



Disparities in Pediatric Provider Availability by Insurance Type After the ACA in California

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ABSTRACT

OBJECTIVE: To examine insurance-based disparities in provider-related barriers to care among children in California in the wake of changes to the insurance market resulting from the Affordable Care Act.

METHODS: Our sample included 6514 children (ages 0 to 11 years) from the 2014–2016 California Health Interview Survey. We examined parent reports in the past year of 1) having trouble finding a general provider for the child, 2) the child not being accepted by a provider as a new patient, 3) the child's health insurance not being accepted by a provider, or 4) any of the above. Multivariable models estimated the associations of insurance type—Medi-Cal (Medicaid), employer-sponsored insurance, or privately purchased coverage—and parent reports of these problems.

RESULTS: Approximately 8% of parents had encountered at least one of these problems. Compared with parents of children with employer-sponsored insurance, parents of children with

Medi-Cal or privately purchased coverage had over twice the odds of experiencing at least one of the barriers. Parents of children with Medi-Cal had over twice the odds of being told a provider would not accept their children's coverage or having trouble finding a general provider and 3 times the odds of being told a provider would not accept their children as new patients. Parents of children with privately purchased coverage had over 3 times the odds of being told a provider would not accept their children's coverage.

CONCLUSIONS: Our study found significant disparities in provider-related barriers by insurance type among children in California.

KEYWORDS: access to health care; children; health insurance; Medicaid; Patient Protection and Affordable Care Act

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WHAT'S NEW

Prior national estimates showed that parents' experiences with providers accepting insurance or new patients were generally good across insurance plans. We found insurance-based disparities in parents' experiences in providers accepting insurance or new patients in California in the post-Affordable Care Act environment.

SIGNIFICANT CHALLENGES WITH provider and appointment availability have been documented among simulated patients with Medicaid or privately purchased coverage (including new Marketplace plans), relative to patients with private insurance, both before and after implementation of the Affordable Care Act (ACA).^{1–5} In addition, a recent study demonstrated significant insurance-based disparities in self-reported experiences with provider and appointment availability for adults in California after the ACA.⁶ Less is known, however, about whether children

experience insurance-based disparities in provider-related barriers to care. A prior study using national pre-ACA survey data from 2011 to 2012 found that experiences with pediatric provider availability were generally good (less than 5% of parents reported their children's coverage not being accepted across public and private insurance types).⁷ However, lower state-level rates of primary care provider (PCP) acceptance of Medicaid were associated with worse outcomes for children with Medicaid.⁷ This suggests that national estimates may mask significant state-level disparities in experiences with provider availability by insurance type. In addition, to our knowledge, no prior study has assessed parent reports of provider availability for privately purchased coverage, including the new ACA Marketplace plans.

California operates the largest Medicaid (called Medi-Cal) program in the country, and, as of 2016, 42% (or over 4 million) of all children in California were covered by Medi-Cal.⁸ Yet, California has one of the lowest rates

of PCP acceptance of Medicaid coverage in the country, second only to New Jersey, most likely due to low Medi-Cal reimbursement rates.⁷ For example, from 2011 to 2012, only 54% of PCPs in California accepted Medicaid coverage, in contrast to over 75% in the majority of states; however, 78% of PCPs in California accepted private coverage.⁷ Earlier data from a statewide survey of PCPs in California indicated that pediatrician acceptance of Medi-Cal was slightly better than family practice or internal medicine physicians (56% vs 52% and 49% as of 1996 and 1998, respectively), but rates were still very low.⁹ California's fee-for-service Medi-Cal reimbursement fee schedule is among the lowest in the nation, with providers receiving only 41% of Medicare rates on average.¹⁰ California's child Medi-Cal enrollees are typically assigned to private managed care plans in their counties, and the relatively low capitation rates paid to those plans ranged from \$57 to \$138 in fiscal year 2016–17.¹¹ Data from the Government Accountability Office on rates paid to Medicaid managed care plans indicate that Medi-Cal provider rates in both managed care plans and fee-for-service are similar, and both are very low in comparison to other states and prevailing commercial rates in an area.¹² Given these significant problems with provider availability and acceptance in California, there have been concerns about how providers would respond to the increase in insurance coverage as a result of major provisions of the ACA implemented in 2014, especially because the greatest gains in insurance were through Medicaid enrollment.¹³ Although children were not the primary focus of the ACA, the insurance rate among children in California increased by almost 5 percentage points, from 92.1% to 96.8%, from 2013 to 2016 (amounting to 344,799 children),⁸ a gain that was attributed to increased outreach and “welcome mat” effects.^{13,14}

