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New York City taxi drivers' knowledge and perceptions of the Affordable Care Act

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Abstract

Objectives—This study was conducted to assess New York City taxi drivers' knowledge and perceptions of the Affordable Care Act (ACA).

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Conflict of Interest

The authors declare that they have no conflict of interest.

Methods—A cross-sectional street-intercept study design was used to assess drivers' knowledge about the ACA. A 146-item questionnaire was administered from September 12 to December 6, 2013 to 175 yellow taxi and for-hire vehicle drivers.

Results—91% of drivers were foreign-born; 50% were uninsured. Mean knowledge about the ACA was quite low; 78% of the sample either knew nothing or only a little bit about the ACA. 77% wanted more information about the ACA. Greater English proficiency, more years driving a taxi, and knowledge of having or not having a pre-existing health condition (versus not knowing) were related to higher ACA knowledge levels. Knowledge of a pre-existing condition (whether they had one or not) compared to those who lacked such knowledge was also an important predictor of the perception of whether the ACA would have a positive impact.

Conclusions—To facilitate enrollment, efforts should focus on occupationally-focused initiatives that educate drivers at their places of work and leisure, to raise the overall knowledge levels and enrollment of the community.

Keywords

knowledge; perceptions; taxi drivers; Affordable Care Act

Background

The number of taxi drivers and chauffeurs in the US has increased steadily since the 1970s, reaching 233,000 by 2012.(1; 2) This number is expected to grow by 16% by 2022, exceeding the average growth rate for all occupations.(2) The majority of drivers are concentrated in only 10 states, with the greatest number of drivers in New York, California, Florida, Illinois, and Texas.(1) In New York City (NYC) alone, there are over 50,000 yellow taxi drivers and a similar number of livery drivers.(3)

Compared to other occupations in the US, taxi driving is characterized by one of the highest proportions of males (87%) and immigrants (38%).(1) Since the 1970s, the number of immigrant drivers has increased at a rate exceeding the upward trend of immigration in the US.(1) Nationally, most immigrant drivers come from South Asia, the Caribbean, and Africa.(1) NYC represents an area with a particularly large immigrant presence among drivers, 94%.

Taxi drivers are considered a high-risk occupational group with long hours and low pay. In 2012 the US median annual wage for taxi drivers was \$22,820.(2) Certain occupation-related factors, such as extended periods of physical inactivity and poor diets, appear to increase drivers' risk for cardiovascular disease and cancer, among other health conditions. (1; 2; 4; 5) Drivers' adverse health risks are further exacerbated by high stress, unstable income, fears for personal safety, and poor access to health care.(4–7)

Despite the great need for health care, past research has shown poorer access to health care among taxi drivers than among the general population. In a 2001 study conducted in NYC among South Asian taxi drivers, 40% of drivers had no usual source of care,(8) compared to approximately 18% among the general population nationwide.(9) In a 2011 study of 466 NYC taxi drivers, 55% were uninsured and 49% did not have a primary care provider.(10)

In a 2010 survey of taxi drivers in Chicago by Apantaku-Onayem et al., 60% of drivers lacked health insurance.(11)

As most provisions of the Affordable Care Act (ACA) undergo full implementation, an unprecedented opportunity exists to improve taxi drivers' access to high-quality, affordable care and reduce the health disparities experienced by drivers. However, challenges to extending health care coverage, including complex eligibility rules and lack of awareness of affordable options, threaten successful inclusion of this high-risk occupational group. Furthermore, the demographics specific to the driver population, such as a high proportion of individuals who are foreign-born, low-income, and/or at high risk for adverse health conditions, may present unique challenges to their enrollment.

Given their documented health risks, their status as independent contractors, and their potential linguistic and cultural barriers to health insurance enrollment, this study was conducted to assess NYC taxi drivers' knowledge and perceptions of the ACA. Results can guide enrollment interventions in this, and in other, high need groups with low enrollment.

