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Racial and Ethnic Disparities Among the Remaining Uninsured Young Adults with Behavioral Health Disorders After the ACA Expansion of Dependent Coverage

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Abstract

Background—In 2010, the Affordable Care Act (ACA) extended eligibility for dependent coverage under private health insurance. Emerging evidence shows that young adults, including those with behavioral health disorders (BHDs), have benefited from this expansion.

Objective—The objective of this study is to explore the population characteristics of the remaining uninsured individuals with and without BHDs and to examine whether the factors that contribute to racial and ethnic disparities in the likelihood of being uninsured were different after the implementation of the ACA provision that extended insurance eligibility for young adults in 2010.

Design—We use cross-sectional data analysis.

Participants—We use a nationally representative dataset of the non-institutionalized civilian population in the Medical Expenditure Panel Survey from 2007 to 2012.

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Compliance with Ethical Standards

Ethical Approval All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards. This research was exempt from the University of Maryland IRB approval because it involved only secondary analysis of data.

Informed Consent Informed consent was obtained from all individual participants included in the study.

Conflict of Interest The authors declare that they have no conflict of interest.

Disclosure Statement Dr. Chen, Ms. Novak, and Ms. Williams-Parry are with the Department of Health Services Administration, School of Public Health, University of Maryland at College Park, College Park, MD (UMCP). Ms. Novak is also an employee of the Agency for Healthcare Research and Quality (AHRQ). Ms. Williams-Parry is also an employee of the National Institutes of Health, National Institute on Minority Health and Health Disparities, and a Health Equity Fellow with the Maryland Center for Health Equity at UMCP.

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Methods—We compare population characteristics of the remaining uninsured individuals ages 19–25, before and after the implementation of the ACA expansion in 2010. We use multivariate logistic regression to estimate the predictors (such as family income and English proficiency) that are associated with the likelihood of having no health insurance. We utilize the Fairlie decomposition method to examine the factors that contribute to racial (non-Latino White (White) vs. non-Latino African-American (African-American)) and ethnic (non-Latino White (White) vs. Latino) differences in the probability of being uninsured. Finally, we apply our analysis among populations with and without BHDs respectively, to examine the differences in the predictors of being uninsured between these two groups.

Results—Among individuals with BHDs, after adjusting for covariates, the estimated probabilities of being uninsured for Whites were 0.21 and 0.16 pre- and post- the ACA expansion, respectively. The predicted probabilities of being uninsured for Latinos were 0.29 and 0.26 and for African-American were 0.19 and 0.17 pre- and post- the ACA expansion, respectively. The ethnic disparity between Whites and Latinos was 19 %. The racial disparity was moderate. Reductions in the uninsured rate of individuals without BHDs were observed as well. However, the ethnicity disparity remained at 19 % and the racial disparity increased by 5 %. Overall, our decomposition model explained 63–89 % of the racial and ethnic disparities in insurance coverage. The major factor associated with the ethnic disparity among those with BHDs was the immigrant status of Latinos, and the major factor associated with racial disparity was geographic location. The major factor associated with the ethnic disparity among those without BHDs included the immigrant status of Latinos, lack of English proficiency, and geographic location, whereas the major factor associated with racial disparity was family income.

Discussion—Our study presents health insurance coverage trends among racial and ethnic minorities after the implementation of insurance expansion, a major provision of the ACA. It is important for policy makers to be aware of differences among the remaining uninsured as they evaluate ways to improve healthcare access and affordability.

Keywords

Affordable Care Act; Expansion of dependent coverage; Disparities; Mental health; Behavioral health disorders

Introduction

The Affordable Care Act (ACA) extended eligibility for dependent coverage under private family health insurance [1]. This provision allowed young adults to remain insured under their parent's private health insurance plans until age 26, the majority of which were employer-sponsored plans [2]. Expanded eligibility for dependent coverage was one of the earliest ACA provisions to be implemented, taking effect on September 23, 2010 [3–8]. Individuals, who remained uninsured after this provision came into force, were more likely to be young adults with parents who lacked employer-sponsored health insurance coverage, who were not eligible for public health insurance [8], and those who chose not to purchase insurance due to the high cost of premiums. Chen et al. [9] suggested that further research should characterize the remaining uninsured young invincible pool and the main reasons for remaining uninsured.