Finally, confusion and misinformation regarding network provider participation have been documented in California,^{4,15} and new Marketplace plans rely increasingly on narrow networks.¹⁶ Seventy-five percent of plans in California's Marketplace, Covered California, include narrow networks, whereas very few group plans do.^{17,18} Therefore, there are major concerns about provider availability in these new plans. This is especially true for pediatric specialty care, as narrow networks are twice as common for pediatric versus adult specialty care in Marketplace silver plans nationally.¹⁹ Official data are unavailable on provider reimbursement fees for carriers offering Marketplace coverage; however, media reports and statements by plans in Covered California indicate that plan networks are more limited in the Marketplace than they are in the employer-sponsored insurance (ESI) market, even for the same insurance carriers, which is likely to indicate lower rates paid by insurers to participating providers in Marketplace plans.^{20–23} In addition, children with privately purchased coverage may be less likely than children with Medi-Cal to receive services at federally qualified health centers, where federal funding, the prospective payment system all-inclusive visit rate, and subsequent wraparound payments may serve as a buffer to low reimbursement rates.²⁴

This study took advantage of measures that were added to the California Health Interview Survey (CHIS) in 2014 to establish baseline metrics to track trends following the ACA. We examined parent reports in the past year of 1) having trouble finding a general provider for children, 2) children not being accepted as new patients, 3) children's insurance not being accepted by a provider, and 4) any of the above. We examined differences in reports of these problems by type of insurance (Medi-Cal), ESI, and privately purchased coverage).

METHODS

We used pooled 2014–2016 data from the public-use CHIS child files.^{25–27} CHIS is a statewide telephone survey of health and health care that is representative of the state's noninstitutionalized population. For the child sample, a child who was 0 to 11 years old was randomly selected from each household with children present, and the adult most knowledgeable of the child's health and health care (almost always the parent) responded on that child's behalf. A total of 6514 children were included in our analyses. Uninsured children ($n = 161$) were excluded from our analyses because our research questions relied on the children being insured. Children with public insurance other than Medi-Cal were also excluded due to the limited sample size ($n = 88$). In addition, 122 children were excluded due to unknown data on parental education level.

Our primary dependent variables included parent reports (yes/no) in the past 12 months of 1) having trouble finding a general provider (“Did you have any trouble finding a general doctor or provider who would see your child?”); 2) children not being accepted by a provider as a new patient (“Were you told by a doctor's office or clinic that they would not accept your child?”); 3) insurance not being accepted by a provider (“Were you told by a doctor's office or clinic that they did not accept your child's health care coverage?”); and 4) an indicator of having experienced any of the above. Our main independent variable was type of health insurance, categorized as Medi-Cal, ESI, and privately purchased coverage in the individual market. Although Marketplace coverage was available for purchase as of 2014, the public-use child file does not indicate whether the child's privately purchased coverage was through Covered California. Our models adjust for the child's race/ethnicity (non-Latino white, Latino, non-Latino black, Asian, non-Latino multiple or other race[s]); child's age (continuous); sex (female/male); general health status (excellent, very good, good, fair or poor); parental education (less than high school degree, high school degree, more than high school degree); language spoken at home (English only, English plus other language[s], only language[s] other than English); family income as a percent of federal poverty guidelines FPG (0% to 138%, 139% to 200%, 201% to 400%, >400%); continuity of health

insurance in the past 12 months (uninsured at some point in past 12 months, insured for all past 12 months); an indicator of rural versus urban residence; and survey year (2014, 2015, 2016).

We first described the sample characteristics and used chi-square tests to examine differences by type of health insurance (Table 1). We then examined parent reports of the 4 primary outcomes by reported insurance type (Table 2). Finally, we ran multivariable logistic regressions for each outcome, comparing Medi-Cal and privately purchased coverage with ESI as the reference group (Table 3). To assess the magnitude of absolute adjusted differences we estimated predicted probabilities after each model (results not shown). We also reported results from post hoc tests comparing Medi-Cal and privately purchased coverage (Table 3). Given that 2014 was an ACA transition year in California, we conducted sensitivity analyses limited to 2015 to 2016 and include these results in the Supplementary Table. To account for the complex survey design, we used jackknife replicate weights. Stata 15.0 was used for all analyses.²⁸