Methods

A cross-sectional street-intercept study design was used to assess knowledge about the Affordable Care Act (ACA) and health care and health insurance access among NYC taxi drivers. A 146-item questionnaire was administered from September 12 to December 6, 2013 to 175 yellow taxi and for-hire vehicle drivers between the ages of 18 and 85 years. The questionnaire was developed by the Immigrant Health and Cancer Disparities (IHCD) Service at Memorial Sloan Kettering Cancer Center (MSKCC), and was informed by IHCD's prior work with the NYC taxi community.(10; 12) The areas of inquiry included demographic, occupational, and health care and insurance access questions, self-reported health status and health behaviors, and knowledge about the ACA. Trained bi-lingual research staff recruited respondents from multiple occupational sites and community settings, including an airport holding lot, taxi garages, livery car bases, gas stations, driver-frequented restaurants, relief stands, and community and religious organizations. The study was granted exempt status by MSKCC's Institutional Review Board.

There were three primary outcomes – Knowledge of the ACA, Desire to Learn More about the ACA, and Perceived Impact of the ACA. The first outcome was continuous and was analyzed using a General Linear Model approach implemented in the SAS procedure GLM. The remaining two primary outcomes were binary and were analyzed using a logistic regression model implemented in the SAS procedure LOGISTIC. All post-hoc comparisons were Tukey adjusted for multiple outcomes.

Results

Descriptive Statistics

Table 1 summarizes the descriptive results. The mean age was 43.6 years old. The majority of the drivers indicated that they had completed high school or further (90%). Drivers on average had been working in the taxi industry for 8.4 years; average years living in the US

was 18.5. The majority of the drivers (81%) reported that they spoke English ‘well’ or ‘very well’. The overwhelming majority of the drivers were foreign-born. Fifty percent of drivers were uninsured. Fifty-one percent reported having a pre-existing health condition, and the majority (41%) reported their overall health status as ‘good’.

With regard to the Affordable Care Act (ACA), mean knowledge was quite low. The frequency distribution indicates that 78% of the sample either knew nothing or only a little bit about the ACA. Seventy seven percent wanted more information about the ACA.

Predictors of Knowledge of the Affordable Care Act

Univariate Results—Table 2 contains the General Linear Model results for the univariate analyses of ACA knowledge (Scaling – 0 = Not at all; 1 = A little bit; 2 = Some; 3 = A lot). The most significant predictor of knowledge was the respondent’s English proficiency. Those stating that they did not speak English well reported the least ACA knowledge (Mean = 0.40). Not surprisingly, those who said they had lived longer in the United States reported significantly greater ACA knowledge as did those reporting higher annual incomes. Having a Pre-existing condition was also a significant predictor but only in the context of Knowing Nothing at all (about the ACA) to Knowing a Little Bit (about the ACA). Knowledge was greater for those having a Pre-existing condition (Mean 1.51) compared to those who did not know if they had a Pre-existing condition (Mean = 0.12). Knowledge for those who said they did not have a Pre-existing condition was intermediate (Mean = 1.00 – Not at all).

Multivariate Results—Using the results of the univariate model, a multivariate model for ACA knowledge was developed which included the number of years that the respondent had been driving a taxi, English proficiency, and having a Pre-existing condition.

The overall model was quite significant [$F(5, 160) = 51.08; p < 0.0001$; R-square = 0.61] (Table 2A). The longer a driver had driven a taxi, the greater his/her ACA knowledge [$F(1, 160) = 7.17; p = 0.0082$]. Having a Pre-existing condition was also significant [$F(2, 160) = 97.26; p < 0.0001$]. Examination of the post-hoc means indicated that those saying they did not know if they had a pre-existing condition had ACA knowledge significantly lower (Mean Knowledge = 0.15) than those not having a pre-existing condition (Mean Knowledge = 1.05) as well as those having a pre-existing condition (Mean Knowledge = 1.50). ACA knowledge among those having a pre-existing condition was marginally ($p = 0.0936$) greater than among those not having a pre-existing condition. Finally, English Proficiency was a marginally [$F(2, 160) = 2.92; p = 0.0569$] significant predictor in the multivariate context, with those who reported that they spoke English very well having greater knowledge (Mean = 1.06).

Predictors of Desire to Learn More about the Affordable Care Act

Univariate Results—Table 3 summarizes the univariate results for wanting more information about the ACA. Not surprisingly, those who were uninsured were significantly more likely to want more information. Interestingly, as driver income increased, there was significantly greater interest in learning more. Region of origin was significant. Inspection

of the odds ratios indicated that those from Sub-Saharan Africa were more interested in ACA information than drivers from North Africa (no other comparisons were significant).