Behavioral health disorders (BHDs) are costly public health concerns. The number of people in the USA with a mental health disorder increased from 31 million in 2002 to 45 million in 2012 [10]. Racial and ethnic minorities face worse access to behavioral health services and private insurance coverage compared to non-Latino Whites (Whites) [11–20]. They are also less likely to be diagnosed, or treated [21]. Compared to Whites, African-Americans and Latinos have less access to behavioral health care and face substantial stigmatization in seeking treatment for BHDs [11–20]. Prior to the implementation of the Affordable Care Act, many young adults lost their health insurance coverage under their parents' plans prior to gaining coverage through employer-sponsored health insurance [2]. The 19–25-year age range is a crucial period during which severe mental illness such as schizophrenia is often first diagnosed [22], and insurance coverage is essential to guarantee access to care.

Research suggests that the ACA is increasing young adults' access to treatment for BHDs nationally. Evidence also suggests that among adults with diagnosed behavioral health conditions, expanding state-based Medicaid insurance was associated with an increased probability of receiving mental health treatment [13]. Furthermore, national trends suggest increased insurance coverage for young adults ages 19–25 [23], modest increases in general hospital psychiatric inpatient admissions [13], and lower rates of emergency department visits for psychiatric conditions in Massachusetts [24]. The increase in the number of individuals insured is especially important, as insurance status is often a key predictor of access to care [23–28]. Not only does having health insurance protect the individual or family from unpredictable or unmanageable out-of-pocket costs [24], but also having insurance is often critical to access BHD treatment in the outpatient setting [26].

The objective of this study is to explore the population characteristics of the remaining uninsured individuals with and without BHDs and examine whether the factors that contribute to racial and ethnic disparities in the likelihood of being uninsured were different post-implementation of the ACA in 2010. In order to develop initiatives to recruit young and healthy adults to enroll in health insurance, policy makers need to have a clear understanding of the uninsured in order to develop tactics to overcome barriers to insurance uptake. Identifying whether racial and ethnic differences in the remaining uninsured continue to persist is also essential to document health care disparities. Finally, it is important for policy makers to be aware of the remaining uninsured as they evaluate ways to improve healthcare access and affordability.

Method

Data

We use the 2007 to 2012 Medical Expenditure Panel Survey (MEPS) dataset [29]. The MEPS is an annual nationally representative survey of the civilian, noninstitutionalized population in the USA, sponsored by the Agency for Healthcare Research and Quality (AHRQ). The MEPS employs an overlapping panel design and collects data from individuals over a 2-year period through a baseline interview and four follow-up interviews. The survey instruments are rigorously tested by the AHRQ. The MEPS Household Component collects detailed information on healthcare utilization and expenditures, health

status, health insurance coverage, and demographic information. It is designed to produce annual estimates of these measures.

In addition to the Household Component that contains the responses of individuals and families, the survey statisticians that administer the MEPS obtain informed consent to interview healthcare providers and obtain insurance records to validate patient-reported data. Interviews with both the patient and the provider, along with insurance claims data, form the basis for the Medical Conditions File. A list of BHDs was obtained from the Medical Conditions File, which are coded using the Clinical Classification Software codes (651–670) developed by AHRQ (Appendix).

Our study focuses on adults ages 19–25, the targeted group for the ACA’s dependent coverage expansion. The period of examination is 2007–2012. We use the 2007–2009 and the 2010–2012 survey years as the pre- and post-implementation periods, respectively. Our dependent variable is the likelihood of being uninsured for the past survey year. We define racial disparities as the difference in health insurance coverage between non-Latino Whites (Whites) and non-Latino African-Americans (African-Americans), and ethnic disparities as the difference between Whites and Latinos. To ensure sufficient sample sizes to calculate meaningful differences, we limit our analysis to non-Latino White, Latino, and African-American groups. Latino and African-American groups are the principal minority groups in the USA. We were not able to study other groups such as Asian-Americans or Native Americans, due to the limited sample sizes of these groups. Our final sample is 8345 young adults ages 19–25, with 1363 having BHDs.

