Disability-Related Disparities in Access to Health Care Before (2008–2010) and After (2015–2017) the Affordable Care Act

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Objectives. To explore the effect of the Affordable Care Act (ACA) on disparities in access to health care based on disability status, as well as age, income, race, and ethnicity.

Methods. In this study, I used logistic regression to analyze nationally representative data from 128 000 respondents to the US National Health Interview Survey from 2008 to 2010 and 2015 to 2017. Outcome variables were uninsurance over the previous 12 months, delayed or forgone health care for reasons of cost, and having a regular provider at a doctor's office or health clinic.

Results. Over the period when the ACA was implemented, large existing disparities in access to health care were reduced for people with certain types of disabilities, young adults aged 19 to 25 years, and low-income families.

Conclusions. The ACA improved overall access to health care and reduced some disparities, but substantial disparities persist. Disability status remains associated with much greater risk of delayed or forgone care, and mental health disability is associated with greater likelihood of uninsurance.

Public Health Implications. The ACA partially achieved its goals and must not be weakened or rolled back. Further policy efforts are needed to address the remaining disparities. (*Am J Public Health.* Published online ahead of print May 16, 2019: e1–e7. doi:10.2105/AJPH.2019.305056)

People with disabilities comprise a minority group qualifying as a protected class under the Americans with Disabilities Act (ADA) and other federal and state laws, making disability-related disparities in access to health care a concern for public health.[1] A segment of the population with a high need for health care, they face substantial barriers to access[2] and have been called "canaries in a coal mine"[3] in experiencing changes in the health care system. Among working-age adults with disabilities who receive cash benefits based on work limitations, most also gain eligibility for Medicare or Medicaid. For those without a disability-related pathway to public coverage, however, multiple barriers have long made it difficult to obtain comprehensive, affordable private coverage: access to employment-based group coverage is limited because of low workforce participation[4] and employment in low-skill jobs[5] not offering benefits. Low income levels[4] render individually purchased insurance unaffordable for many. And people with disabilities are rejected, charged more, or offered limited coverage because of "preexisting" health problems and impairments that are often the locus of disability or occur as secondary conditions related to having a disability.[6]

A principal goal of the Patient Protection and Affordable Care Act of 2010 (ACA; Pub L No. 111-148) was to improve access to health care through both expanded public health coverage and improved availability and affordability of private insurance. Major provisions of the ACA aimed to reduce high uninsurance rates among specific populations including (1) the youngest adults, through extending the age for coverage under their parents' private insurance policies; (2) lower-income families, through raising income limits for Medicaid coverage and subsidizing private coverage; and (3) people whose preexisting health conditions had made it difficult to obtain affordable, comprehensive private insurance coverage, through prohibitions against denying coverage, charging higher premiums, or limiting coverage for people with such conditions.

In this study, I addressed the impact of the ACA on working-age adults with disabilities, with a particular focus on those not previously eligible for public coverage, who would likely benefit most from greater affordability and availability of both private and public coverage not subject to preexisting condition exclusions. Having a disability, defined according to limitations in activity or functioning related to a health condition or impairment, is conceptually distinct from having a preexisting condition, which could be anything for which one had previously sought treatment, but there is a substantial overlap between the affected populations.

Although evidence points to reduced uninsurance among people with disabilities following the ACA,[7] a differential impact based on disability status has not been investigated,[8] except for 1 study that found similar gains in health coverage for young adults with and without disabilities.[9] Similarly, although researchers found a substantial effect on people with chronic health

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conditions, they either did not explicitly compare people with and without such conditions[10–12] or, in 1 case, did not find a significant difference between those with and without.[8]

METHODS

The National Health Interview Survey (NHIS) is a nationally representative survey of US households conducted annually by the Census Bureau for the National Center for Health Statistics (NCHS).[13] Each year's sample comprises approximately 95 000 individuals from about 37 000 households. Interviews are conducted in person, and feature questions on health conditions, activity limitation, health coverage, health care utilization, and other topics. Following a household interview, a "sample adult" from each household is selected for detailed follow-up questions. This analysis, based on 6 years of NHIS data, includes information obtained from sample adults in both the household and sample adult interviews. In this analysis, I used 3 years of pooled data for both the pre-ACA period (2008–2010) and the post-ACA period (2015–2017), with a total sample size of 128 000 respondents. I excluded the years in between from the analysis because of the gradual roll-out of ACA provisions between 2010 and 2014; the full effect on respondents' previous 12-month health care experiences and insurance status would not be reflected until 2015.