Multivariate Results—Using the results of the univariate model, a multivariate model for wanting more ACA knowledge was developed. The model included health insurance status, annual income, and region of origin. The overall model was significant [Wald Chi-Square (2) = 9.2872; $p = 0.0096$]. However, region of origin was not statistically significant and was eliminated from the model. The model included health insurance status and annual income (Table 3A). As was the case in the univariate model, the uninsured were significantly [Wald Chi-square (1) = 4.0027; $p = 0.0454$] more likely to want more information compared those having insurance (O.R. = 2.273; 95% C.I. = 1.107, 5.081). Higher income drivers were significantly [Wald Chi-square (1) = 4.9181; $p = 0.0266$; O.R. 1.000 (1.000,1.001)] more likely to want more information.

Predictors of the Perception that the ACA would have a Positive Impact

Univariate Results—Table 4 summarizes the univariate results for the perception that the ACA will have a positive impact. There it can be seen that English proficiency is a significant predictor. As the driver's reported English proficiency moves from not speaking English very well to speaking very well, there is a significant increase in the belief that the ACA will have a positive impact. The driver's rating of his/her overall health is also significant. The worse one's health is reported to be, there is a decline in the belief that the Act will have a positive impact. Finally, having a Pre-existing condition is a predictor. Compared to those having or not having a Pre-existing condition, those who don't know are significantly less likely to think that the Act will have a positive impact.

Multivariate Results—Using the results of the univariate model, the multivariate model for the belief that the ACA would have a positive impact had only a single significant [Wald Chi-square (2) = 56.1097; $p < 0.0001$; R-Square = 0.4161] predictor (having a Pre-existing condition) (Table 4A). Compared to those not having a Pre-existing condition, those who don't know are significantly less likely to think that the Act will have a positive impact (O.R. = 17.99; 95% C.I. = 1.70, 190.60). Those reporting they do have a Pre-existing condition are significantly (O.R. = 0.025; 95% C.I. = 0.008, 0.078) more likely to think the Act will have a positive impact compared to those who don't know if they have any Pre-existing condition. There was no significant difference in the belief of a positive impact for those having or not having a Pre-existing condition.

Predictors of Not Being Sure of the ACA's impact

Univariate Results—Table 5 summarizes the univariate results for being uncertain about the ACA's impact. English proficiency was a significant predictor. As English proficiency increased, there was a significant decrease in those saying they were uncertain about the ACA's impact. Interestingly, as reports of overall health increased, uncertainty about the ACA's impact also increased.

Multivariate Results—In the multivariate model for Not Being Sure of the ACA's impact, both English Proficiency and Overall Health were included in the model (Table 5A).

The overall model was significant [Wald Chi-Square = 15.4387; $p = 0.0015$; R-Square = 0.1044]. The driver's Overall Health was significant [Wald Chi-Square = 4.8821; $p = 0.0271$]. With regard to English Proficiency, those whose spoken English was characterized as "Not well" or "Well" were more likely to express uncertainty about the ACA's impact.

Understanding English Proficiency

Given that English proficiency was often a predictor of the various study outcomes, a multivariate General Linear model was developed to understand those variables that predicted Proficiency. In this model, education was significant [$F(1, 144) = 14.06$; $p = 0.0003$]. As education increased, proficiency increased. Income was also a significant [$F(1, 144) = 12.47$; $p = 0.0006$] predictor. Lower income drivers reported speaking English less well. Finally, the number of years the driver lived in the US was a very significant [$F(1, 144) = 35.86$; $p < 0.0001$] predictor. Those drivers living less long in the US spoke English less well. The overall model accounted for 35% of the variance in proficiency.

Discussion

In this study of largely foreign-born taxi drivers, but longstanding US residents, half were uninsured. An overwhelming 78% described either knowing nothing or only a little bit about the ACA. Greater English proficiency, more years driving a taxi, and knowledge of having or not having a pre-existing health condition (versus not knowing) were related to higher ACA knowledge levels. Low knowledge levels underscore the importance of increasing outreach, education and navigation/assistance with ACA enrollment among eligible drivers and other hard-to-reach and high-risk populations. Not surprisingly, uninsured drivers were significantly more likely to desire more information about the ACA than insured drivers. Of concern, however, was that higher income drivers were significantly more likely to desire more information, suggesting that the premiums associated with the ACA may be a deterrent for lower income drivers.

