

Racial and Ethnic Disparities in Health Care Access and Utilization Under the Affordable Care Act

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Objective: To examine racial and ethnic disparities in health care access and utilization after the Affordable Care Act (ACA) health insurance mandate was fully implemented in 2014.

Research Design: Using the 2011–2014 National Health Interview Survey, we examine changes in health care access and utilization for the nonelderly US adult population. Multivariate linear probability models are estimated to adjust for demographic and socio-demographic factors.

Results: The implementation of the ACA (year indicator 2014) is associated with significant reductions in the probabilities of being uninsured (coef = -0.03 , $P < 0.001$), delaying any necessary care (coef = -0.03 , $P < 0.001$), forgoing any necessary care (coef = -0.02 , $P < 0.001$), and a significant increase in the probability of having any physician visits (coef = 0.02 , $P < 0.001$), compared with the reference year 2011. Interaction terms between the 2014 year indicator and race/ethnicity demonstrate that uninsured rates decreased more substantially among non-Latino African Americans (African Americans) (coef = -0.04 , $P < 0.001$) and Latinos (coef = -0.03 , $P < 0.001$) compared with non-Latino whites (whites). Latinos were less likely than whites to delay (coef = -0.02 , $P < 0.001$) or forgo (coef = -0.02 , $P < 0.001$) any necessary care and were more likely to have physician visits (coef = 0.03 , $P < 0.005$) in 2014. The association between year indicator of 2014 and the probability of having any emergency department visits is not significant.

Conclusions: Health care access and insurance coverage are major factors that contributed to racial and ethnic disparities before the ACA implementation. Our results demonstrate that racial and ethnic disparities in access have been reduced significantly during the initial years of the ACA implementation that expanded access and mandated that individuals obtain health insurance.

Key Words: Affordable Care Act, racial and ethnic disparities, health care access, health insurance, health care utilization

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The Affordable Care Act (ACA), implemented in 2014, aims to expand health insurance coverage.^{1,2} Early evidence shows that uninsured rates have been reduced significantly from 18% to 12%.^{2,3} Recent studies demonstrate that the implementation of the ACA is associated with significant improvement in self-reported insurance coverage, access to primary care and medications, and health outcomes.^{4,5}

Racial and ethnic disparities in health care have been well documented in the literature.⁶ Health care access and insurance coverage are major factors that contributed to racial and ethnic disparities before the ACA implementation.^{6–8} Health insurance expansions under the ACA, however, have resulted in a net increase of 16.9 million people gaining insurance between 2013 and 2015,⁹ allowing millions of previously uninsured individuals to access and utilize health care. Hence, it is reasonable to expect that the ACA would benefit racial and ethnic minorities who historically have experienced lower coverage rates and suboptimal access to care.^{10–12} Statistics show that uninsured rates narrowed for minorities in 2014.¹³ Little is known about racial and ethnic disparities in health care access and utilization under the ACA in its first years of operation.

To our knowledge, this is the first study to examine and quantify the short-term changes in racial and ethnic disparities in health care utilization and access under the ACA using a nationally representative data set including 2014 data. We hypothesize that racial and ethnic disparities have been reduced significantly during the initial years ACA implementation that expanded access to affordable coverage and mandated that individuals obtain health insurance.

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METHOD

Data

This study uses the 2011–2014 National Health Interview Survey, a nationally representative survey of the civilian, noninstitutionalized population in the United States. This survey provides information on respondents' health care access and utilization during the survey year, as well as demographic, socioeconomic, and health-related characteristics. This study focuses on individuals 18–64 years of age. The sample has 91,826 observations in total, including 52,803 non-Latino whites (whites), 13,680 non-Latino African Americans (African Americans), 17,088 Latinos, and 8255 other races/ethnicities.

Variables

Our outcome variables include 3 measures that have been used in the literature^{5,14}: probability of being uninsured, probability of having any delayed necessary medical care, and probability of having any forgone medical care. We also use 2 health care utilization measures: probability of having any emergency department (ED) visit, and probability of having any physician visit.