Measures

I used 3 dichotomous outcome variables to measure different aspects of access to health care: uninsurance, delayed or forgone care, and regular provider.

Having stable health coverage is crucial to accessing needed health care. A measure of uninsurance, whether at the time of the interview or at any time during the previous 12 months, captures the absence of stable coverage. Respondents are classified as insured if they have private health insurance, whether obtained through an employer, the ACA Health Insurance Marketplace ("exchanges"), or purchased directly from an insurer, but excluding single-service plans that cover, for example, a particular illness or type of treatment. Also included are those covered under Medicare, Medicaid, military or veterans' coverage, or some state- or other government-sponsored program; coverage under the Indian Health Service alone is excluded in accord with NCHS practice.[14] People who are insured at the time of interview are asked whether they went without coverage at any time during the previous 12 months. In this analysis, I classified respondents who were uninsured on the day of the interview or during the previous 12 months as experiencing uninsurance over a 12-month period.

Many people postpone or go without needed health care because of cost. Two questions address this issue. One captures whether the person delayed obtaining care "because of worry about the cost," and the other addresses whether the person needed care but did not get it because they "couldn't afford it." In this study, I classified people responding affirmatively to either or both questions as experiencing delayed or forgone health care.

A final measure of access to care relates to having a regular health care provider, someone who is likely to be familiar with the person's medical history and does not start from a blank slate at each encounter. Having a regular provider also means that the person has somewhere, other than a hospital emergency department, to go for both urgent care needs and routine screenings. The NHIS asks first about whether there is a place where the person usually goes "when [they] are sick or need advice about [their] health." A second question asks about a usual place for "routine or preventive care, such as a physical examination or checkup." Follow-up questions ascertain whether the place is a clinic, doctor's office, hospital emergency room, hospital outpatient department, or "some other place." For this analysis, I considered individuals to have a "regular provider" if they had a doctor's office or clinic that they usually go to for both urgent and routine care.

Independent variables used in the models included the following sociodemographic factors: age, gender, race/ethnicity, family income, and disability status. I used 5 age categories, as indicated in Table 1; the first category, age 19 to 25 years, was chosen because this is the age group affected by the ACA provisions allowing parents to keep their children on their private health plans through age 25 years. Gender was categorized into male or female. Race/ethnicity comprised 5 categories, using a mutually exclusive measure based on stated Hispanic/Latino ethnicity and racial identity (or "primary race," if multiple racial categories are chosen). A small number of "other" responses, including people selecting multiple races but not naming a "primary," were included in the reference category of non-Hispanic White/other. There were 4 categories for family income, calculated as a proportion of the federal poverty level (FPL) established annually by the US Department of Health and Human Services.

Disability status can also be considered a sociodemographic factor. In a method consistent with the ADA definition of disability, the NHIS identifies respondents with limitations in activities that are caused by "a physical, mental, or emotional problem." Adult household members are asked about specific activities including self-care, other routine daily activities, working, mobility, and cognition. I classified respondents endorsing any of those questions, or a catch-all question on limitations "in any way in any activities," as having a disability. Further questions ascertain the condition that causes the disability.

A separate part of the questionnaire asks about frequency of various mental health symptoms[15]; respondents identifying any such symptoms are further asked to what extent those feelings interfere with activities. For this analysis, I classified people responding "a lot" as having disabilities even if they did not endorse the general activity limitation questions.