RESULTS

Table 1 displays the sample characteristics by type of health insurance. Half (50.1%) of all children had Medi-Cal, 45.6% had ESI, and 4.3% had privately purchased coverage. Children with Medi-Cal were more likely to be Latino, whereas those with ESI or privately purchased coverage were more likely to be non-Latino white. Medi-Cal enrollees were less likely to have very good or excellent parent-reported health status; their parents had lower levels of education and were more likely to report a language other than English spoken at home. As expected, children on Medi-Cal were more likely to be in families with lower incomes. Finally, children with privately purchased coverage were the most likely to report having been uninsured at some point in the past 12 months (5.2%) compared to 3.0% of Medi-Cal enrollees and 0.9% of children with ESI.

Table 2 shows that 7.8% of parents had encountered any one of the problems. Parents of children with Medi-Cal (10.0%) or privately purchased coverage (13.0%) were 2 or more times more likely than those with ESI

Table 1. Sample Characteristics Among Children Ages 0 to 11 Years (2014–2016 California Health Interview Survey)

	Medi-Cal	Employer-Sponsored Insurance	Privately Purchased	Total	χ^2 P
n	3020	3199	295	6514	
Percent (%) of weighted sample	50.1%	45.6%	4.3%	100.0%	
Race/ethnicity					< .001
Non-Latino white	12.6%	38.7%	53.2%	26.2%	
Latino	69.8%	33.7%	28.7%	51.6%	
Non-Latino black	7.3%	4.4%	0.0%	5.6%	
Non-Latino Asian	6.2%	14.1%	8.4%	9.9%	
Other/multiple (non-Latino)	4.2%	9.2%	9.8%	6.7%	
Age (mean)	5.3 y	5.8 y	6.4 y	5.6 y	
Female	48.8%	50.0%	45.6%	49.2%	.799
Health status					< .001
Excellent	46.1%	66.9%	60.4%	56.2%	
Very good	24.2%	23.2%	30.6%	24.0%	
Good	23.4%	8.9%	8.1%	16.1%	
Fair or poor	6.3%	0.9%	0.9%	3.6%	
Parental education					< .001
Less than high school degree	30.4%	2.5%	4.6%	16.6%	
High school degree	30.6%	13.3%	6.4%	21.7%	
More than high school degree	39.0%	84.2%	89.0%	61.7%	
Language spoken at home					< .001
English only	31.8%	59.8%	56.3%	45.6%	
English plus other language(s)	42.1%	33.3%	37.2%	37.9%	
Only language(s) other than English	26.1%	6.9%	6.4%	16.5%	
Family income as percent of FPGs					< .001
0%–138% of FPGs	70.7%	12.0%	11.6%	41.4%	
139%–200% of FPGs	14.6%	8.7%	8.3%	11.6%	
201%–400% of FPGs	10.4%	29.5%	42.1%	20.4%	
> 400% of FPGs	4.3%	49.9%	38.1%	26.6%	
Uninsured at some point in past 12 mo	3.0%	0.9%	5.2%	2.2%	.009
Geography					.155
Urban	88.6%	92.0%	87.6%	90.1%	
Rural	11.4%	8.0%	12.4%	9.9%	
Survey year					.855
2014	33.1%	33.4%	36.4%	33.4%	
2015	33.0%	32.6%	26.4%	32.5%	
2016	33.9%	34.0%	37.2%	34.1%	

n indicates number; FPGs, federal poverty guidelines.

Table 2. Trouble Finding General Provider, Not Accepted as New Patient, or Coverage Not Accepted by Coverage Type Among Children Ages 0 to 11 Years (2014–2016 California Health Interview Survey)

	Medi-Cal	Employer-Sponsored Insurance	Privately Purchased	Total	χ^2 P
n	3020	3199	295	6514	
Experienced at least one of the following barriers	10.0%	4.9%	13.0%	7.8%	.001
Had trouble finding general provider for child past year	3.0%	0.9%	2.2%	2.0%	< .001
Child not accepted by provider as new patient past year	3.8%	1.4%	3.6%	2.7%	.013
Child's coverage not accepted by provider past year	8.2%	3.7%	11.5%	6.3%	.001

n indicates number.

