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Authors

Bustamante, Arturo Vargas
McKenna, Ryan M
Viana, Joseph
et al.

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Access-To-Care Differences Between Mexican-Heritage And Other Latinos In California After The Affordable Care Act

Arturo Vargas Bustamante [associate professor],
health policy and management at the Jonathan and Karin Fielding School of Public Health, University of California Los Angeles (UCLA).

Ryan M. McKenna [assistant professor],
health management and policy at the Drexel University Dornsife School of Public Health, in Philadelphia, Pennsylvania.

Joseph Viana [graduate student researcher],
Jonathan and Karin Fielding School of Public Health at UCLA.

Alexander N. Ortega [professor], and
Department of Health Management and Policy, in and chair of the Drexel University Dornsife School of Public Health.

Jie Chen [associate professor]
health services administration at the University of Maryland, in College Park.

Abstract

We examined changes in health insurance coverage and access to and use of health care among adult (ages 18–64) Latinos in the US before (2007–13) and after (2014–16) implementation of the main provisions of the Affordable Care Act. Data from the California Health Interview Survey were used to compare respondents in the two periods. We used multivariable and decomposition regression analyses to investigate the role of documentation status in access disparities between Mexicans and other Latinos in California. Our findings show that after the implementation of these provisions in California, insurance coverage increased for US- and foreign-born Latinos, including undocumented Latinos. Our decomposition analyses show that after implementation, disparities between Mexicans and other Latinos declined with respect to having coverage and a usual source of care. Without the implementation of these provisions in 2014, these disparities would have been 5.76 percent and 0.31 percent larger, respectively. In contrast, legal documentation status was positively associated with disparities between Mexicans and other Latinos in having coverage and physician visits. If Mexican Latinos had had the same share of undocumented immigrants as other Latinos, disparities in health insurance coverage would have declined by 24.17 percent.

According to the 2016 US census, Latinos account for 39.1 percent of California's population.[1] Only New Mexico had a greater percentage Latino population (48.5 percent) in 2016. Nationwide, Latinos are the largest minority group, and by 2060 one in every three US residents is projected to be Latino.[2] The Affordable Care Act (ACA) has raised new research and policy awareness about the potential consequences of health insurance eligibility for access to and use of health care among Latinos.[3–7]

Prior research has examined access to and use of health care among Latinos.[7] Most of this work has either studied just one Latino heritage group (for example, Mexican Americans or Puerto Ricans) or combined Latinos when comparing them with other racial/ethnic groups.[8] Few studies have examined differences across Latino groups.[9–11] Research that has investigated changes in access to care among Latinos after implementation of the main provisions of the ACA—such as the health insurance mandate, federal subsidies for health insurance, and elimination of restrictions on preexisting conditions— showed that the law has contributed to closing the coverage gap across different Latino heritage groups.[3,5] To our knowledge, though, no study has investigated the role of documentation status in explaining differences between Mexicans and other Latinos. The focus on Mexican Latinos is particularly salient since 33.7 million Latinos in the US are of Mexican heritage, and they are the largest group (64 percent) of US Latinos.[12]

Studies have shown that immigrants born in Mexico are less likely to access, use, and spend financial resources on health care, compared to US-born Mexican Americans, other Latinos, and non-Latino whites.[11,13] Because of measurement challenges, less is known about the effects of documentation status on disparities in access to care.[14] With some exceptions, studies that have focused on undocumented immigrants have used small samples, had inadequate measures, and grouped all Latinos together to analyze the effect of documentation status on access and use.[7,15]

Undocumented immigrants are ineligible to participate in the ACA's health insurance expansions.[16,17] Until the Great Recession of 2008–09, undocumented immigrants from Mexico out-numbered those from other Latin American countries.[18] Since 2009 the number of non- Mexican undocumented immigrants has increased rapidly.[19] How the expansion of the health programs that were part of the ACA has affected undocumented Latinos remains an open question.