This analysis used 4 hierarchical categories of disability. Two categories included people whose highly activity-limiting disabilities might qualify them for public health coverage. The category "needs ADL help" comprised people needing help in self-care activities, the activities of daily living (ADL) such as dressing, bathing, and eating. Members of this subgroup are considered to have more significant disabilities and can often become eligible for Medicaid based on meeting an "institutional level of care" standard, meaning that extensive long-term service and support needs qualify them for institutional placement, should they choose that option.

TABLE 1—Sociodemographic Characteristics of US Adults and 12-Month Uninsurance Rate, 2008–2017

	Distribution 2008–2017, %	Uninsured Pre-ACA, % (SE)	Uninsured Post-ACA, % (SE)	*P* Pre- vs Post-ACA
All working-age adults	100.0	25.6 (0.3)	17.5 (0.3)	< .001
Age group, y				
19–25	15.7	40.7 (0.8)	20.9 (0.7)	< .001
26–34	19.9	32.8 (0.6)	23.8 (0.5)	< .001
35–44	21.3	24.9 (0.5)	19.2 (0.5)	< .001
45–54	22.9	19.5 (0.4)	14.6 (0.4)	< .001
55–64	20.2	14.4 (0.4)	10.4 (0.3)	< .001
Gender				
Male	49.1	27.9 (0.4)	18.9 (0.4)	< .001
Female	50.9	23.4 (0.3)	16.2 (0.3)	< .001
Race/ethnicity				
Non-Hispanic White/other	64.9	20.4 (0.3)	13.3 (0.3)	< .001
Non-Hispanic African American	12.5	30.1 (0.6)	20.2 (0.7)	< .001
Non-Hispanic AIAN	0.7	41.1 (3.7)	33.1 (2.8)	.06
Non-Hispanic Asian	5.6	19.0 (0.8)	11.3 (0.6)	< .001
Latino/Hispanic	16.3	46.9 (0.8)	32.1 (0.8)	< .001
Family income[a]				
< FPL	13.9	47.7 (0.9)	31.7 (0.8)	< .001
1–1.99 × FPL	17.1	47.3 (0.7)	31.5 (0.6)	< .001
2–3.99 × FPL	28.4	26.6 (0.4)	19.2 (0.4)	< .001
≥ 4 × FPL	40.5	9.0 (0.3)	6.5 (0.2)	< .001
Disability status				
Needs ADL help	1.3	14.0 (1.6)	9.9 (1.2)	.049
Disability prevents work	6.0	19.4 (0.8)	13.6 (0.7)	< .001
Other mental health disability	2.6	40.8 (1.4)	27.2 (1.5)	< .001
Other physical or cognitive disability	3.7	26.2 (1.1)	16.4 (0.9)	< .001
No disability	86.3	25.7 (0.3)	17.6 (0.3)	< .001

Note. ACA = Affordable Care Act; ADL = activities of daily living; AIAN = American Indian/Alaska Native; FPL = federal poverty level.

[a]FPL defined annually by US Department of Health and Human Services.

Among people with disabilities not needing ADL help, a second subgroup—"disability prevents work"—is also potentially eligible for public coverage because of disability status, namely people who report that "a physical, mental, or emotional problem NOW keep[s] [them] from working at a job or business." Perceived inability to work is the cornerstone of eligibility for both Supplemental Security Income and Social Security Disability Insurance; the former typically conveys eligibility for Medicaid and the latter for Medicare.

Two categories are for the remainder of the disability population, who lack disability-based access to public coverage. "Other mental health disability" is composed of people not meeting the previously described criteria who either identify a mental health condition as causing activity limitation or who indicate that mental health interferes with their lives or activities "a lot." Previous studies have reported that people with mental health disabilities face particular barriers to accessing health care.[16–18] The category "other physical or cognitive disability" contains the remainder of the disability population.

Data Analysis

All analyses took into account the complex design of the NHIS, using sampling weights and information about sampling design contained in the strata and primary sampling unit variables. I obtained standard errors for proportions by using Taylor series linearization and performed the adjusted Wald test to calculate *P* values for differences in the proportion uninsured across time periods.