Analysis

We first summarize and compare characteristics of uninsured young adults ages 19–25 in 2007–2009 (before the ACA expansion) and 2010–2012 (after the implementation of the ACA’s dependent coverage expansion) for individuals with and without BHDs. We use multivariable logistic regressions to estimate the likelihood of being uninsured for Whites, non-Latino African-Americans (African-Americans), and Latinos, respectively. Differences in the probability of being uninsured among Asians, American Indians, and persons reporting multiple races are not included in our analysis due to the limited sample size.

The independent (control) variables include those suggested through the extensive literature on the Andersen health behavioral model [30–32], including gender, age, marital status (married or not), English speaking (interviewed in English vs. not interviewed in English), US-born status (vs. foreign-born), family income (under 100 % Federal Poverty Level (FPL), 100–200 % FPL, and above 200 % FPL), education (less than high school vs. high school degree or greater), US Census Regions (Northeast, West, South, and Midwest), and self-reported physical and mental health. These variables have been widely adopted in the literature to examine access to health care [30–33]. We use the Fairlie decomposition [34] to estimate racial and ethnic disparities in being uninsured for young adults ages 19–25 before and after the ACA implementation, by comparing Whites vs. African-Americans, and Whites vs. Latinos. The Fairlie decomposition technique is an extension of Blinder-Oaxaca’s approach for obtaining contributors of group differences in regression-based models. Specifically, to decompose the disparities in insurance coverage between Whites and

Latinos, we first estimate logistic regressions for these two groups separately. We then subtract these two estimated equations and rearrange the differences into two parts: (1) differences due to all of the observed population characteristics (all of the control variables) and (2) differences reflecting unobserved heterogeneity, such as cultural factors. Among the observed characteristics, we further quantify and select the major factors that contribute to the differences in insurance coverage between Whites and Latinos. Similar procedures are applied to estimate the racial disparities (Whites vs. African-American) in health insurance coverage.

The next step in our analysis is to examine whether the reasons associated with insurance coverage disparities differ by the presence of the BHD diagnosis. We do this by sorting our sample populations into two groups—those with and without BHDs. Finally, we adjust all the sampling weights provided by the MEPS to make our results nationally representative. We use Stata 12 MP to conduct the analysis.

Results

Figure 1 shows the probabilities of being uninsured for individuals with and without BHDs by race and ethnicity in 2007–2009 and 2010–2012. Both groups, those with and without BHDs, had reductions in the likelihood of being uninsured after the ACA implementation, though people with a BHD diagnosis had a lower probability of being uninsured in 2007–2009, compared with those without BHDs. However, there are notable differences across race and ethnicity. Latinos were much more likely to be uninsured whether or not they had BHDs, while African-Americans with BHDs were insured at almost the same rates as Whites. A significant difference was present among African-Americans without BHDs compared with Whites, and this difference was statistically significant after 2010. Uninsured rates of Non-Latino White and Latino individuals with BHDs decreased in the post-implementation period; the reduction was statistically significant among Whites ($p < .05$).

Table 1 shows sample characteristics of uninsured individuals ages 19–25 with and without BHDs. Populations with BHDs were more likely to be White, female, US-born, English-speaking, or have low family income compared to the individuals without BHDs. In 2010–2012, individuals with BHDs in the South and West and those with less than a high school education were more likely to be uninsured, compared to 2007–2009.

Table 2 presents the decomposition results for racial and ethnic disparities.

The top panel presents the decrease in rates of being uninsured among individuals with BHDs for all the races and ethnicities in 2010–2012, compared with 2007–2009. The probabilities of being uninsured for non-Latino Whites were 0.21 and 0.16 pre- and post- the ACA expansion, respectively. The predicted probabilities of being uninsured for Latinos were 0.29 and 0.26 pre- and post- the ACA expansion, respectively. After adjusting for covariates, the gap between Whites and Latinos remained at 19 % pre- and post-expansion. Our model can explain 89 % ($=0.08/0.09$) of the difference post-implementation of the ACA and 78 % ($=0.07/0.09$) of the difference before the expansion of the ACA dependent coverage clause. In the pre-ACA implementation period, the major factors associated with

the ethnic differences in the predicted probability of being insured were immigrant status and English proficiency. Individuals with limited English proficiency were more likely to be uninsured. Similarly, immigrants were more likely to be uninsured. Immigrant status remained a major predictor of Latinos' higher probability of being insured post-ACA dependent coverage expansion.