To help fill this gap in the literature, this study analyzed differences in health insurance coverage and access to and use of health care between Mexicans and other Latinos in California. We specifically studied how differences among documented and undocumented Latino immigrants have changed following implementation of the main provisions of the ACA on January 1, 2014. Using statewide survey data from California, we tested the hypothesis that health insurance coverage and access to and use of health care would increase among US-born and documented Latinos. The ACA made health insurance more affordable through expanding eligibility for Medicaid and subsidizing the purchase of insurance on the state and federal health insurance Marketplaces. At the same time, lacking health insurance became costly because of the penalties associated with the health insurance mandate. As of 2019, however, this penalty will no longer exist at the federal level.

Since undocumented immigrants were excluded from the ACA's main provisions, we hypothesized that documentation status would continue to be one of the main factors associated with disparities between Mexicans and other Latinos. Undocumented immigrants are overrepresented among Mexican Latinos. Considering how little evidence exists about health insurance coverage and health care access and use among undocumented Latinos—

particularly before and after the implementation of the ACA—our study provides useful and timely evidence for the ongoing debate on the likely effects of health care reform in the US.

Study Data And Methods

DATA

We used data for the period 2007–16 from 54,248 adults (ages 18–64) who responded to the California Health Interview Survey. This is a random-digit-dialed survey via landline and cell phones of a sample of the noninstitutionalized population in California. The survey has collected data continuously during two-year cycles since 2007. Its data are collected in English, Spanish, and other languages. The survey methods have been described elsewhere.[20]

HEALTH INSURANCE COVERAGE AND HEALTH CARE ACCESS AND USE

Our study outcomes included four dichotomous measures. The first was health insurance coverage: Survey participants were asked whether they were currently insured. Access was measured by whether participants had a usual place to go when sick, other than the emergency department (ED). Health care use was measured by whether participants had had at least one physician visit and at least one ED visit during the previous year.

LATINO HERITAGE GROUPS

Participants were categorized by Latino or Hispanic ethnicity and nativity. The populations of interest for this study were Latinos of Mexican heritage (n = 42,403) and other Latinos (n = 11,845). In the former category, we included all Latinos who either reported being born in Mexico or identified themselves as a US-born Latino of Mexican heritage. All other Latino heritage groups were classified as “other Latinos.” For the descriptive analyses, we distinguished among other Latinos from Guatemala, El Salvador, other Central American countries, Puerto Rico, and South America and those from other Latino groups to characterize California’s Latino population.[18] Latinos from Puerto Rico were analyzed separately from other Latino heritage groups since they are US citizens by birth.[9,21] The “other Latinos” category included those who did not identify with a specific Latino heritage group or who identified with more than one such group.

All Latinos were initially classified as US-born, naturalized US citizen, or foreign-born noncitizen. Noncitizen Latinos who answered yes to the question “Are you a permanent resident with a green card?” were classified as legal permanent residents. Previous studies have estimated that approximately 98 percent of foreign-born people from Latin America in the US who are noncitizens without green cards are undocumented.[22] Thus, foreign-born Latinos who were not US citizens or legal permanent residents were classified as undocumented. This approach has been used in other peer-reviewed studies.[11,23]

EXPLANATORY VARIABLES

The analyses controlled for socioeconomic and demographic characteristics including sex; marital status; age; education; English language use and proficiency; income as a percentage of the federal poverty level; employment status; health insurance coverage; self-reported

health status; physician-diagnosed chronic conditions; urban, suburban, or rural residence; California region; and—for foreign-born Latinos—time in the US.

STATISTICAL ANALYSIS

We used the implementation of the ACA's main provisions on January 1, 2014, as a cutoff for the statistical analyses. We combined multiple cycles of the California Health Interview Survey for pooled crosssectional analyses using data files for 2007–13 for the pre-ACA period and for 2014–16 for the post-ACA period. We provide descriptive statistics of variables with a comparison of means pre and post ACA. Subsequently, we used Pearson's chi-square analyses to compare differences across the seven Latino heritage groups. Multivariable logistic regression models were used to estimate differences in health insurance cover-age and access to and use of health care after we controlled for the explanatory variables described above.