Knowledge of whether or not a driver had a pre-existing condition (whether they had one or not) compared to those who lacked such knowledge was also an important predictor of the perception of whether the ACA would have a positive impact. English proficiency was an important predictor of many of the study's outcomes. Knowledge of having a pre-existing condition requires prior or current health care access, and thus reflects better linkages with the health care system compared to an individual who is unaware of any condition. Greater English proficiency was also associated with a better socioeconomic profile, as well as with more years driving and longer duration of residence in the US. These results suggest that those with already greater health care access and socioeconomic status are more likely to have greater knowledge of the ACA, and those most vulnerable and in need of the ACA have less knowledge and may therefore be less likely to enroll.

Because taxi drivers are generally considered independent contractors and thus not 'employees', the vast majority are not entitled to employer-sponsored health insurance options through taxi companies.⁽¹³⁾ The ACA thus represents a tremendous opportunity for the driver population to access high quality, affordable health care, although the size of the premiums could themselves be a deterrent. Our study suggests that ACA knowledge levels

among drivers are extremely low, boding poorly for driver enrollment. To facilitate enrollment, efforts should focus on occupationally-focused initiatives that educate drivers at their places of work and leisure, to raise the overall knowledge levels and enrollment of the community. Navigators fluent in the languages of the drivers, who are responsive to drivers' schedules and shifts, may serve as an effective approach to increase enrollment. For vulnerable, hard-to-reach communities, such as taxi drivers, such facilitated enrollment programs offer great potential. The outcomes of these efforts, including successful ACA enrollment and subsequent identification and engagement with a primary care provider, should be evaluated for efficacy in order to support their wider dissemination among at-risk communities across the US.

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Table 1

Sociodemographics, Health Status, and Knowledge/Perception of the Affordable Care Act (ACA)

Sociodemographic and Health Status Variables	N (%)	Mean (S.D.)
Health Insurance Status		
Uninsured	87 (49.71)	
Insured	88 (50.29)	
Education		
None – 8 th grade	6 (3.4)	
9 th – 11 th grade	12 (6.9)	
12 th grade/HS Graduate	57 (32.6)	
Some College	31 (17.7)	
College Graduate	56 (32.0)	
Post College/Graduate School	13 (7.4)	
Age		43.58 (11.64)
Years of Taxi Driving		8.40 (8.38)
Monthly Income		2227.42 (988.70)
English Proficiency		
Not Well	33 (19.41)	
Well	79 (46.47)	
Very Well	58 (34.12)	
Missing	5	
Marital Status		
Partnered	104 (60.12)	
Formerly Partnered	21 (12.14)	
Single	48 (27.75)	
Missing	2	
Having Diabetes		
No	146 (85.88)	
Yes	24 (14.12)	
Missing	5	
Treated for Diabetes		
No	151 (86.78)	
Yes	23 (13.22)	
Missing	1	
Having High Blood Pressure		
No	134 (76.48)	
Yes	36 (21.18)	
Missing	5	
Treated for Blood Pressure		
No	143 (82.66)	
Yes	30 (17.34)	
Missing	2	

Sociodemographic and Health Status Variables	N (%)	Mean (S.D.)
Having Elevated Cholesterol		
No	123 (72.78)	
Yes	46 (27.22)	
Missing	6	
Treated for Elevated Cholesterol		
No	136 (78.61)	
Yes	37 (21.39)	
Missing	2	
Overall Health		
Poor	5 (2.91)	
Fair	27 (15.70)	
Good	70 (40.70)	
Very Good	42 (24.42)	
Excellent	28 (16.28)	
Missing	3	
Years in the United States		18.52 (13.19)
Having a Pre-existing Condition		
No	5 (2.92)	
Don't Know	78 (45.61)	
Yes	88 (51.46)	
Missing	4	
Region of Origin		
North Africa	26 (15.12)	
Southern Asia	52 (30.23)	
Caribbean	17 (9.88)	
United States	13 (7.56)	
Sub-Saharan Africa	44 (25.88)	
Southern/Central America	7 (4.07)	
Other	13 (7.56)	
Missing	26	
Knowledge/Perception of the ACA	N (%)	Mean (S.D.)
Knowledge of the ACA		
Nothing at all	77 (44.00)	
A little bit	60 (34.29)	
Some	27 (15.43)	
A lot	11 (6.29)	
Desire to Learn More about the ACA		
No	40 (23.12)	
Yes	133 (76.88)	
Missing	2	
Perception of Potential Impact of ACA on Health		