We use the Andersen behavioral model of health care utilization to select covariates.¹⁵ The covariates included in our study can be categorized into 3 domains. Predisposing factors are race/ethnicity (white, African American, Latino, and other race/ethnicity), immigration status (US born citizens, naturalized US citizens, and non-US citizens), sex, and marital status (married). Enabling factors include education (less than high school degree, high school degree, college degree, and advanced degree), family income [$<100\%$ Federal Poverty Line (FPL), 100% – 200% FPL, and $>200\%$ FPL], interview language (English, Spanish, and other), and US Census region (Northeast, Midwest, South, and West). Need factors include self-reported physical and mental health (excellent, very good, good, fair, and poor), any functional limitation, and self-reported chronic conditions (hypertension, diabetes, asthma, heart diseases, and cancer). These variables have been widely used in the literature to examine health care access and utilization.¹⁶

Analysis

We first summarize the trends of health care access and utilization for whites, African Americans, Latinos, and other race/ethnicity from 2011 to 2013 (before the ACA was fully implemented) to 2014 (after ACA implementation). We use survey weights to adjust sample characteristics to be nationally representative. We then use multivariate linear probability models to estimate the trends of health care access and utilization under the ACA. We estimate the models including the predisposing factors (age, sex, marital status, US citizenship/naturalized status), enabling factors (family income, education, interviewed language, US Census Region), and the need factors (self-reported chronic disease, any functional limitation, and self-reported health outcome). To explore the different exposures to the ACA for specific racial and ethnic cohorts, we estimate the interaction terms between the ACA indicator (year 2014) and race/ethnicity.

We estimate the models adjusting for the robustness of SEs using the clustered survey design, controlling for sampling weights, primary sampling units, and strata.

RESULTS

Figure 1 presents the trends of health care access and utilization from 2011 to 2014 by race ethnicity. The uninsured rates have been reduced significantly after implementation of the ACA for all races and ethnicities. Specifically, the uninsured rates in 2014 have been reduced by 7% for African Americans and Latinos, 5% for other racial and ethnic groups, and 3% for whites, compared with the uninsured rates in 2011. The uninsured rates were still the highest among Latinos in 2014, compared with all other racial/ethnic groups. The reductions in the probabilities of having any delayed or forgone care range from 1% for whites to 6% for Latinos. African Americans were more likely to have any delayed or forgone care in 2014, compared with other racial and ethnic groups. Results also show the significant increase in the probabilities of having any physician visit. Latinos, African Americans, and whites were 5%, 3%, and 2% more likely to have any physician visit during the survey year in 2014 compared with 2011. The probabilities of having any ED visit are similar before and during 2014.

Table 1 shows the results of multivariate linear probability models that control for predisposing, enabling, and need factors. After controlling for all the covariates, the ACA implementation (year indicator 2014) is associated with significant reductions in the probabilities of being uninsured (coef = -0.03 , $P < 0.001$), delaying any necessary care (coef = -0.03 , $P < 0.001$), forgoing any necessary care (coef = -0.02 , $P < 0.001$), and a significant increase in the probability of having any physician visits (coef = 0.02 , $P < 0.001$), compared with 2011. Year indicators also show that probabilities of delaying or forgoing any necessary care have been consistently reduced each year since 2011. The reductions are more pronounced in 2014, after the ACA's full implementation. The association between year indicator of 2014 and the probability of having any ED visits is not significant.

Results also indicate significant variation in health care access and utilization among the different race/ethnicity categories under the ACA. Interaction terms between the 2014 year indicator and race/ethnicity show that the probabilities of being uninsured in 2014 were 4 and 3 percentage points lower for African Americans and Latinos compared with that of whites, respectively. Meanwhile, the probabilities of having any delayed or forgone care were 2 percentage points lower for Latinos, and the probability of having any physician visit in 2014 was 3 percentage points higher for Latinos. African Americans did not have statistically significant differences relative to whites in delaying or forgoing care, or for physician visits in 2014.

DISCUSSION

Our results demonstrate that racial and ethnic minorities, who have historically encountered more disparities in