The Blinder-Oaxaca decomposition method was used to parse health care disparities between Mexicans and other Latinos into two components: disparities due to observed characteristics and those related to unobserved heterogeneity. This method has been used to study racial/ethnic disparities in health insurance coverage and health care access and use.[8,10,21] The first part of the outcome differential is explained by group differences in levels of observed explanatory variables across the two categories. The second part represented differences that could be interpreted as unobserved heterogeneities between reference and comparison groups. Given the binary nature of our outcome measures, we used the nonlinear decomposition methods proposed by Tamas Bartus[24] and Robert Fairlie.[25] Stata, version 14, was used for the statistical analyses. To account for the complex survey design of the California Health Interview Survey and the pre-post study design, the analyses used survey weights and design variables that were combined to reflect the 2007–13 and 2014–16 periods.

LIMITATIONS

Our study had several limitations. First, we used a repeated cross-sectional design, which limited our ability to observe individual-level differences over time.

Second, our method for identifying documentation status is based on reports of having legal permanent resident status or being a US citizen rather than on a question directly assessing documentation status, which might have led to some response bias. However, studies that investigated the magnitude of this bias in the California Health Interview Survey have found it to be with-in acceptable margins and homogeneous across survey years.[26]

Third, the pre-post ACA analyses did not apply to the early Medi-Cal (California Medicaid) expansion that was part of the Low-Income Health Program known as Bridge to Reform or the 2016 expansion of Medi-Cal benefits to undocumented immigrants in California.[27]

Fourth, time effects for yearly economic changes were not controlled for in the multivariable analyses, to avoid collinearity with the pre-post comparison.

Fifth, the external validity of our findings to other US states is limited because of California's unique demographic and policy environment.

Study Results

Uninsurance rates declined from the pre to the post period for all Latino groups, including undocumented Latinos, and the differences were significant (exhibit 1). Public health insurance coverage increased for all Latino groups, and these differences were also significant. By contrast, private insurance coverage declined for US-born and US citizen (naturalized) Latinos. In terms of health care access and use, a significantly greater share of US-born, naturalized, and undocumented Latinos reported having had at least one ED visit, and a significantly greater share of naturalized, legal permanent resident, and undocumented Latinos reported having a usual source of care.

COMPARISONS BY LATINO HERITAGE GROUP

Mexican Latinos were the largest Latino heritage group both pre and post ACA. Chi-square tests for each measure showed significant differences across Latino groups in both periods (exhibit 2). Insurance coverage and a usual source of care increased for all Latino groups post ACA.

MULTIVARIABLE ANALYSES

Once confounding factors were taken into account, Latinos were more likely to report having insurance coverage after, than before, the ACA (exhibit 3). The odds of having coverage among foreign-born Latinos were relatively similar between Mexicans and other Latinos, compared to US-born Latinos. Documented Mexicans and other Latinos were more likely to have coverage, compared to undocumented Mexicans and other Latinos.

The results of the logistic regression analyses included controls for potential confounders in all models but are not shown for brevity. They are available in the appendix. [28] Income as a percentage of poverty and English proficiency are in cluded in exhibit 3 since previous research has identified these factors as important predictors of access to and use of health care.[6,7] Latinos with incomes of 251 percent of poverty or more were more likely to have health insurance coverage, compared to those with incomes of 0–138 percent of poverty. Latinos with limited English proficiency were less likely to have coverage, compared to those with greater proficiency.

