every month.[22] With such lack of knowledge, people will not be able to behave in a way that the policy encourages.

Finally, the risk preference was not significantly associated with the likelihood of being uninsured. This finding indicated that people remained uninsured not because they are risk takers as suggested by the expected utility model[23] rather because they feel "losses" relative to their reference points.

Managing the adverse selection is critical for the marketplace's success. Our study emphasizes the need for increasing the perceived value of health insurance to reduce uninsured rate among the people with no other insurance sources than marketplace. More rigorous, and targeted outreach efforts to raise awareness of financial assistance and individual mandate are required and will help people in poverty understand the value of health insurance better. Shi et al. noted that individuals were likely to respond to the presence of penalty rather than the amount of penalty.[12] The outreach efforts should focus not only on providing information tailored to their insurance literacy but also establishing a new social norm of health

insurance: buying health insurance is not optional. People tend to be influenced by friends and family, sometimes more than by experts, and follow social norms.[24-25] This new social norm or new reference point will be key to the success of insurance marketplace, especially with the recent tax reform of removing the penalty component from the ACA.

Limitations

The data for MEPS-HC did not have information on states so our study used 138% to 400% of FPL to identify people who are eligible for premium subsidies. As of January 1, 2014, 26 states decided to expand Medicaid eligibility, so our sample did not include people with income 100–138% of FPL in 25 states not adopting Medicaid expansion, so our findings may not be generalized to this population. Also, we categorized the persons who have health insurance as the insured without differentiating new enrollees from those who have been insured. So past experiences with health insurance might have influenced the scores of attitudinal variables among the insured. In addition, we identified people working for the firms that provide health insurances based on their current main job. Some people may have obtained their health insurances through other jobs, but it is very unlikely. About a quarter of the sample had missing values for three attitudinal variables, but there is little concern of selection bias as characteristics of missing data were not significantly different from the sample characteristics. Lastly, there could be recall bias because the data were collected retrospectively.

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Figure 1. Sampling frame and uninsured rates

Weighted (unweighted) uninsured rate	Sample selection flow	
9.8% (14.3%)	Panel 18 (n=17590, 50.4%) Panel 19 (n=17285, 49.6%)	
11.5% (16.0%)	Nonelderly (n=30,198)	Exclude elderly ≥ 65 years old (n=4,677)
14.3% (21.0%)	Nonelderly adults (n=20,898)	Exclude children < 18 years old (n=9,300)
17.2% (21.9%)	Nonelderly adults with income 138-400% FPL (n=9,162)	Exclude those with incomes< 138%FPL or >400%FPL (n=11,736)
25.3% (31.4%)	Nonelderly adults with income 138-400% FPL without ESI sources (n=6,169)	Exclude those continuously offered health insurance through employer (n=2,993)
31.1% (40.0%)	Final sample (n=4,848)	Exclude those with any public insurance (n=1,321)

Note. Unweighted and weighted uninsured rates represent the raw estimate and the estimate adjusted by person-level weight variable. ESI: employer-sponsored insurance, FPL: federal poverty level.

Table 1. Sample characteristics by insurance status (n=4,848)

Variables	All		Uninsured		Insured		P-value
	Unweighted	Weighted	Unweighted n (%)	Weighted n (%)	Unweighted n (%)	Weighted n (%)	
Continuously insured for 2014	4848	40681985	1938 (40.0%)	12633284 (31.1%)	2910 (60.0%)	28048701 (68.9%)	
Poverty							
138 – 250% FPL	2662 (54.9%)	20558162 (50.5%)	1292 (66.7%)	8138518 (64.4%)	1370 (47.1%)	12420000(44.3%)	<0.001
250 – 400% FPL	2186 (45.1%)	20123823 (49.5%)	646 (33.3%)	4494767 (35.6%)	1540 (52.9%)	15630000 (55.7%)	
Age							<0.001
18-24	1034 (21.3%)	9085428 (22.3%)	323 (16.7%)	2081958 (16.5%)	711 (24.4%)	703470 (25.0%)	
25-44	2217 (45.7%)	17784355 (43.7%)	1035 (53.4%)	6554626 (51.9%)	1182 (40.6%)	11230000 (40.0%)	
45-64	1597 (32.9%)	13812202 (34.0%)	580 (29.9%)	3996700 (31.6%)	1017 (35.0%)	9815502 (35.0%)	
Gender							<0.001
Male	2406 (49.6%)	19709756 (8.5%)	1147 (59.2%)	761772 (60.3%)	1259 (43.3%)	12090000 (43.1%)	
Female	2442 (50.4%)	20972229 (51.6%)	791 (40.8%)	5011512 (39.7%)	1651 (56.7%)	15960000 (56.9%)	
Ethnicity							<0.001
Hispanic	1864 (38.5%)	9703213 (23.9%)	1055 (54.4%)	5272097 (41.7%)	809 (27.8%)	4431116 (15.8%)	
Non-Hispanic	2984 (61.6%)	30978772 (76.2%)	883 (15.6%)	7361187 (58.3%)	2101 (72.2%)	23620000 (84.2%)	
Employment status							<0.001
Employed	2661 (54.9%)	22444511 (55.2%)	1220 (63.0%)	8234153 (65.2%)	1441 (54.2%)	14210000 (50.7%)	
Unemployed	2011 (41.5%)	18192018 (44.7%)	623 (32.2%)	4393357 (34.8%)	1388 (47.7%)	13800000 (49.2%)	
Missing	176 (3.6%)	45456.62 (0.1%)	95 (4.9%)	5774.18 (0.1%)	81 (2.8%)	39682.4 (0.1%)	
Education							<0.001
HS or less	2525 (52.1%)	19071368 (46.9%)	1259 (65.0%)	7859595 (62.2%)	1266 (43.5%)	11210000 (40.0%)	
Beyond HS	2011 (41.5%)	21353096 (52.5%)	623 (32.2%)	4585167 (36.3%)	1629 (56.0%)	16770000 (59.8%)	
Missing	176 (3.6%)	257520.7 (0.6%)	56 (2.9%)	188523 (1.5%)	15 (0.5%)	68998.1 (0.3%)	