(4.9%) to have experienced at least one of the barriers. The most common barrier was having been told that a provider would not accept the child's insurance (6.3% overall). Parents of children with privately purchased coverage were the most likely to encounter this problem (11.5%), followed by 8.2% of parents of children with Medi-Cal. Only 3.7% of parents of children with ESI experienced this barrier. Although less prevalent, there were significant differences in the proportion of parents who were told that a provider would not accept their children as new patients (2.7%) or had trouble finding a general provider (2.0%). Parents of children with Medi-Cal were more likely to have encountered either problem. Among parents of children with Medi-Cal, 3.8% had been told a provider would not accept their children as new patients versus 1.4% of parents of children with ESI and 3.6% of parents of children with privately purchased insurance. Three percent of parents of children with Medi-Cal had trouble finding a general provider for their children versus 0.9% of parents of children with ESI and 2.2% of parents of children with privately purchased insurance.

Table 3 presents results from multivariable models estimating the odds of encountering at least one problem and each problem separately. Parents of children with privately purchased insurance had 2.69 times the odds of having encountered at least one problem (95% confidence interval [CI], 1.15–6.28) relative to parents of children with ESI, whereas parents of children with Medi-Cal had 2.14 times the odds (95% CI, 1.10–4.17). Compared to parents of children with ESI, parents of children with Medi-Cal had over twice the odds of having trouble finding a general provider (adjusted odds ratio [aOR], 2.83; 95% CI, 1.28–6.25) or being told a provider would not accept their children's coverage (aOR, 2.41; 95% CI, 1.11–5.22) and three times the odds of being told a provider would not accept their children as new patients (aOR, 3.05; 95% CI, 1.09–8.53). Parents of children with privately purchased coverage had 3.17 times the odds (95% CI, 1.24–8.14) of being told a provider would not accept their children's coverage compared to parents of children with ESI. Adjusted estimates of absolute differences in each barrier by insurance type were virtually similar to the unadjusted differences reported in Table 2. Finally, post hoc tests indicated that there were no significant differences in reports between parents of children with Medi-Cal and parents of children with privately purchased coverage.

Sensitivity analyses are reported in the Supplementary Table. Results from models excluding 2014 were robust for children with Medi-Cal compared to those with ESI, and the aORs were actually higher for all but the outcome of the child not being accepted as a new patient. In that case, the aOR was diminished and was no longer statistically significant, most likely due to lower power to detect statistically significant differences. For privately purchased coverage compared to ESI, the magnitude of the aORs remained the same but the confidence intervals crossed 1.0; this is again likely due to the wider confidence intervals and lower power to detect significant differences that resulted from the loss in sample.

DISCUSSION

Although provider-related barriers to care appear to be less prevalent among children than previously reported among adults,⁶ a significant proportion of parents in California reported problems accessing providers for their children in the post-ACA environment. The ACA certainly led to large gains in coverage for children;^{13–14} yet, in California children are facing disparate availability of providers by type of insurance coverage. Parents of children covered by Medi-Cal or privately purchased insurance were more likely to report these barriers than parents of children covered by ESI. The most common barrier encountered by parents was providers not accepting their children's insurance. This was more common than reporting difficulty finding a provider for their children or their children being denied as new patients.

A greater proportion of parents reported these barriers compared to findings from 2 pre-ACA studies using the National Health Interview Survey. A National Center for Health Statistics brief indicated that only 2.4% of parents had been told that a provider would not accept their children's coverage,²⁹ compared to 6.3% in our study. Decker's study,⁷ which looked at these problems nationally by insurance type, only observed problems with providers not accepting coverage for 4.1% of children with Medicaid, compared to 8.2% in our study.

Our study reveals important differences between two types of private insurance: ESI versus the individual insurance market. The main barrier experienced by parents with privately purchased coverage in our study was being told that a provider would not accept their children's insurance. The ACA has significantly increased coverage among both adults and children, in part through

Table 3. Multivariable Logistic Regression Results Among Children Ages 0 to 11 Years (2014–2016 California Health Interview Survey)