Latinos were less likely to have had a physician visit after than before the ACA. Differences in the odds of having a physician visit across Latino categories were not significant, with one exception: Latinos with incomes above 400 percent of poverty were more likely to have had a physician visit, compared to those with incomes of 0–138 percent of poverty. Similarly, the odds of having had an ED visit across Latino categories were not significantly different. Compared to Latinos with private insurance, uninsured Latinos were less likely and Latinos with public insurance were more likely to have had an ED visit. Latinos with limited English proficiency were also less likely to have had an ED visit, compared to those who were proficient in English.

The odds of foreign-born Mexican Latinos' and other Latinos' having a usual source of care, compared to US-born Latinos, were similar (exhibit 3). Documented Mexicans and other Latinos were more likely than their undocumented peers to have a usual source of care. Latinos with no insurance and those with public insurance were less likely to have a usual source of care, compared to Latinos with private insurance. Latinos with incomes above 138 percent of poverty were more likely to have such a source of care, compared to those with incomes of 0–138 percent of poverty. Latinos with limited English proficiency were less likely to have a usual source of care, compared to those with greater proficiency. An interaction terms analysis that tested for documentation status in the post-ACA period had mostly nonsignificant results (we omitted the results for brevity, but they are available upon request).

DECOMPOSITION ANALYSES

The main objective of our study was to parse out disparities into observed and unobserved factors that affect having health insurance coverage and access to and use of health care between Mexicans and other Latinos. Exhibit 4 shows the results of the decomposition analysis. Covariates were adjusted for in all models. (For brevity, these are not shown in exhibit 4, but they are available in the appendix.)[28]

Seventy-two percent of Mexicans and 87 percent of other Latinos had health insurance coverage (exhibit 4). Observed factors explained 79 percent of cross-sectional differences in health insurance coverage between the two groups. However, unobserved heterogeneity accounted for the remaining 21 percent of cross-sectional differences across groups. ACA implementation was negatively associated with disparities in health insurance coverage (−5.76 percent). In other words, without the implementation of the ACA's main provisions in 2014, disparities between Mexicans and other Latinos would have been 5.76 percent larger. By contrast, documentation status was positively associated with disparities in health insurance coverage (24.17 percent). Thus, if Mexican Latinos had had the same share of undocumented immigrants as other Latinos, disparities in health insurance coverage would have declined 24.17 percent. Income and English proficiency were also positively associated with disparities in health insurance coverage.

For physician visits, 73 percent of Mexicans and 80 percent of other Latinos reported having had a visit. Observed factors accounted for 93 percent of the differences betweenthe groups. Documentation status, lacking health insurance coverage, and having an income equal to or above 251 percent of poverty were positively associated with disparities in physician visits. In contrast, having an income of 139–250 percent of poverty was negatively associated with disparities in physician visits.

Eighteen percent of Mexican Latinos and 20 percent of other Latinos reported having had an ED visit. Observed factors explained 73 percent of differences between the groups. Lacking health insurance coverage and English proficiency were positively associated with disparities in ED visits. In contrast, having public health insurance coverage was negatively associated with the disparities.

Seventy-one percent of Mexican Latinos and 82 percent of other Latinos had a usual source of care. Observed factors explained 98 percent of differences between the groups. ACA implementation and having income of 139–250 percent of poverty (compared to 0–138 percent) were negatively associated with disparities in having a usual source of care. Lacking health insurance and having public health insurance, income equal to or above 251 percent of poverty (compared to 0–138 percent), and English proficiency were positively associated with disparities in having a usual source of care.

Discussion

Previous research has shown that Latino heritage groups differ in terms of demographic and socioeconomic characteristics.[7] These differences are associated with differences in health insurance coverage and access to and use of care across the groups.[10,11,21] Latinos were less likely before the ACA to be insured and to report optimal levels of health care access and use.[4,7] Pre-post ACA differences were even more pronounced among foreign-born Latinos.[6,11] Recent studies that used national data have found that health insurance coverage and access to care after the ACA differ significantly among Latino heritage groups.[3,5] Our study confirms these findings and shows that differences across the groups have narrowed after the implementation of the ACA in California.