Income							<0.001
$1-$22,200	303 (6.3%)	2486864 (6.1%)	159 (8.2%)	1079247 (8.5%)	144 (5.0%)	1407617 (5.0%)	
$22,201-$44,724	1777 (36.7%)	15208167 (37.4%)	829 (42.8%)	5739873 (45.4%)	948 (32.6%)	9468294 (33.8%)	
$44,725 - $82,006	2125 (43.8%)	17559132 (43.2%)	742 (38.3%)	4541879 (36.0%)	1383 (47.5%)	13020000 (46.4%)	
$82,007 or more	643 (13.3%)	5427822 (13.3%)	208 (10.7%)	1272284 (10.1%)	435 (15.0%)	4155538 (14.8%)	
Region							<0.001
Northeast	616 (12.7%)	5694686 (14.0%)	206 (10.6%)	1459764 (11.6%)	410 (14.1%)	234922 (15.1%)	
Midwest	808 (16.7%)	8076425 (19.9%)	264 (13.6%)	2062163 (16.3%)	544 (18.7%)	6014262 (21.4%)	
South	2034 (42.0%)	17027871 (41.9%)	901 (46.5%)	5933865 (47.0%)	1133 (38.9%)	11090000 (39.6%)	
West	1390 (28.7%)	9883004 (24.3%)	567 (29.3%)	3177491 (25.2%)	823 (28.3%)	6705512 (23.9%)	
Self-reported health status							<0.001
Excellent	907 (18.7%)	9847356 (24.5%)	370 (19.1%)	3165288 (25.3%)	537 (18.5%)	6682069 (24.1%)	
Very good	1302 (26.9%)	14347927 (35.7%)	430 (22.2%)	3842977 (30.7%)	872 (30.0%)	10500000 (37.9%)	
Good	1204 (24.8%)	11285120 (28.0%)	514 (26.5%)	3959398 (31.6%)	690 (23.7%)	7325722 (26.4%)	
Fair	411 (8.5%)	3734114 (9.3%)	162 (8.4%)	1172257 (9.4%)	249 (8.6%)	2561857 (9.2%)	
Poor	56 (1.2%)	629469.9 (9.3%)	18 (0.9%)	190391 (1.5%)	38 (1.3%)	439079 (1.6%)	
Missing	968 (20.0%)	406071.4 (1.0%)	444 (22.9%)	203097 (1.6%)	524 (18.0%)	202975 (0.7%)	
Provider visit within the past 12 months							<0.001
Never visited	2343 (48.3%)	16429911 (40.4%)	1336 (68.9%)	7759184 (61.4%)	1007 (34.6%)	8670727 (30.9%)	
Visited at least once	2505 (51.7%)	24252074 (59.6%)	602 (31.1%)	4874100 (38.6%)	1903 (65.4%)	19380000 (69.1%)	
Prescription drug refill within the past 12 months							<0.001
Never refilled	2708 (55.9%)	19858208 (48.8%)	1414 (73.0%)	8588436 (68.0%)	1294 (44.5%)	11270000 (40.2%)	
Refilled at least once	2140 (44.1%)	20823777 (51.2%)	524 (27.0%)	4044848 (32.0%)	1616 (55.5%)	16780000 (59.8%)	

Note. The percentages represent the proportion of indicated responses in each item. They were weighted using person weight variable. Missing data include responses coded as don't know, inapplicable, not ascertained. Variables without missing category did not have any missing values. ESI: employer-sponsored insurance, FPL: federal poverty level, HS: high school.