I estimated 3 logistic regression models for each of the outcome variables. First, I estimated a pre-ACA model with data for 2008 to 2010, with all predictors as independent variables. Adjusted odds ratios (AORs) from these models, along with their 95% confidence intervals (CIs), are shown in the first data column of Tables 2, 3, and 4. Next, I estimated a comparison model including data from both the pre- and post-ACA periods. In addition to the sociodemographic and disability independent variables, I included a dummy variable to distinguish between the 2 time periods, along with interaction terms between that variable and the sociodemographic and disability variables. The AORs for the main effect of the period variable and the interactions between period and the other independent variables are shown in the second data column of Tables 2, 3, and 4. (The AORs for the main effect of the sociodemographic and disability variables are identical to those from the first model.) Finally, I estimated a post-ACA model identical to the pre-ACA model except using data from 2015 to 2017. The AORs are shown in the third data column of Tables 2, 3, and 4.

RESULTS

Table 1 shows the distribution of the working-age population by sociodemographic characteristics and disability status. Disability affected 13.7% of working-age adults: 1.3% needed help with ADL, an additional 6.0% reported a disability that kept them from working, a further 2.6% had a mental health disability, and a remaining 3.7% had a physical or cognitive disability.

Uninsurance Over a 12-Month Period

Rates of 12-month uninsurance are also shown in Table 1, for the pre- and post-ACA periods. Across nearly all population groups, declines in uninsurance rates were highly statistically significant. Before the ACA, especially high uninsurance rates were seen

TABLE 2—Adjusted Odds Ratios for Factors Predicting Uninsurance During the Previous 12 Months Among US Adults Aged 19–64 Years, 2008–2010, 2015–2017, and Change Between Those Periods

	Pre-ACA, AOR (95% CI)	Change Between Pre- and Post-ACA, AOR (95% CI)	Post-ACA, AOR (95% CI)
Age group, y			
19–25	2.33 (2.09, 2.60)	0.57 (0.49, 0.66)	1.32 (1.18, 1.48)
26–34	1.96 (1.79, 2.14)	1.02 (0.90, 1.16)	2.01 (1.83, 2.19)
35–44	1.48 (1.35, 1.62)	1.10 (0.96, 1.25)	1.62 (1.47, 1.78)
45–54	1.31 (1.20, 1.42)	1.03 (0.90, 1.17)	1.34 (1.22, 1.48)
55–64 (Ref)	1	1	1
Gender			
Male	1.40 (1.32, 1.48)	0.95 (0.88, 1.02)	1.33 (1.25, 1.40)
Female (Ref)	1	1	1
Race/ethnicity			
Non-Hispanic White/other (Ref)	1	1	1
Non-Hispanic African American	1.16 (1.08, 1.25)	0.99 (0.88, 1.12)	1.15 (1.05, 1.26)
Non-Hispanic AIAN	2.03 (1.48, 2.80)	1.07 (0.71, 1.60)	2.17 (1.63, 2.89)
Non-Hispanic Asian	0.79 (0.70, 0.90)	0.91 (0.76, 1.11)	0.73 (0.63, 0.84)
Latino/Hispanic	2.07 (1.92, 2.24)	0.93 (0.83, 1.05)	1.94 (1.77, 2.12)
Family income[a]			
< FPL	8.09 (7.25, 9.04)	0.81 (0.70, 0.95)	6.59 (5.92, 7.33)
1–1.99 × FPL	7.92 (7.28, 8.62)	0.77 (0.67, 0.87)	6.06 (5.52, 6.66)
2–3.99 × FPL	3.27 (3.04, 3.51)	0.96 (0.85, 1.08)	3.13 (2.86, 3.42)
≥ 4 × FPL (Ref)	1	1	1
Disability status			
Needs ADL help	0.30 (0.22, 0.41)	1.11 (0.73, 1.69)	0.34 (0.26, 0.44)
Disability prevents work	0.46 (0.41, 0.52)	1.06 (0.89, 1.28)	0.49 (0.43, 0.56)
Other mental health disability	1.40 (1.21, 1.62)	0.91 (0.73, 1.13)	1.27 (1.08, 1.50)
Other physical or cognitive disability	1.04 (0.91, 1.19)	0.78 (0.64, 0.95)	0.81 (0.70, 0.94)
No disability (Ref)	1	1	1
Time period			
Pre-ACA (Ref)		1	
Post-ACA (2015–2017)		0.75 (0.65, 0.86)	

Note. ACA = Affordable Care Act; ADL = activities of daily living; AIAN = American Indian/Alaska Native; AOR = adjusted odds ratio; CI = confidence interval; FPL = federal poverty level.