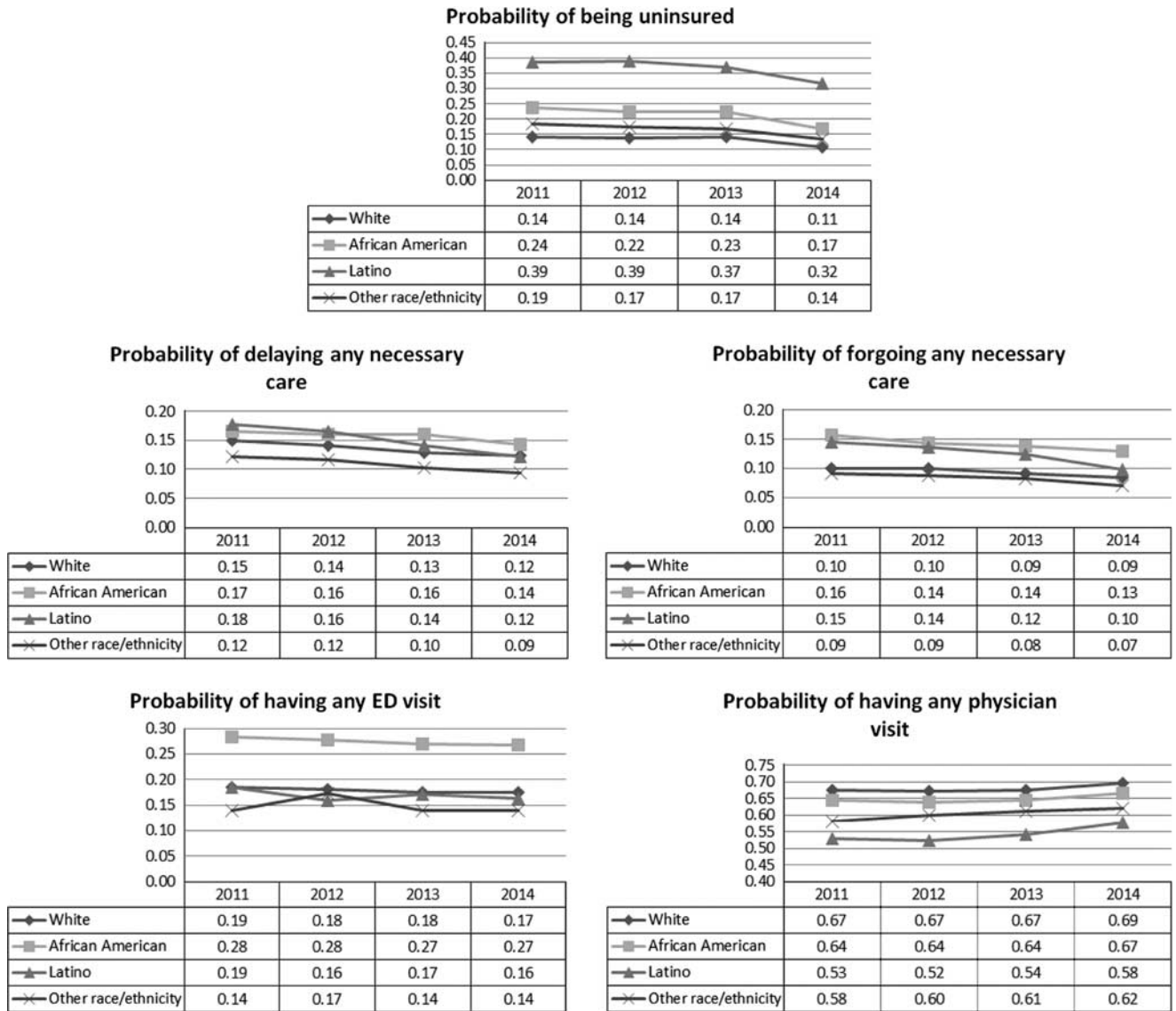


FIGURE 1. Weighted averages of health care access and utilization in 2011–2014 by race/ethnicity. Data source: National Health Interview Survey 2011–2014. Results are nationally representative. ED indicates emergency department.

coverage and access, have improved more on these measures under the ACA compared with whites. African Americans seem to have benefitted the most in terms of uninsured rates. It is likely that African Americans are more likely to gain the insurance coverage through Health Insurance Marketplace and Medicaid expansion under the ACA, compared with whites. Relatively smaller declines in uninsured rates among Latinos may be explained by the fact that recent Latino immigrants are more likely to live in states that are not participating in the Medicaid expansion as well as poor outreach to the Latino community regarding the ACA eligibility, subsidies, and enrollment.¹⁷ Important progress among Latinos, however, is observed in this short-term analysis of the ACA implementation in terms of fewer delays and a lower probability of forgoing health care among Lat-

inos who were eligible. These results suggest that the ACA has the potential to reduce and eliminate racial and ethnic disparities if present trends continue.