Sociodemographic and Health Status Variables	N (%)	Mean (S.D.)
Care Access		
No impact	9 (5.26)	
Negative Impact	4 (2.34)	
Positive Impact	77 (45.03)	
Don't know/Not sure	81 (47.37)	
Missing	4	

Table 2

Univariate General Linear Model Results for Knowledge of Affordable Care Act

Predictor Variables	Degrees of freedom	F Value	p-value	Means for Categorical Variables	R-Square
Have Health Insurance	1, 173	0.02	0.8788	Insured – 0.850 Uninsured – 0.830	0.001
Education	1, 173	1.76	0.0794		0.018
Age	1, 171	1.01	0.3120		0.006
Years of Driving a Taxi	1, 173	5.54	0.0197		0.031
Income	1, 153	2.41	0.0172		0.036
English Proficiency	1, 168	11.93	<0.0001	Not well – 0.40 Well – 0.72 Very well – 1.26	0.123
Marital Status	2, 170	0.43	0.6484	Partnered – 0.80 Formerly Partnered – 1.00 Single – 0.85	0.005
Has Diabetes	1, 168	0.10	0.7487	No – 0.856 Yes – 0.792	0.0006
Has Treatment for Diabetes	1, 22	0.07	0.7915	No – 0.854 Yes – 0.783	0.003
Has High Blood Pressure	1, 168	0.00	0.9865	No – 0.858 Yes – 0.861	0.000002
Treated for High Blood Pressure	1, 34	0.96	0.3349	No – 0.825 Yes – 0.933	0.027
Has Elevated Cholesterol	1, 167	0.08	0.7810	No – 0.870 Yes – 0.826	0.0004
Treated for Elevated Cholesterol	1, 171	0.32	0.5738	No – 0.823 Yes – 0.919	
Overall Health	1, 170	2.22	0.1384		0.013

Predictor Variables	Degrees of freedom	F Value	p-value	Means for Categorical Variables	R-Square
Years in the United States	1, 168	17.47	< 0.0001		0.094
Have a Pre-existing Condition	2, 168	113.05	< 0.0001	No = 1.00 Don't Know = 0.115 Yes = 1.511	0.574
Region of Origin	6, 165	1.96	0.0747	North Africa = 0.500 Southern Asia = 0.769 Caribbean = 1.000 North America = 1.46 Sub-Saharan Africa = 0.818 South/Central America = 1.14 Other = 0.769	0.070

Table 2A

A Multivariate General Linear Model Results for Knowledge of Affordable Care Act

Predictor Variables	Degrees of freedom	F Value	p-value	Means for Categorical Variables
Years of Driving a Taxi	1,160	7.17	0.0082	
English Proficiency	2,160	2.92	0.0569	Not Well = 0.83 Well = 0.81 Very Well = 1.06
Has a Pre-existing Condition	2,160	97.26	<0.0001	No = 1.05 Don't Know = 0.15 Yes = 1.50

Table 3
Univariate Logistic Regression Results for Desire to Learn More about the Affordable Care Act

Predictor Variables	Degrees of freedom	Wald Chi Square	p-value	Odds Ratio (95% C.I.)	R-Square
ACA Knowledge	1	0.6267	0.4286	1.178 (0.78, 1.77)	0.0037
Have Health Insurance	1	5.95	0.0147	Uninsured vs. Not Insured - 2.53 (1.20, 5.32)	0.036
Education	1	0.0036	0.9771	1.004 (0.78, 1.30)	0.000
Age	1	0.0231	0.8791	1.002 (0.97, 1.03)	0.0001
Years of Driving a Taxi	1	0.0062	0.9370	0.998 (0.96, 1.04)	0.000
Income	1	5.65	0.0310	1.000 (1.000, 1.001)	0.033
English Proficiency	1	0.5498	0.4584	1.21 (0.73, 2.00)	0.123
Marital Status	2	0.9998	0.6066	Partnered vs. Single - 1.08 (0.49, 2.40) Partnered vs. Formerly Partnered - 0.542 (0.114, 2.58) Formerly Partnered vs. Single - 2.00 (0.38, 10.49)	0.006
Has Diabetes	1	1.42	0.2334	Diabetic vs. Not Diabetic - 1.766 (0.693, 4.49)	0.008
Has Treatment for Diabetes	1	1.98	0.1597	Treated for Diabetes vs. Not Treated - 0.51 (0.20, 1.30)	
Has High Blood Pressure	1	0.0012	0.9724	Has High Blood Pressure vs. Not - 0.985 (0.41, 2.39)	0.0000
Treated for High Blood Pressure	1	0.0001	0.9912	Treated for High Blood Pressure vs. Not - 1.005	0.0000