[a]FPL defined annually by US Department of Health and Human Services.

among people with incomes below twice the FPL and among Latinos, American Indians and Alaska Natives (AIANs), people with other mental health disabilities, and those aged 19 to 25 years. By contrast, the lowest rates of uninsurance were seen for the highest income category, people needing help with ADLs, and in the highest age group.

Following the ACA, the youngest working-age adults no longer had especially high uninsurance rates. While Latinos and people under twice the FPL all achieved gains, these groups continued to experience high uninsurance rates, as did the AIAN group.

Results of the logistic regression models for uninsurance are shown in Table 2. For the pre-ACA period, each of the sociodemographic and disability variables had a statistically significant effect on the likelihood of uninsurance, when I controlled for other factors. Family income below twice the FPL had by far the largest effect (AOR = 8.09 and 7.92 for the 2 income categories; $P < .001$). Family income between twice and 4 times the FPL, minority status as AIAN or Latino, and age younger than 26 years all had AORs greater than 2. Other significant factors increasing uninsurance included age younger than 55 years (AOR between 1.3 and 2.0), male gender (AOR = 1.40), other mental health disability (AOR = 1.40), and African American race (AOR = 1.16). By contrast, needing ADL help and having a disability that prevents work both substantially reduced uninsurance (AOR < 0.5).

Table 2 contains AORs from the model comparing the pre- and post-ACA periods. These are the exponentiated coefficients of the interaction terms between a time period dummy variable and each of the sociodemographic and disability variables. The main effect of the period variable is also shown and indicates a reduction (AOR = 0.75; $P < .001$) in the likelihood of uninsurance for the reference population (i.e., for nondisabled, non-Latino White men aged 55–64 years with incomes in the highest category). Young adults aged between 19 and 25 years saw much larger gains than their older counterparts (AOR = 0.57; $P < .001$); people in or near the FPL (AOR = 0.81 and 0.77, respectively; $P = .009$ and $P < .001$) had greater improvements than the reference income group; and people with other physical or cognitive disabilities saw gains (AOR = 0.78; $P = .01$) relative to their nondisabled counterparts. There were no significant changes across race/ethnicity or gender categories.

After the ACA, despite the substantial improvements, lower family income remained highly related to increased uninsurance (AOR > 6.00 for income below twice FPL and AOR = 3.13 for between twice and 4 times FPL, all $P < .001$; Table 2). Age remained an important predictor, but now it was the second age group (26–34 years) with the highest AOR (2.01; $P < .001$). Predictors for the first 3 disability categories remained largely unaffected, but other physical or cognitive disability now predicted lower likelihood of uninsurance relative to nondisabled adults. Gender and race/ethnicity AORs were nearly identical to those before the ACA.

Delayed or Forgone Health Care

Table 3 contains a similar set of statistics from models of delayed or forgone care because of cost concerns. Before ACA, having a family income below 4 times FPL greatly

TABLE 3—Adjusted Odds Ratios for Factors Predicting Delayed or Forgone Care Among US Adults Aged 19–64 Years, 2008–2010, 2015–2017, and Change Between Those Periods