Although the focus of our brief report is the trends of health care access and utilization, more research is needed to further explore the factors associated with the reductions of disparities in 2014. For example, income has been considered as a major barrier for health care access. Racial and ethnic difference in income, however, is less of a concern due to the expansion of insurance coverage under the ACA. We test stratified analysis by income levels (results are not shown given the scope of this brief report). We find that health care access improved more substantially among populations with income 100%–200% FPL, followed by income <100% FPL, and income >200% FPL. This finding is

TABLE 1. Linear Probability Model of Health Care Access and Utilization in 2011–2014

	Probability of Being Uninsured			Probability of Delaying Any Necessary Care			Probability of Forgoing Any Necessary Care					
	Coef	95% CI	P	Coef	95% CI	P	Coef	95% CI	P			
Year indicator												
2011		Reference			Reference			Reference				
2012	0.00	−0.01	0.00	0.31	−0.01	−0.02	0.00	<0.05	0.00	−0.01	0.00	0.16
2013	0.00	−0.01	0.00	0.20	−0.02	−0.03	−0.01	<0.001	−0.01	−0.02	0.00	<0.001
2014	−0.03	−0.04	−0.02	<0.001	−0.03	−0.03	−0.02	<0.001	−0.02	−0.02	−0.01	<0.001
Race/ethnicity												
White		Reference			Reference			Reference				
African American	0.01	0.00	0.02	0.08	−0.03	−0.04	−0.02	<0.001	0.00	−0.01	0.01	0.61
Latino	0.06	0.05	0.08	<0.001	−0.01	−0.02	0.00	0.14	0.01	0.00	0.01	0.21
Others	−0.02	−0.03	0.00	<0.05	−0.03	−0.04	−0.02	<0.001	−0.01	−0.02	0.00	<0.05
Interaction terms												
African American × 2014	−0.04	−0.06	−0.02	<0.001	0.00	−0.02	0.01	0.64	−0.01	−0.02	0.01	0.41
Latino × 2014	−0.03	−0.05	−0.02	<0.001	−0.02	−0.04	−0.01	<0.001	−0.02	−0.04	−0.01	<0.001
Other race × 2014	−0.01	−0.03	0.01	0.41	0.00	−0.02	0.02	0.74	0.00	−0.02	0.02	0.96
Age												
25–34	0.10	0.09	0.12	<0.001	0.08	0.07	0.09	<0.001	0.06	0.05	0.07	<0.001
35–44	0.08	0.06	0.09	<0.001	0.07	0.06	0.08	<0.001	0.07	0.06	0.08	<0.001
45–54	0.08	0.06	0.09	<0.001	0.08	0.07	0.09	<0.001	0.07	0.06	0.08	<0.001
55–64	0.06	0.04	0.07	<0.001	0.05	0.04	0.06	<0.001	0.04	0.03	0.05	<0.001
Female	−0.04	−0.04	−0.03	<0.001	0.01	0.00	0.01	<0.001	0.01	0.00	0.01	0.01
Married	−0.06	−0.06	−0.05	<0.001	−0.08	−0.09	−0.07	<0.001	−0.05	−0.06	−0.05	<0.001
US citizenship and nativity status												
US Born		Reference			Reference			Reference				
Non-US citizen and <5 y US residence	0.10	0.08	0.13	<0.001	0.01	−0.01	0.02	0.52	0.00	−0.02	0.01	0.83
Non-US citizen and >5 y US residence	0.19	0.17	0.20	<0.001	0.00	−0.01	0.02	0.48	0.01	0.00	0.02	0.10
Naturalized US citizen and <5 y US residence	0.05	−0.04	0.15	0.29	0.02	−0.04	0.08	0.55	−0.03	−0.08	0.01	0.18
Naturalized US citizen and >5 y US residence	0.01	0.00	0.02	0.21	0.00	−0.01	0.01	0.97	0.00	−0.01	0.01	1.00
Family income												
<100% FPL		Reference			Reference			Reference				
100%–200% FPL	0.02	0.01	0.03	<0.001	0.04	0.03	0.05	<0.001	0.01	0.00	0.02	0.01
>200% FPL	−0.16	−0.18	−0.15	<0.001	−0.08	−0.09	−0.07	<0.001	−0.09	−0.10	−0.09	<0.001
Education												
No high school degree		Reference			Reference			Reference				
High school degree	−0.02	−0.03	−0.01	<0.001	0.01	0.00	0.02	<0.05	0.01	−0.01	0.02	0.33
Some college	−0.07	−0.08	−0.06	<0.001	0.04	0.03	0.05	<0.001	0.02	0.01	0.03	<0.001
College degree	−0.10	−0.12	−0.09	<0.001	0.03	0.02	0.04	<0.001	0.00	−0.01	0.01	0.53
Advanced degree	−0.15	−0.16	−0.14	<0.001	0.01	0.00	0.02	0.06	−0.01	−0.02	0.00	0.09
Interview language												
English		Reference			Reference			Reference				
Spanish	0.10	0.08	0.13	<0.001	0.01	0.00	0.03	0.18	−0.01	−0.02	0.01	0.27
Other language	0.03	−0.02	0.08	0.19	−0.06	−0.09	−0.02	<0.001	−0.06	−0.09	−0.03	<0.001
US census region												
Northeast		Reference			Reference			Reference				
Midwest	0.02	0.01	0.03	<0.001	0.03	0.02	0.04	<0.001	0.01	0.01	0.02	<0.001
South	0.07	0.06	0.08	<0.001	0.03	0.02	0.04	<0.001	0.03	0.02	0.04	<0.001
West	0.05	0.04	0.06	<0.001	0.04	0.04	0.05	<0.001	0.03	0.02	0.04	<0.001
Self-reported health status												
Poor		Reference			Reference			Reference				
Fair	0.06	0.04	0.08	<0.001	−0.03	−0.05	−0.01	0.01	−0.04	−0.06	−0.02	<0.001
Good	0.08	0.07	0.10	<0.001	−0.09	−0.12	−0.07	<0.001	−0.10	−0.12	−0.08	<0.001