Compared to the difference between Whites and Latinos, the difference in insurance coverage between Whites and African-Americans was relatively small. Among African-Americans with BHDs, we observed a 19 % predicted probability of being uninsured, compared with a 21 % predicted probability for Whites, in the 2007–2009 period. Our model overexplained the difference in 2007–2009, such that if the levels of our control variables such as family income were equal for Whites and African-Americans, the uninsured rates would be the same for both groups. After the implementation of the ACA's dependent coverage provision, we observed a predicted probability of being uninsured among Whites with BHDs of 16 % and among African-Americans of 17 %. Our model showed that the region of residence was a major factor associated with the differences.

Among young adults who did not have BHDs, in 2007–2009, we observed a predicted probability of being uninsured of 23 % for Whites and 41 % for Latinos, a gap of 19 %. After adjusting for the covariates suggested by the Andersen model, our model can explain 84 % ($=0.16/0.19$) of the gap. The major factor contributing to this difference was the immigrant status of the Latino population. In the 2010–2012 period, we observed that the predicted probability of being uninsured was reduced to 18 % for Whites and 37 % for Latinos, resulting in an ongoing gap of 19 %. The model now can explain 63 % ($=0.12/0.19$) of the difference. The major predictors of the explained differences included Latinos foreign-born status, lack of English proficiency, and region of residence. Compared with those who live in the Northeast, individuals who live in the Midwest and West are more likely to be uninsured, and Latinos were less likely to live in the Midwest and more likely to live in the West compared to their White cohort. Hence, we observed the contribution of regional residence in the results.

When comparing drivers of the predicted probability of being uninsured in 2007–2009 for African-Americans and Whites without BHDs, we observed that Whites had a predicted probability of 23 %, compared with African-Americans who had a 24 % predicted probability. After the expansion of the ACA's dependent coverage clause, we saw that the gap between African-Americans and Whites broadened, with Whites having a predicted probability of 18 % of being uninsured, while African-Americans had a predicted probability of 24 %. Our model explained 67 % ($=4\%$ of the 6 %) of the coverage gap, with family income being the major predictor of insurance coverage in the post-implementation period.

Discussion

Overall, our models explained 63–89 % of the racial and ethnic disparities in the insurance coverage of the young adults ages 19–25. Consistent with Clemans-Cope and colleagues [35], our results also showed that racial and ethnic disparities among the uninsured remained

high for young adults. Results also showed that the predictors associated with racial and ethnic disparities were different after 2010.

Among individuals with BHDs, foreign-born Latino status remained a major predictor for not having insurance coverage after the ACA expansion of dependent coverage. Latinos in our sample without a BHD were more likely to remain uninsured in 2010–2012. This finding is consistent with much of the literature on the immigrant paradox [36]. The immigrant paradox refers to the fact that despite being of a lower income status than the general population, immigrants often report better health than non-immigrant counterparts [37–39]. While more research is needed to understand the immigrant paradox, the reasons commonly cited for the immigrant paradox include the issues that legal permanent residents are not eligible for Medicaid during their first 5 years in the USA; immigrants are unfamiliar with the US health care system; immigrants usually are healthier and younger, and they may think they do not need health insurance; and immigrants with BHDs issues may face social stigma and barriers to finding culturally appropriate mental health care.

Among individuals without BHD, racial disparity in uninsured rates was 5 % higher in 2010–2012, compared with 2007–2009, and family income was the main reason for racial disparities. The ACA expansion of dependent coverage targets families with private insurance, and this component allowed eligible young adults to stay on their families' health insurance plans starting in 2010. Yet, this provision did not require that every family with a young adult ages 19–25 purchase health insurance starting in 2010. The literature suggests that populations with low family income are unlikely to have employer-sponsored private insurance. Our findings suggest that low-income African-Americans did not benefit as much from dependent coverage expansion as their White counterparts, since African-Americans were less likely to have employer-sponsored health coverage.