	Pre-ACA, AOR (95% CI)	Change Between Pre- and Post-ACA, AOR (95% CI)	Post-ACA, AOR (95% CI)
Age group, y			
19–25	0.96 (0.87, 1.08)	0.83 (0.71, 0.96)	0.80 (0.71, 0.89)
26–34	1.16 (1.05, 1.27)	0.89 (0.78, 1.02)	1.03 (0.93, 1.14)
35–44	1.10 (1.01, 1.20)	0.95 (0.84, 1.08)	1.05 (0.96, 1.15)
45–54	1.19 (1.09, 1.31)	1.00 (0.88, 1.14)	1.20 (1.10, 1.31)
55–64 (Ref)	1	1	1
Gender			
Male	0.87 (0.82, 0.92)	0.97 (0.89, 1.06)	0.84 (0.79, 0.89)
Female (Ref)	1	1	1
Race/ethnicity			
Non-Hispanic White/other (Ref)	1	1	1
Non-Hispanic African American	0.88 (0.81, 0.96)	0.95 (0.84, 1.08)	0.84 (0.76, 0.93)
Non-Hispanic AIAN	0.90 (0.61, 1.33)	0.91 (0.55, 1.52)	0.82 (0.59, 1.12)
Non-Hispanic Asian	0.49 (0.43, 0.58)	1.05 (0.82, 1.33)	0.52 (0.43, 0.63)
Latino/Hispanic	0.79 (0.73, 0.85)	1.08 (0.96, 1.22)	0.85 (0.77, 0.94)
Family income[a]			
< FPL	3.64 (3.27, 4.05)	0.94 (0.80, 1.10)	3.42 (3.06, 3.83)
1–1.99 × FPL	4.27 (3.88, 4.71)	0.87 (0.76, 1.003)	3.72 (3.36, 4.13)
2–3.99 × FPL	2.57 (2.35, 2.80)	1.02 (0.90, 1.16)	2.62 (2.39, 2.87)
≥ 4 × FPL (Ref)	1	1	1
Disability status			
Needs ADL help	1.64 (1.32, 2.05)	1.09 (0.81, 1.46)	1.78 (1.47, 2.16)
Disability prevents work	2.08 (1.87, 2.32)	1.03 (0.88, 1.20)	2.14 (1.92, 2.38)
Other mental health disability	3.42 (3.00, 3.90)	0.89 (0.73, 1.10)	3.05 (2.62, 3.55)
Other physical or cognitive disability	2.53 (2.24, 2.86)	0.91 (0.77, 1.09)	2.31 (2.03, 2.64)
No disability (Ref)	1	1	1
Time period			
Pre-ACA (Ref)		1	
Post-ACA (2015–2017)		0.74 (0.65, 0.84)	

Note. ACA = Affordable Care Act; ADL = activities of daily living; AIAN = American Indian/Alaska Native; AOR = adjusted odds ratio; CI = confidence interval; FPL = federal poverty level.

[a]FPL defined annually by US Department of Health and Human Services.

increased the likelihood of delayed or forgone care (AOR > 2.5 for all 3 income groups; $P < .001$) relative to incomes above that level. Compared with people without disabilities, all disability categories were at greatly increased risk, especially other mental health disability (AOR = 3.42; $P < .001$) and other physical or cognitive disability (AOR = 2.53; $P < .001$). Being male or having racial/ethnic minority status was associated with a lower likelihood of delayed or forgone care. Younger ages were generally associated with greater risk, except the youngest age group, which was not significantly different from the oldest.

There was a large decline between the pre- and post-ACA periods in delayed or forgone care for the reference population (AOR = 0.74; $P < .001$). Among sociodemographic and disability predictors, the only change significantly different from reference was for young adults aged 19 to 25 years (AOR = 0.83; $P = .015$). Following the ACA, all predictors except age group had approximately the same effects as before the ACA. The group of young adults aged 19 to 25 years was now significantly associated with lower risk than the oldest age group (AOR = 0.80; $P < .001$) and 2 of the other age categories had lost significance.