(Continued)

TABLE 1. Linear Probability Model of Health Care Access and Utilization in 2011–2014 (*continued*)

	Probability of Being Uninsured				Probability of Delaying Any Necessary Care				Probability of Forgoing Any Necessary Care				
	Coef	95% CI		P	Coef	95% CI		P	Coef	95% CI		P	
Very good	0.06	0.04	0.08	<0.001	-0.14	-0.16	-0.11	<0.001	-0.14	-0.16	-0.12	<0.001	
Excellent	0.05	0.03	0.07	<0.001	-0.17	-0.19	-0.14	<0.001	-0.16	-0.18	-0.14	<0.001	
Chronic condition													
Hypertension	-0.03	-0.04	-0.03	<0.001	0.00	-0.01	0.01	0.66	0.00	0.00	0.01	0.20	
Coronary heart disease	-0.03	-0.05	-0.02	<0.001	-0.01	-0.03	0.00	0.14	-0.01	-0.03	0.01	0.24	
Heart condition/disease	-0.02	-0.03	-0.01	<0.001	0.01	0.00	0.03	<0.05	0.01	0.00	0.02	<0.05	
Asthma	-0.02	-0.03	-0.01	<0.001	0.02	0.01	0.03	<0.001	0.02	0.01	0.02	<0.001	
Cancer	-0.02	-0.03	-0.01	<0.001	0.01	-0.01	0.02	0.38	0.00	-0.01	0.02	0.51	
Diabetes	-0.03	-0.04	-0.02	<0.001	-0.02	-0.03	-0.01	<0.001	-0.02	-0.03	-0.01	<0.001	
Any functional limitation	-0.01	-0.02	-0.01	<0.001	0.07	0.06	0.08	<0.001	0.05	0.05	0.06	<0.001	
Constant	0.23	0.20	0.26	<0.001	0.23	0.21	0.26	<0.001	0.23	0.20	0.25	<0.001	
		Probability of Having Any ED Visit				Probability of Having Any Physician Visit							
Year indicator													
2011		Reference					Reference						
2012	0.00	-0.01	0.01	0.56	0.00	-0.01	0.01	0.36					
2013	-0.01	-0.01	0.00	0.13	0.00	-0.01	0.01	0.45					
2014	-0.01	-0.02	0.00	0.08	0.02	0.01	0.03	<0.001					
Race/ethnicity													
White		Reference					Reference						
African American	0.05	0.04	0.06	<0.001	-0.01	-0.02	0.01	0.24					
Latino	0.00	-0.01	0.02	0.40	-0.03	-0.04	-0.02	<0.001					
Others	-0.01	-0.02	0.01	0.26	-0.03	-0.05	-0.01	<0.001					
Interaction terms													
African American × 2014	0.00	-0.02	0.02	0.97	0.01	-0.02	0.04	0.54					
Latino × 2014	0.00	-0.02	0.01	0.57	0.03	0.00	0.05	0.03					
Other race × 2014	0.00	-0.02	0.03	0.81	0.00	-0.02	0.03	0.76					
Age													
25–34	0.00	-0.01	0.01	0.49	-0.07	-0.09	-0.05	<0.001					
35–44	-0.03	-0.05	-0.02	<0.001	-0.03	-0.04	-0.01	<0.001					
45–54	-0.07	-0.08	-0.06	<0.001	-0.01	-0.03	0.01	0.35					
55–64	-0.09	-0.11	-0.08	<0.001	0.02	0.00	0.03	0.05					
Female	0.03	0.03	0.04	<0.001	0.09	0.08	0.10	<0.001					
Married	0.00	-0.01	0.00	0.67	0.05	0.04	0.06	<0.001					
US citizenship and nativity status													
US born		Reference					Reference						
Non-US citizen and <5 y US residence	-0.06	-0.08	-0.04	<0.001	-0.10	-0.13	-0.06	<0.001					
Non-US citizen and >5 y US residence	-0.05	-0.07	-0.04	<0.001	-0.07	-0.09	-0.06	<0.001					
Naturalized US citizen and <5 y US residence	-0.01	-0.09	0.07	0.85	-0.01	-0.11	0.09	0.87					
Naturalized US citizen and >5 y US residence	-0.02	-0.03	-0.01	<0.001	0.02	0.00	0.03	0.01					
Family income													
< 100% FPL		Reference					Reference						
100%–200% FPL	-0.04	-0.05	-0.03	<0.001	-0.01	-0.02	0.00	0.14					
> 200% FPL	-0.08	-0.09	-0.07	<0.001	0.07	0.05	0.08	<0.001					
Education													
No high school degree		Reference					Reference						
High school degree	-0.02	-0.04	-0.01	<0.001	0.02	0.01	0.04	<0.001					
Some college	-0.02	-0.04	-0.01	<0.001	0.07	0.06	0.09	<0.001					
College degree	-0.04	-0.06	-0.03	<0.001	0.09	0.07	0.10	<0.001					
Advanced degree	-0.05	-0.07	-0.04	<0.001	0.13	0.11	0.14	<0.001					