Since the ACA was passed in 2010, California has maximized opportunities to expand health insurance coverage among eligible people. In this study we hypothesized that health insurance coverage and access to and use of health care would increase after the ACA, since the law made health insurance more affordable. Our study showed that after implementation of the ACA's main provisions in California, health insurance coverage increased for US- and foreign-born Latinos, including undocumented Latinos. The increase was primarily driven by public health insurance expansion, since the share of people with that insurance increased for all Latino groups, including the undocumented.

Undocumented immigrants were excluded from the ACA's main provisions. However, state and local government programs in California tried to close the gap between its ACA-eligible and other populations. Locally funded initiatives offered different forms of health insurance coverage or a medical home to some undocumented people through the expansion of eligibility for Medi-Cal to young adults enrolled in the Deferred Action for Childhood Arrivals (DACA) program and their parents, or through locally managed health plans such as Healthy San Francisco or My Health LA.[14] Some of these programs have limitations that keep them from constituting comprehensive coverage. That said' undocumented immigrants could have better access to care in California than in other states. The roll-out of these programs may partly explain the increase in public coverage reported by undocumented Latinos in our study.

Parallel to the increase in public health insurance coverage, the share of US- and foreign-born Latinos with legal permanent residence reporting private coverage status declined. This change could be partly explained by the rapid increase in public coverage among previously uninsured Latinos. In addition, some people might have shifted from private to public coverage (that is, health insurance crowd-out) when they became eligible for Medicaid

benefits, or when their private policies became noncompliant with essential health benefit regulations under the ACA.

Our descriptive analyses show that health insurance coverage and access to and use of health care were heterogeneous across Latino heritage groups in California. Differences were observed between the pre- and post-ACA periods: Higher shares of Latinos reported health insurance coverage and a usual source of care in the post-ACA period. In our multivariable analyses, we found that documented and undocumented Latinos had similar odds of reporting a usual source of care. However, no significant differences were identified in the odds of reporting a physician or ED visit.

We found evidence that ED use increased marginally for undocumented Latinos after the ACA. However, mean values of ED use in the pre and post periods for undocumented Latinos remained lower than those for US-born and documented Latinos. These findings are consistent with the results of other studies and may suggest that health care use is mostly linked to medical need.[3,5] Need could also be a factor related to the lack of significant differences between US-born, documented, and undocumented Latinos in the odds of having had a physician visit. Interestingly, the decomposition analyses showed that observable characteristics accounted for a large proportion of disparities in having physician visits and a usual source of care between Mexicans and other Latinos.

We also hypothesized that legal status would continue to be one of the main factors associated with disparities between Mexicans and other Latinos, since undocumented immigrants are overrepresented among Mexican Latinos. Undocumented immigrants are ineligible for the ACA's health insurance programs, which preserve inequities in health care access. Unsurprisingly, we found that undocumented immigrants had the lowest odds of having health insurance coverage or a usual source of care throughout our study period. The decomposition analyses showed that documentation status was positively associated with disparities in health insurance coverage and physician visits. Interestingly, it was not a significant predictor of disparities in having a usual source of care or ED visits, which confirmed our findings from the multivariable analyses.

Previous research has shown that socioeconomic and demographic factors influence access to and use of health care among Latinos.[7] We identified poverty status and English proficiency as robust predictors that contributed to disparities in health insurance coverage, reporting a physician visit, and having a usual source of care across Latino heritage groups. In fact, the contributions of poverty status and English proficiency to disparities in health insurance coverage were comparable in magnitude to that of documentation status. These findings have important policy implications, since the potential benefits of addressing the legal status of Latinos in the US in terms of reducing health care disparities could be comparable to socioeconomic changes such as reducing poverty and improving English proficiency.