Having a Regular Health Care Provider

In the pre-ACA period, the likelihood of having a regular health care provider at a doctor's office or health clinic (Table 4) was highly dependent on family income (AOR = 0.26 and 0.29 for the 2 lowest categories; $P < .001$), age (AOR = 0.35 and 0.38 for the youngest age groups; $P < .001$), gender (male AOR = 0.43; $P < .001$), and disability status, the effect of which varied by category: ADL help and work limitation were highly associated with greater likelihood of a regular provider (AOR = 3.04 and 1.82, respectively; $P < .001$) compared with people without disabilities, other physical or cognitive disability was modestly associated with greater likelihood (AOR = 1.13; $P = .043$), and mental health disability was associated with reduced likelihood (AOR = 0.76; $P = .001$). Latino ethnicity (AOR = 0.62; $P < .001$) and African American race (AOR = 0.88; $P = .001$) were also significant.

Substantial improvements between the pre- and post-ACA periods were seen for the 3 lower income categories relative to the highest. Other physical or cognitive disability also showed an improvement, and male gender and Latino ethnicity were also significant. Post-ACA predictors followed the same pattern as the pre-ACA predictors, except that African American race and other mental health disability were no longer significant, and the other physical or cognitive disability category had grown substantially in magnitude (AOR = 1.42; $P < .001$).

DISCUSSION

Statistical modeling of national survey data revealed substantial disparities in access to health care before the passage of the ACA. Disparities by family income were the most pronounced, and age-related and racial/ethnic disparities were also readily apparent. Disparities by disability status depended on the extent and type of disability: having a highly activity-limiting disability was associated with greater access in terms of lower uninsurance and greater likelihood of having a regular provider, compared with people without disabilities, but also with increased likelihood of delayed or forgone care. The

TABLE 4—Adjusted Odds Ratios for Factors Predicting Having a Regular Provider in a Doctor's Office or Clinic Among US Adults Aged 19–64 Years, 2008–2010, 2015–2017, and Change Between Those Periods

	Pre-ACA, AOR (95% CI)	Change Between Pre- and Post-ACA, AOR (95% CI)	Post-ACA, AOR (95% CI)
Age group, y			
19–25	0.35 (0.31, 0.38)	1.09 (0.95, 1.25)	0.38 (0.34, 0.42)
26–34	0.38 (0.35, 0.41)	0.91 (0.81, 1.03)	0.35 (0.32, 0.38)
35–44	0.59 (0.54, 0.65)	1.00 (0.88, 1.14)	0.59 (0.54, 0.66)
45–54	0.74 (0.68, 0.80)	1.01 (0.89, 1.16)	0.75 (0.68, 0.82)
55–64 (Ref)	1	1	1
Gender			
Male	0.43 (0.40, 0.45)	1.14 (1.06, 1.23)	0.49 (0.46, 0.51)
Female (Ref)	1	1	1
Race/ethnicity			
Non-Hispanic White/other (Ref)	1	1	1
Non-Hispanic African American	0.88 (0.82, 0.95)	1.09 (0.97, 1.22)	0.96 (0.88, 1.04)
Non-Hispanic AIAN	0.71 (0.49, 1.03)	1.38 (0.85, 2.24)	0.98 (0.71, 1.34)
Non-Hispanic Asian	0.90 (0.80, 1.01)	1.01 (0.85, 1.19)	0.91 (0.81, 1.03)
Latino/Hispanic	0.62 (0.58, 0.67)	1.17 (1.05, 1.30)	0.72 (0.67, 0.78)
Family income[a]			
< FPL	0.26 (0.23, 0.28)	1.38 (1.20, 1.58)	0.35 (0.32, 0.39)
1–1.99 × FPL	0.29 (0.27, 0.31)	1.39 (1.23, 1.57)	0.40 (0.37, 0.44)
2–3.99 × FPL	0.52 (0.48, 0.56)	1.14 (1.03, 1.26)	0.59 (0.54, 0.63)
≥ 4 × FPL (Ref)	1	1	1
Disability status			
Needs ADL help	3.04 (2.26, 4.10)	0.75 (0.50, 1.13)	2.29 (1.73, 3.03)
Disability prevents work	1.82 (1.59, 2.07)	0.97 (0.81, 1.17)	1.76 (1.55, 2.01)
Other mental health disability	0.76 (0.66, 0.89)	1.14 (0.92, 1.43)	0.87 (0.74, 1.03)
Other physical/cognitive disability	1.13 (1.004, 1.28)	1.25 (1.03, 1.52)	1.42 (1.22, 1.66)
No disability (Ref)	1	1	1
Time period			
Pre-ACA (Ref)		1	
Post-ACA (2015–2017)		0.93 (0.81, 1.07)	

Note. ACA = Affordable Care Act; ADL = activities of daily living; AIAN = American Indian/Alaska Native; AOR = adjusted odds ratio; CI = confidence interval; FPL = federal poverty level.