Predictor Variables	Degrees of freedom	Wald Chi Square	p-value	Odds Ratio (95% C.I.)	R-Square
Has Elevated Cholesterol	1	0.006	0.9410	(0.40, 2.55) Has Elevated Cholesterol vs. Not – 0.970 (0.43, 2.20)	0.0004
Treatment for Elevated Cholesterol	1	0.0705	0.7906	Treated for Cholesterol vs. Not – 1.13 (0.47, 2.71)	0.0004
Overall Health	1	0.8675	0.3516	0.76 (0.43, 1.35)	0.0005
Years in the United States	1	0.8259	0.3634	1.02 (0.98, 1.06)	0.0005
Have a Pre-existing Condition	2	0.5408	0.7631	Yes vs. No – 0.91 (0.09, 8.61) Don't know vs. No – 0.70 (0.07, 6.64) Yes vs. Don't Know – 0.70 (0.05, 10.32)	0.0003
Region of Origin	4	9.50	0.0496	North Africa vs. Southern Asia – 0.67 (0.17, 2.68) North Africa vs. the Caribbean – 0.49 (0.07, 3.32) North Africa vs. North America – 0.48 (0.06, 3.94) North Africa vs. Sub-Saharan Africa – 0.04 (0.002, 0.726) Southern Asia vs. the Caribbean – 0.74 (0.13, 4.34) Southern Asia vs. North America – 0.72 (0.1, 5.22) Southern Asia vs. Sub-Saharan Africa – 0.06 (0.003, 1.00) Caribbean vs. North America – 0.98 (0.09, 10.52) Caribbean vs. Sub-Saharan Africa – 0.08	0.12

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Predictor Variables	Degrees of freedom	Wald Chi Square	p-value	Odds Ratio (95% C.I.)	R-Square
				(0.003, 2.08)	

Table 3A

A Multivariate Logistic Regression Results for Desire to Learn More about the Affordable Care Act

Predictor Variables	Degrees of freedom	Wald Chi Square	p-value	Odds Ratio (95% C.I.)
Health Insurance Status	1	4.0027	0.0454	2.273 (1.017, 5.081)
Income	1	4.9181	0.0266	1.000 (1.000, 1.001)

Table 4
Univariate Logistic Regression Results for Perception of Positive Impact of the Affordable Care Act

Predictor Variables	Degrees of freedom	Wald Chi Square	p-value	Odds Ratio (95% C.I.)	R-Square
ACA Knowledge	1	1.8378	0.1752	5.732 (0.46, 71.57)	0.0063
Have Health Insurance	1	0.1305	0.7179	For the Uninsured – 0.90 (0.49, 1.64)	0.0008
Education	1	0.6714	0.4126	1.102 (0.87, 1.39)	0.004
Age	1	0.6482	0.4208	0.989 (0.96, 1.02)	0.004
Years of Driving a Taxi	1	0.0016	0.9683	0.999 (0.96, 1.04)	0.000
Income	1	1.48	0.2239	1.000 (1.000, 1.001)	0.009
English Proficiency	1	9.39	0.0022	2.05 (1.30, 3.24)	0.059
Marital Status	2	0.8027	0.6694	Partnered vs. Single – 0.74 (0.323, 1.71) Formerly Partnered vs. Single – 0.95 (0.34, 2.66) Partnered vs. Formerly Partnered – 0.783 (0.253, 2.42)	0.005
Has Diabetes	1	0.1397	0.7086	Diabetic vs. Not – 0.85 (0.35, 2.03)	0.0008
Has Treatment for Diabetes	1	0.4059	0.5241	Treated for Diabetes vs. Not – 0.75 (0.30, 1.84)	
Has High Blood Pressure	1	0.0031	0.8557	Has High Blood Pressure – vs. Not – 0.93 (0.44, 1.96)	0.0000
Treated for High Blood Pressure	1	0.0426	0.8365	Treated for High Blood Pressure vs. Not – 1.09 (0.49, 2.40)	0.0002