Table 2. Attitudinal variables by insurance status (n=4,848)

Variables	All		Uninsured		Insured		P-value
	Unweighted	Weighted	Unweighted n (%)	Weighted n (%)	Unweighted n (%)	Weighted n (%)	
Do not need health insurance							<0.001
Disagreed	2528 (52.2%)	25983991 (64.6%)	822 (42.4%)	6349551 (50.7%)	1706 (58.6%)	19630000 (70.8%)	
Uncertain	457 (9.4%)	4726435 (11.7%)	228 (11.8%)	2069350 (16.5%)	229 (7.9%)	2657085 (9.6%)	
Agreed	789 (16.3%)	8062779 (20.0%)	397 (20.5%)	3533532 (28.2%)	392 (13.5%)	4529247 (16.3%)	
Missing	1074 (22.2%)	1476853 (3.7%)	491 (25.3%)	580974 (4.6%)	583 (20.0%)	895879 (3.2%)	
Health insurance is not worth cost							<0.001
Disagreed	1848 (38.1%)	19252698 (47.8%)	556 (28.7%)	4601602 (36.7%)	1292 (44.4%)	14650000 (52.9%)	
Uncertain	697 (14.4%)	6780511 (16.9%)	336 (17.3%)	2445884 (19.5%)	361 (12.4%)	4334626 (15.6%)	
Agreed	1209 (24.9%)	12595583 (31.3%)	541 (27.9%)	4852302 (38.7%)	668 (23.0%)	7743281 (27.9%)	
Missing	1094 (22.6%)	1621266 (4.0%)	505 (26.1%)	633618 (5.1%)	589 (20.2%)	987648 (3.6%)	
More likely to take risks							<0.001
Disagreed	2148 (44.3%)	22369348 (55.6%)	743 (38.3%)	6272301 (50.0%)	1405 (48.3%)	16100000 (58.1%)	
Uncertain	701 (14.5%)	6687322 (16.6%)	292 (15.1%)	2122513 (16.9%)	409 (14.1%)	4564809 (16.5%)	
Agreed	907 (18.7%)	9594789 (23.8%)	398 (20.5%)	3479823 (27.8%)	509 (17.5%)	6114966 (22.1%)	
Missing	1092 (22.5%)	1598599 (4.0%)	505 (26.1%)	658770 (5.3%)	587 (20.2%)	939829 (3.4%)	

Note. The percentages represent the proportion of indicated responses in each item. They were weighted using SAQ weight variable. Missing data include responses coded as don't know, inapplicable, not ascertained. "Disagreed" includes strongly disagree and somewhat disagree. "Agreed" includes strongly agree and somewhat agree.

Table 3. Odds ratios from logit models (n=3,666)

Variables	OR	95% CI	p-value
Perceptions about health insurance			
Do not need health insurance	1.18	1.10-1.26	<0.001
Health insurance not worth cost	1.11	1.04-1.18	0.001
More likely take risks	1.00	0.94-1.07	0.993
Demographics			
Age			
18-24	-	-	-
25-44	2.07	1.67-2.57	<0.001
45-64	1.79	1.41-2.27	<0.001
Gender			
Male	-	-	-
Female	0.80	0.68-0.93	0.005
Ethnicity			
Hispanic	2.53	2.15-2.98	<0.001
Non-hispanic	-	-	-
Employment status			
Employed	1.42	1.21-1.67	<0.001
Unemployed	-	-	-
Education			
High school or less	1.88	1.60-2.21	<0.001
Beyond high school	-	-	-
Income			
$1-$22,200	1.94	1.33-2.83	<0.001
$22,201-$44,724	1.92	1.48-2.48	<0.001
$44,725 -$82,006	1.06	0.82-1.37	0.643
$82,007 or more	-	-	-
Region			
Northeast	-	-	-
Midwest	1.28	0.94-1.73	0.118
South	1.50	1.15-1.94	0.002
West	1.26	0.96-1.67	0.094
Health status and utilization			
Self-reported health status	0.84	0.77-0.91	<0.001
Provider visit within the past 12 months			
Never visited	2.51	2.08-3.03	<0.001
Visited at least once	-	-	-
Prescription drug refill within the past 12 months			
Never refilled	1.59	1.30-1.94	<0.001
Refilled at least once	-	-	-

Note. The categories without values represent references for each variable. Higher number in variables representing perceptions about health insruance indicates agreement to the statements and higher number of self-reported health status indicates excellent health status.