[a]FPL defined annually by US Department of Health and Human Services.

other physical or cognitive disability category had, on the one hand, greater access than the nondisabled in terms of having a regular provider, but also greater delayed or forgone care. The other mental health disability category was associated with the most severe access barriers among disability groups: this population has substantially greater risk of uninsurance, very much greater likelihood of delayed or forgone care, and less likelihood of having a regular provider compared with the nondisabled group.

Despite indications of across-the-board increases in health coverage and reductions in delayed or forgone care, the impact of the ACA in terms of reducing disparities is most notable for income and age disparities, with some improvements in disability-related disparities. Among disability subpopulations, only the other physical or cognitive disability category saw improvements relative to the nondisabled population, with both substantially reduced uninsurance and increased likelihood of having a regular provider. Although the reader may detect hints of improvement for people with mental health disabilities, statistical significance was not approached for any measure. For young adults aged between 19 and 25 years, the likelihood of uninsurance was dramatically reduced and the risk of delayed or forgone care was substantially lowered, confirming findings from previous studies.[19,20] The lower income categories were associated with large reductions in uninsurance and increases in having a regular provider, again consistent with previous studies.[19,21–23]

Following the implementation of the ACA, disparities based on disability status persisted. Other mental health disability remained associated with a higher risk of uninsurance and a much higher likelihood of delayed or forgone care. Increased risk of delayed or forgone care also remained apparent for the other disability groups. But by far the largest disparity remaining in the post-ACA period, according to this analysis, was determined by family income: people with incomes below twice FPL remained far more likely to be uninsured than those with incomes above 4 times FPL, and they faced far greater likelihood of going without needed care and not having a regular provider. Improvements seen among the lower income groups were not nearly sufficient to erase these disparities. Disparities by age also remained, despite substantial progress for the youngest group: those aged 26 to 44 years continued to have higher uninsurance than those aged 55 to 64 years, and all younger age groups remained less likely to have regular providers. Large racial/ethnic disparities remained in uninsurance and, for Latinos, in having a regular provider.

Limitations

The cross-sectional nature of the data used in this study poses a potential limitation in interpretation of the findings. Although disability is typically long-lasting, its presence and extent are subject to change over time, and evidence indicates that these can be influenced by improved access to health care.[24,25] Thus, it is possible that newly acquired health coverage might have moved some population members out of the disability population before the interview, potentially affecting the observed association between disability status and health care access.

Public Health Implications

The ACA improved access to health care for the population generally, including for

people with disabilities, with across-the-board reductions in uninsurance and delayed or forgone care. It also reduced disparities based on income, age, and disability status, but substantial disparities based on these and other factors remain. The ACA can thus be regarded as an imperfect success. Gains in coverage for some segments of the disability population can be attributed to provisions prohibiting coverage denial or restriction based on preexisting conditions, promoting greater affordability, and increasing the availability of public coverage. These reforms must not be rolled back or weakened.

Public policy initiatives should address the remaining disability-related disparities: higher uninsurance among people with mental health disabilities and, across the disability population, much greater delayed or forgone care. Large gaps remaining with respect to income could be further reduced if more states were to expand Medicaid coverage and subsidized private policies were to be further promoted and more widely purchased. Troubling racial/ethnic disparities persist and must also be addressed in future policy. AJPH

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CONFLICTS OF INTEREST

The author has no conflicts of interest.

HUMAN PARTICIPANT PROTECTION

This secondary data analysis was deemed exempt from institutional review.

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