	Reference	Reference	Reference	Reference	Reference	Reference	
Interview language							
English	-0.06	-0.08	-0.04	<0.001	-0.05	-0.07	<0.001
Spanish	-0.05	-0.10	0.00	<0.05	0.03	-0.02	0.23
Other language							
US census region							
Northeast	-0.01	-0.02	0.00	0.04	-0.03	-0.05	<0.001
Midwest	-0.02	-0.03	-0.01	<0.001	-0.06	-0.07	<0.001
South	-0.03	-0.04	-0.02	<0.001	-0.07	-0.08	<0.001
West							
Self-reported health status							
Poor	-0.11	-0.14	-0.09	<0.001	-0.04	-0.06	<0.001
Fair	-0.21	-0.23	-0.18	<0.001	-0.08	-0.10	<0.001
Good	-0.24	-0.27	-0.22	<0.001	-0.09	-0.11	<0.001
Very good	-0.26	-0.28	-0.24	<0.001	-0.12	-0.14	<0.001
Excellent							
Chronic condition							
Hypertension	0.04	0.03	0.05	<0.001	0.13	0.12	<0.001
Coronary heart disease	0.06	0.03	0.08	<0.001	0.03	0.01	0.01
Heart condition/disease	0.09	0.07	0.10	<0.001	0.04	0.02	<0.001
Asthma	0.06	0.05	0.07	<0.001	0.07	0.06	<0.001
Cancer	0.05	0.04	0.06	<0.001	0.05	0.04	<0.001
Diabetes	0.02	0.01	0.03	<0.001	0.06	0.05	<0.001
Any functional limitation	0.08	0.08	0.09	<0.001	0.07	0.06	<0.001
Constant	0.50	0.47	0.52	<0.001	0.57	0.54	<0.001

Data source: National Health Interview Survey 2011–2014; Estimates are nationally representative and are calculated adjusting for person weights, stratum, and primary sampling unit. CI indicates confidence interval; Coef, coefficient; FPL, federal poverty line.

consistent with the goal of the ACA, to make the insurance affordable.

Our study has some limitations. First, we use year 2014 to indicate the full implementation of the ACA. It is likely that respondents benefited from the ACA during late 2014 due to late enrollment. Second, we only explore health care access and utilization in this study. Future research should examine changes in health care quality, experiences in care, and health outcomes under the ACA. Third, the data only had crude measures of race and ethnicity. Future studies will also be needed to explore health care utilization patterns under the ACA for specific racial and ethnic subgroups. Finally, variation of states' health care reform implementation strategies, such as the Medicaid expansion and Health Insurance Marketplace Exchanges, is likely to have major impacts on health care access and utilization for low-income African Americans and Latinos. It is important for future research to assess across-state variation of these policies to identify more precise changes in race and ethnic disparities.

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