Policy Implications

California was an early adopter of the ACA's Medicaid expansion, being one of the few states that received a waiver to begin the expansion in 2011.[27] One of the main challenges that the state encountered with the ACA implementation was the health insurance eligibility among its foreign-born population, especially undocumented immigrants. California has the largest undocumented population in the country: Approximately one-quarter of all undocumented immigrants in the US live in the state.[29] Our study showed that lack of legal status remains an important barrier to health insurance coverage and access to and use of health care in California.

State and local programs that offer coverage options to some undocumented immigrants in California might have reduced the divide between US-born, documented Latinos and their undocumented peers. While the programs funded by the state and local governments have been beneficial, much more could be done. Proposals to expand Medi-Cal eligibility to all low-income undocumented residents in California or allow undocumented immigrants to purchase coverage in the state health insurance Market-place (Covered California) should be further investigated. Nationwide, states and local governments with large minority and immigrant populations can learn from California's experience of coverage expansion to its underserved populations.

Approved legislation and executive actions that eliminate the ACA's health insurance mandate and undercut the law's operation have led to uncertainty about the future of health care financing and access. Some states are already preparing to preserve some of the effects of the mandate by creating state mandates.[30] Policy proposals to create a state mandate in California should be further studied to create mechanisms that lead to sustained improvements in health insurance coverage and access to care for all Californians.

Conclusion

Our study provides evidence that in its early years of implementation, the ACA was associated with a positive impact on health insurance coverage among Latinos, the largest ethnic population group in California. Our study suggests that the ACA reduced disparities between Mexicans and other Latinos. However, differences in outcomes remain, as a result of observed disparities in income, English proficiency, and documentation status between Mexicans and other Latinos.

Supplementary Material

Refer to Web version on PubMed Central for supplementary material.

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EXHIBIT 1

Selected characteristics of Latino adults in California before and after implementation of the main provisions ofthe Affordable Care Act, by citizenship and nativity status, 2007–16

			Foreign-born (%)					
	US-born citizen (%)		US citizen		LPR		Undocumented (%)	
Characteristic	Pre	Post	Pre	Post	Pre	Post	Pre	Post
Latino heritage								
Mexican	76.57	76.3	74.59	73.47	80.55	80.51	82.23	78.94*
Other Latino	23.43	23.70	25.41	26.53	19.45	19.49	17.77	21.06
Health care outcomes								
At least one MD visit	77.76	77.09	79.11	78.87	72.23	72.68	59.34	60.05
At least one ED visit	21.63	24.55**	16.23	19.30*	14.67	16.20	12.91	15.84*
Usual source of care	74.62	76.39	78.47	82.78*	67.02	72.91**	54.35	59.79**
Health insurance type								
None	21.73	13.82****	24.97	13.78****	38.47	21.03****	55.92	48.02***
Public	20.45	35.23****	16.83	33.44****	23.53	44.19****	28.18	38.67****
Private	57.82	50.94****	58.20	52.78**	38.00	34.79	15.90	13.24
Explanatory variables								
Female	49.20	49.10	49.80	55.52**	48.87	49.59	48.69	47.30
Married	35.46	29.70***	68.94	65.36	63.39	58.36*	45.33	44.78
Age (years)		***		****		****		****
18–29	49.80	53.57	12.45	8.42	15.89	13.14	29.14	14.48
30–39	19.67	20.00	21.00	15.60	28.75	20.43	42.15	42.47
40–49	15.56	12.31	32.75	29.65	32.14	33.50	21.84	30.60
50–64	14.98	14.12	33.80	46.33	23.21	32.93	6.87	12.44
Education		***		*				
Less than high school	10.95	8.67	38.52	40.75	58.62	61.59	64.11	64.15
High school graduate	37.41	33.98	28.71	23.99	21.58	20.47	24.15	23.52