Predictor Variables	Degrees of freedom	Wald Chi Square	p-value	Odds Ratio (95% C.I.)	R-Square
Has Elevated Cholesterol	1	0.3663	0.5450	Has Elevated Cholesterol vs. Not – 0.81 (0.40, 1.61)	0.002
Treatment for Elevated Cholesterol	1	0.0051	0.9430	Treated for Cholesterol vs. Not – 0.97 (0.46, 2.04)	0.0000
Overall Health	1	4.9371	0.0263	0.70 (0.52, 0.96)	0.0301
Years in the United States	1	0.2199	0.6391	1.006 (0.98, 1.03)	0.0013
Have a Pre-existing Condition	2	56.1097	< 0.0001	Yes vs. No – 0.441 (0.048, 4.066) Don't know vs. No – 17.99 (1.70, 190.604) Don't know vs. Yes – 0.025 (0.008, 0.078)	0.4161
Region of Origin	6	6.3518	0.3850	North Africa vs. Southern Asia – 1.385 (0.32, 5.92) North Africa vs. the Caribbean – 0.44 (0.06, 3.002) North Africa vs. North America – 0.86 (0.11, 6.42) North Africa vs. Sub-Saharan Africa – 0.63 (0.14, 2.81) North Africa vs. Central/South America – 1.832 (0.12, 28.10) North Africa vs. Other – 1.17 (0.15, 9.10) Southern Asia vs. the Caribbean – 0.32 (0.06, 1.82) Southern Asia vs. North America – 0.62 (0.097, 3.94) Southern Asia vs. Sub-Saharan	0.0383

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Predictor Variables	Degrees of freedom	Wald Chi Square	p-value	Odds Ratio (95% C.I.)	R-Square
				Africa – 0.46 (0.13, 1.61) Southern Asia vs. Central/South America – 1.32 (0.097, 18.02) Southern Asia vs. Other – 0.85 (0.13, 5.60) Caribbean vs. North America – 1.94 (0.21, 18.23) Caribbean vs. Sub-Saharan Africa – 1.44 (0.24, 8.54) Caribbean vs. America – 4.16 (0.23, 75.58) Caribbean vs. Other – 2.67 (0.28, 25.76) North America vs. Sub-Saharan Africa – 0.74 (0.11, 4.86) North America vs. Central/South America – 2.14 (0.11, 41.43) North America vs. Other – 1.37 (0.13, 14.36) Sub-Saharan vs. Central/South America – 2.89 (0.21, 40.29) Sub-Saharan vs. Other – 1.85 (0.27, 12.61) Central/South America vs. Other – 0.64 (0.03, 12.67)	

Table 4A

A Multivariate Logistic Regression Results for Perception of Positive Impact of the Affordable Care Act

Predictor Variables	Degrees of freedom	Wald Chi Square	p-value	Odds Ratio (95% C.I.)
Have a Pre-existing Condition	2	56.1097	< 0.0001	No vs. Don't know = 17.99 (1.70, 190.60) Don't Know vs. Yes = 0.025 (0.008,0.078)

Table 5
Univariate Logistic Regression Results for Not Sure of the Impact of the Affordable Care Act