Consistent with the literature on social determinants of health, our findings suggest that place matters in the distribution of the uninsured. Prior research has suggested that individuals most likely to benefit from the expansion of Medicaid were African-Americans and Latinos [40]. After the 2012 Supreme Court ruling that allowed states to choose whether or not to expand Medicaid, 30 states, mainly concentrated in the North, Central, and Western areas of the USA, chose to expand their Medicaid programs, while a majority of Southern states did not [40–43]. States supporting Medicaid expansion for adults 18–64 without children have seen reductions in delayed care and mortality compared with non-expanding states [23]. Many of the states that chose not to expand Medicaid have higher proportions of African-American and Latino residents. Many of these same states that chose not to expand Medicaid also chose not to operate their own State Health Insurance Exchange [40–43]. Our results suggest that the variation of Medicaid expansion by states may have a major impact on the distributions of uninsured populations, and exacerbate racial and ethnic disparities in health care after the full implementation of the ACA in 2014.

Limitations

Our study has several limitations. First, we use the cross-sectional analysis given the available data. We are unable to infer the causal effect of the ACA expansion on insurance coverage. The goal of this study, however, is to conduct a descriptive analysis of uninsured

populations. Secondly, we compare uninsured rates in 2007–2009 vs. 2010–2012. In addition to the ACA expansion, it is likely that other factors such as the Great Recession, and mental health policy initiatives, may have impacted the trends as well. Finally, our inclusion of individuals with behavioral health disorders depends on patient and provider reports. There is the possibility that individuals with BHD chose not to be treated since the literature has documented that African-Americans and Latinos often are less likely to seek treatment for certain types of BHD and that they receive poorer quality care when they seek treatment for BHDs.

Conclusion

This study builds on the research that examines the population characteristics of the remaining uninsured population after the ACA early expansion of dependent coverage [8]. The remaining high uninsured rates suggest that work remains to be done to ensure access to appropriate mental health and substance abuse treatment. We speculate that the availability of safety-net healthcare resources such as providers and facilities that offer behavioral health care in the community can be critical. A culturally competent and integrated behavioral health system targeting healthcare coordination and health promotion might also be effective to improve behavioral health care. Ongoing research is needed to evaluate whether special initiatives to enroll African-Americans and Latinos have improved access to care.

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Appendix

Behavioral health disorders were coded using the Clinical Classification Software codes (651–670):

- Anxiety disorder
- Attention deficit
- Cognitive disorders
- Development disorders
- Disorders usually diagnosed in infancy, childhood, or adolescences

Impulse control
Mood disorders
Personality disorder
Schizophrenia and other psychotic disorders
Alcohol related disorders
Substance related disorder
Suicide and intentional self-inflicted injury
Screening and history of mental health and substance abuse codes
Miscellaneous disorders

Note: Clinical Classification Software, using the ICD-9 codes, was developed by the Agency for Healthcare Research and Quality.

Fig. 1.

Probabilities of being uninsured for adults ages 19–25 years old with and without behavioral health disorders (BHDs) by race and ethnicity in 2007–2009 (pre-ACA’s dependent coverage expansion) and 2010–2012 (post-ACA’s dependent coverage expansion). Notes: Data source: MEPS 2007–2012. Estimates were adjusted by the survey weights; results are nationally representative; definition of Non-Latino White, African-American, and Latino with Non-Latino White as the reference group; *** $p < 0.001$; ** $p < 0.01$; * $p < 0.05$

Table 1

Sample characteristics of uninsured young adults ages 19–25 (unit 100 %)