			Foreign-born (%)					
	US-born citizen (%)		US citizen		LPR		Undocumented (%)	
Characteristic	**Pre**	**Post**	**Pre**	**Post**	**Pre**	**Post**	**Pre**	**Post**
College or more	51.64	57.34	32.77	35.26	19.80	17.94	11.74	12.33
English use and proficiency								
Speak very well/well	98.44	98.12	60.45	58.30	33.13	31.83	16.06	18.52
Speak not well/not at all	1.56	1.88	39.55	41.70	66.87	68.17	83.94	81.48
Income (percent of poverty)		***						
0–138%	25.14	30.76	32.47	36.12	53.68	52.04	74.21	72.35
139–250%	21.15	22.08	28.17	26.88	28.39	29.32	18.18	19.73
251 −400%	20.73	19.32	19.36	19.35	9.82	12.61	5.13	5.65
More than 400%	32.99	27.84	20.00	17.65	8.10	6.04	2.47	2.27
Years in the US								
0–4	__[a]	__[a]	0.59	0.17****	5.29	6.94****	14.01	7.02****
5–9	__[a]	__[a]	2.82	1.55	9.11	7.34	25.59	12.95
10–14	__[a]	__[a]	6.63	4.96	12.01	12.26	28.33	27.28
15 or more	__[a]	__[a]	89.96	93.32	73.60	73.47	32.07	52.75

SOURCE Authors' analysis of data for 2007–16 from the California Health Interview Survey. **NOTES** The pre period is 2007–13. The post period is 2014–16. A full list of explanatory variables, including self-reported health status, chronic conditions, urban versus rural residence, and California region, is in the online appendix (see note 28 in text). Significance was measured using *t*-tests for continuous variables and chi-square tests for categorical variables. LPR is legal permanent resident (for example, a green card holder). MD is physician. ED is emergency department.

[a] Not applicable.

* $p < 0.10$

** $p < 0.05$

*** $p < 0.01$

**** $p < 0.001$

EXHIBIT 2

Health care outcomes and insurance status of Latino adults in California before and after implementation of the main provisions of the Affordable Care Act, by heritage group, 2007–16

	Mexico	Guatemala	El Salvador	Other Central American	Puerto Rico	South America	Other Latino	*p* value
PRE (2007–13)								
Outcome variables								
Had health insurance	67.6%	57.9%	60.6%	64.9%	87.2%	80.2%	79.0%	****
Had at least one MD visit	72.9	66.1	73.1	73.2	85.0	79.9	80.1	****
Had at least one ED visit	16.9	13.2	17.6	16.0	30.9	21.2	25.5	****
Had usual source of care	69.6	61.2	68.6	72.0	77.7	75.5	78.2	****
Share of total Latino adults	82.2	2.6	4.4	1.9	1.3	2.9	4.7	__[a]
POST (2014–16)								
Outcome variables								
Had health insurance	77.8%	61.0%	76.7%	78.4%A	94.1%	80.3%	88.2%	****
Had at least one MD visit	72.4	60.6	75.2	75.9	82.3	80.8	82.8	***
Had at least one ED visit	18.6	23.8	19.7	28.0	39.2	26.1	31.6	***
Had usual source of care	73.2	64.0	72.2	78.6	88.2	79.5	79.3	**
Share of total Latino adults	78.9	2.7	4.5	1.6	1.3	2.4	8.6	__[a]

SOURCE Authors' analysis of data for 2007–16 from the California Health Interview Survey. **NOTES** Significance was measured using joint significance chi-square tests in each period. MD is physician. ED is emergency department.

[a]Because this information was added for descriptive purposes, tests for pre-post significance changes were not performed.