Predictor Variables	Degrees of freedom	Wald Chi Square	p-value	Odds Ratio (95% C.I.)	R-Square
Have Health Insurance	1	1.34	0.2463	For the Uninsured the Insured – 1.43 (0.78, 2.61)	0.008
Education	1	2.4468	0.1178	0.83 (0.66, 1.05)	0.0146
Age	1	0.0020	0.9640	1.002 (0.98, 1.03)	0.0000
Years of Driving a Taxi	1	0.7975	0.3718	0.98 (0.95, 1.02)	0.005
Income	1	3.40	0.0650	1.000 (0.999, 1.000)	0.0231
English Proficiency	1	12.29	0.0005	0.437 (0.275, 0.694)	0.0772
Marital Status	2	3.9632	0.1378	Partnered vs. Single – 1.83 (0.76, 4.42) Formerly Partnered vs. Single - 0.76 (0.18, 3.35) Partnered vs. Formerly Partnered – 2.39 (0.60, 9.46)	0.0271
Has Diabetes	1	0.1025	0.7489	Diabetic vs. Not – 0.48 (0.36, 2.06)	0.0006
Has Treatment for Diabetes	1	2.051	0.1521	Treated for Diabetes vs. Not – 0.75 (0.18, 1.31)	0.0143
Has High Blood Pressure	1	0.2411	0.6234	Has High Blood Pressure vs. Not – 0.83 (0.40, 1.74)	0.0015

Predictor Variables	Degrees of freedom	Wald Chi Square	p-value	Odds Ratio (95% C.I.)	R-Square
Treated for High Blood Pressure	1	0.0487	0.8254	Treated for High Blood Pressure vs. Not – 0.91 (0.38, 2.18)	0.0003
Has Elevated Cholesterol	1	0.1991	0.6555	Has Elevated Cholesterol vs. Not – 0.81 (0.43, 1.70)	0.0012
Treatment for Elevated Cholesterol	1	0.2026	0.6527	Treated for Cholesterol vs. Not – 0.82 (0.36, 1.90)	0.0014
Overall Health	1	4.0575	0.0440	1.37 (1.009, 1.861)	0.0246
Years in the United States	1	2.1775	0.1400	0.98 (0.96, 1.006)	0.0134
Have a Pre-existing Condition	Non_Estimable	Non_Estimable	Non_Estimable	Non_Estimable	Non_Estimable
Region of Origin	6	5.440	0.5055	North Africa vs. Southern Asia – 1.082 (0.26, .52) North Africa vs. the Caribbean – 2.999 (0.42, 21.60) North Africa vs. North America – 2.182 (0.28, 16.92) North Africa vs. Sub-Saharan Africa – 1.92 (0.43, 8.61) North Africa vs. Central/South America – 1.023 (0.81, 12.94)	0.0323

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Predictor Variables	Degrees of freedom	Wald Chi Square	p-value	Odds Ratio (95% C.I.)	R-Square
				North Africa vs. Other – 1.591 (0.21, 11.93)	
				Southern Asia vs. the Caribbean – 2.773 (0.46, 16.62)	
				Southern Asia vs. North America – 2.017 (0.31, 13.11)	
				Southern Asia vs. Sub-Saharan Africa – 1.78 (0.51, 6.18)	
				Southern Asia vs. Central/South America – 0.946 (0.086, 10.40)	
				Southern Asia vs. Other – 0.85 (0.13, 5.60)	
				Caribbean vs. North America – 0.727 (0.072, 7.36)	
				Caribbean vs. Sub-Saharan Africa – 0.642 (0.101, 4.06)	
				Caribbean vs. Central/South America – 0.341 (0.022, 5.37)	
				Caribbean vs. Other – 0.530 (0.054, 5.21)	
				North America vs. Sub-Saharan Africa – 0.882 (0.129, 6.04)	
				North America vs. Central/South America –	

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Predictor Variables	Degrees of freedom	Wald Chi Square	p-value	Odds Ratio (95% C.I.)	R-Square
				0.469 (0.028, 7.785) North America vs. Other – 0.729 (0.070, 7.64) Sub-Saharan Africa vs. Central/South America – 0.531 (0.046, 6.083) Sub-Saharan vs. Other – 0.826 (0.125, 5.46) Central/South America vs. Other – 1.556 (0.096, 25.22)	

Table 5A

A Multivariate Logistic Regression Results for Not Sure of the Impact of the Affordable Care Act

Predictor Variables	Degrees of freedom	Wald Chi Square	p-value	Odds Ratio (95% C.I.)
Overall Health	1	4.8821	0.0271	1.44 (1.04, 2.01)
English Proficiency	2			Not well vs. Well = 3.09 (1.01, 9.42) Not well vs. Very Well = 6.21 (1.87, 20.63) Well vs. Very Well = 2.01 (0.83, 4.86)