	Uninsured individuals without BHDs				Uninsured individuals with BHDs			
	2007–2009	Std dev	Mean (%)	Std dev	2010–2012	Mean (%)	Std dev	2010–2012
	(n = 1009)		(n = 998)			(n = 160)		(n = 141)
	Mean (%)	Std dev	Mean (%)	Std dev	Mean (%)	Std dev	Mean (%)	Std dev
Race and ethnicity								
White	0.33	0.47	0.28	0.45 *	0.51	0.50	0.53	0.50
African-American	0.17	0.38	0.22	0.41 *	0.12	0.32	0.12	0.33
Latino	0.45	0.50	0.45	0.50	0.33	0.47	0.32	0.47
Gender								
Male	0.55	0.50	0.54	0.50	0.49	0.50	0.47	0.50
Female	0.45	0.50	0.46	0.50	0.51	0.50	0.53	0.50
Marital status								
Married	0.12	0.33	0.10	0.30	0.09	0.29	0.09	0.28
Not married	0.88	0.33	0.90	0.30	0.91	0.29	0.91	0.28
Immigrant status								
US born	0.69	0.46	0.75	0.43 **	0.80	0.40	0.84	0.36
Foreign born	0.31	0.46	0.25	0.43	0.20	0.40	0.16	0.36
Interviewed language								
English	0.72	0.45	0.72	0.45	0.79	0.41	0.86	0.35
Non-English	0.28	0.45	0.28	0.45	0.21	0.59	0.14	0.65
Education								
No high school degree	0.78	0.42	0.73	0.44 *	0.81	0.39	0.69	0.46 *
High school degree	0.22	0.58	0.27	0.56	0.29	0.61	0.31	0.54
Family income								
<100 % FPL	0.33	0.47	0.31	0.46	0.46	0.50	0.38	0.49
100–200 % FPL	0.32	0.47	0.36	0.48	0.24	0.43	0.30	0.46
>200 % FPL	0.34	0.47	0.33	0.47	0.29	0.46	0.32	0.47

	Uninsured individuals without BHDs				Uninsured individuals with BHDs			
	2007–2009		2010–2012		2007–2009		2010–2012	
	Mean (%)	Std dev	Mean (%)	Std dev	Mean (%)	Std dev	Mean (%)	Std dev
Self-reported health								
Poor/fair	0.11	0.31	0.09	0.29	0.21	0.41	0.13	0.34
Good	0.30	0.46	0.28	0.45	0.30	0.46	0.40	0.49
Very good/excellent	0.59	0.49	0.63	0.48	0.49	0.50	0.46	0.50
Self-reported mental health								
Poor/fair	0.04	0.19	0.04	0.19	0.26	0.44	0.22	0.42
Good	0.25	0.43	0.23	0.42	0.31	0.46	0.28	0.45
Very good/excellent	0.71	0.45	0.73	0.44	0.43	0.50	0.50	0.50
Urban	0.85	0.36	0.86	0.34	0.83	0.38	0.89	0.32
Rural	0.15	0.36	0.14	0.34	0.17	0.38	0.11	0.32
US Census Division								
Northeast	0.10	0.30	0.10	0.30	0.09	0.29	0.11	0.31
Midwest	0.18	0.38	0.19	0.40	0.28	0.45	0.22	0.42
South	0.44	0.50	0.43	0.50	0.33	0.47	0.50	0.50**
West	0.29	0.45	0.27	0.45	0.30	0.46	0.18	0.38*

Reference group is the 2007–2009 cohort. Our total sample size is $n = 8345$ young adults ages 19–25. Table 1 presents the characteristics of $n = 2308$ who were uninsured among this cohort

White non-Latino White, African-American non-Latino African-American

* $p < 0.05$;

** $p < 0.01$;

*** $p < 0.001$

Predicted values and major predictors of being uninsured using the estimates of the decomposition analysis

Table 2

Individuals with behavioral health disorders		2007–2009			
2010–2012					
Predicted probability of being uninsured					
White	0.16	White	0.16	White	0.21
African-American	0.17	Latino	0.26	African-American	0.19
Difference	0.01	Difference	0.09	Difference	–0.02
Explained by the multivariable model	0.01	Explained	0.08	Explained	0.02
Major predictors (% of the explained differences)					
Midwest	–	US born	+	Family income	+
South	+				English
Individuals without behavioral health disorders					
2010–2012		2007–2009			
Predicted probability of being uninsured					
White	0.18	White	0.18	White	0.23
African-American	0.24	Latino	0.37	African-American	0.24
Difference	0.06	Difference	0.19	Difference	0.01
Explained by the multivariable model	0.04	Explained	0.12	Explained	0.06
Major predictors (% of the explained differences)					
Family income	+	US born	+	Family income	+
		English	+	US born	+
		Midwest	–		
		West	+		