** $p < 0.05$

*** $p < 0.01$

**** $p < 0.001$

EXHIBIT 3

Odds ratios of Latinos' likelihood of having health insurance coverage and health care access and having used care in California, by selected characteristics, 2007–16

Characteristic	Health insurance	MD visits	ED visits	Usual source of care
HAD HEALTH INSURANCE				
Pre period (ref)				
Post period	1.83****	0.86**	1.06	1.08
LATINO HERITAGE AND CITIZENSHIP				
US-born (ref)				
Foreign-born Mexican Latinos				
Documented	0.67**	1.04	0.91	0.61***
Undocumented	0.28****	0.91	0.89	0.58****
Foreign-born other Latinos				
Documented	0.61***	1.27	1.23	0.67**
Undocumented	0.28****	1.03	1.08	0.58**
HEALTH INSURANCE TYPE				
Private (ref)				
Public	—[a]	0.35	1.59****	0.67****
No insurance	—[a]	0.25	0.74**	0.27****
INCOME (PERCENT OF POVERTY)				
0–138% (ref)				
139–250%	0.92	1.14*	0.94	1.22***
251 –400%	1.49****	1.20	0.95	1.21**
More than 400%	2.66****	1.46****	0.99	1.48****
ENGLISH USE AND PROFICIENCY				
Speak very well/well (ref)				
Speak not well/not at all	0.64****	0.84	0.69****	0.68****

SOURCE Authors' analysis of data for 2007–1 6 from the California Health Interview Survey. **NOTES** The exhibit shows the results of a multivariable logistic regression analysis. Covariates were adjusted for in each category; a full list of covariates and confidence intervals is in the online appendix (see note 28 in text). The pre (2007–13) and post (2014–16) periods refer to before and after implementation of the main provisions of the Affordable Care Act. MD is physician. ED is emergency department. Documented is foreign-born US citizen or legal permanent resident.

[a]Not applicable.

*$p < 0.10$

**$p < 0.05$

***$p < 0.01$

****$p < 0.001$

EXHIBIT 4

Decomposition analysis: parsing out disparities between Mexicans and other Latinos in California, 2007–16

	Health insurance	MD visits	ED visits	Usual source of care
PREDICTED PROBABILITY				
Mexican Latinos	0.72	0.73	0.18	0.71
Other Latinos	0.87	0.80	0.20	0.82
DIFFERENCE IN PREDICTED PROBABILITY				
Total difference (percentage points)	−0.15	−0.08	−0.02	−0.11
Observed factors	79%	93%	73%	98%
Unobserved factors	21%	7%	27%	2%
EXPLANATORY VARIABLES				
Health insurance coverage				
Pre ACA (ref)				
Post ACA	−5.76%****	−0.02%	0.93%	−0.31%****
Documentation status				
Documented (ref)				
Undocumented	24.17%****	6.41%****	2.29%	0.63%
Health insurance type				
Private (ref)				
Public	—[a]	3.51%	−30.60%****	6.12%****
None	—[a]	36.35%****	28.26%***	31.92%****
Income (percent of poverty)				
0–138% (ref)				
139–250%	0.44%	−2.00%****	3.87%	−2.18%***
251–400%	1.50%****	0.70%***	−1.92%*	0.78%****
More than 400%	29.17%****	20.04%****	10.98%	16.44%****
English use and proficiency				
Speak very well/well (ref)				

Health Aff (Millwood). Author manuscript; available in PMC 2019 September 01.

	Health insurance	MD visits	ED visits	Usual source of care
Speak not well/not at all	22.03%****	11.50%	11.76%****	20.81%****

SOURCE Authors' analysis of data for 2007–1 6 from the California Health Interview Survey. **NOTES** Positive or negative coefficients indicate the share of explanatory variables that are positively or negatively associated with disparities in outcomes between Mexicans and other Latinos. Covariates were adjusted for in each category; a full list of covariates with coefficients and standard errors is in the appendix (see note 28 in text). Observed and unobserved differences might not add to 100 percent because of rounding. MD is physician. ED is emergency department. Documentation status is explained in the notes to exhibit 3.

[a] Not applicable.

* $p < 0.10$

*** $p < 0.01$

**** $p < 0.001$