	Any Barrier				Trouble Finding General Provider for Child				Child Not Accepted by Provider as New Patient				Child's Coverage Not Accepted by Provider			
	aOR	95% CI		P	aOR	95% CI		P	aOR	95% CI		P	aOR	95% CI		P
Health insurance coverage																
Employer-sponsored insurance	REF				REF				REF				REF			
Medi-Cal	2.14	1.10	4.17	.025	2.83	1.28	6.25	.011	3.05	1.09	8.53	.034	2.41	1.11	5.22	.026
Privately purchased	2.69	1.15	6.28	.023	2.40	0.49	11.76	.278	2.18	0.51	9.21	.289	3.17	1.24	8.14	.016
Race/ethnicity																
Non-Latino white	REF				REF				REF				REF			
Latino	0.96	0.54	1.71	.889	1.39	0.58	3.36	.459	0.65	0.28	1.51	.318	1.11	0.58	2.10	.775
Non-Latino black	0.39	0.11	1.35	.134	0.19	0.03	1.29	.090	0.66	0.06	7.03	.726	0.40	0.09	1.69	.213
Non-Latino Asian	0.45	0.17	1.23	.120	1.73	0.46	6.49	.413	0.73	0.13	4.20	.720	0.24	0.03	1.78	.163
Other/multiple (non-Latino)	1.38	0.61	3.16	.440	2.87	0.67	12.23	.153	2.32	0.70	7.63	.166	1.23	0.47	3.20	.676
Age	0.97	0.91	1.04	.405	1.04	0.93	1.17	.484	0.96	0.85	1.08	.466	0.96	0.90	1.02	.223
Female	0.78	0.51	1.20	.258	0.81	0.42	1.57	.532	0.78	0.37	1.63	.510	0.81	0.49	1.32	.390
Health status																
Excellent	REF				REF				REF				REF			
Very good	0.89	0.53	1.47	.630	0.74	0.27	2.04	.559	0.53	0.22	1.27	.154	0.92	0.53	1.60	.774
Good	1.27	0.73	2.22	.399	1.91	0.63	5.80	.254	1.04	0.46	2.32	.932	1.31	0.72	2.39	.377
Fair or poor	2.02	0.80	5.07	.135	2.66	0.57	12.48	.212	2.22	0.55	8.95	.260	2.29	0.87	6.00	.091
Parental education																
Less than high school degree	REF				REF				REF				REF			
High school degree	1.66	0.81	3.39	.167	1.01	0.23	4.46	.987	2.45	0.68	8.81	.170	1.66	0.74	3.75	.218
More than high school degree	1.77	0.92	3.39	.087	1.79	0.61	5.25	.289	4.18	1.67	10.42	.002	1.91	0.89	4.10	.099
Language spoken at home																
English only	REF				REF				REF				REF			
English plus other language(s)	0.90	0.52	1.56	.704	1.09	0.57	2.09	.795	1.32	0.50	3.48	.570	0.77	0.42	1.43	.410
Only language(s) other than English	0.99	0.49	2.00	.981	1.37	0.37	5.15	.637	2.34	0.71	7.77	.163	0.65	0.31	1.33	.238
Family income as percent of FPGs																
0%–138% of FPGs	REF				REF				REF				REF			
139%–200% of FPGs	1.06	0.50	2.25	.871	1.05	0.25	4.42	.948	1.18	0.32	4.38	.801	0.83	0.39	1.74	.620
201%–400% of FPGs	0.95	0.51	1.78	.874	0.97	0.43	2.21	.951	1.05	0.50	2.20	.893	0.90	0.42	1.91	.779
> 400% of FPGs	0.86	0.43	1.74	.681	0.60	0.16	2.33	.463	0.56	0.17	1.87	.346	0.89	0.38	2.09	.795
Insurance continuity past 12 mo																
Insured all past 12 mo	REF				REF				REF				REF			
Uninsured in past 12 mo	1.84	0.74	4.62	.190	1.60	0.27	9.68	.605	0.01	0.43	8.72	.382	1.51	0.58	3.92	.392
Geography																
Urban	REF				REF				REF				REF			
Rural	1.06	0.65	1.74	.812	1.29	0.06	2.56	.456	2.56	1.12	5.83	.026	1.06	0.58	1.91	.855

(continued on next page)

showed that reductions in Medicaid fees in California following the temporary bump from the ACA were associated with a higher likelihood of adult Medicaid enrollees reporting not being accepted as new patients. Work in Washington State suggests that other strategies may be more effective in encouraging providers to accept Medicaid enrollees.³⁴ For example, increasing efficiency and lowering costs for provider participation in Medicaid by simplifying administrative procedures, reimbursing for care more quickly, and reducing the costs of meeting patients' health care needs may be effective strategies.³⁴

Our study suggests significant problems with provider availability for children in California. There are limitations, however, in our approach. First, the CHIS measures we examined were only asked of children ages 0 to 11 years and not of adolescents. Second, the measures do not indicate whether problems in accessing providers were encountered in primary or specialty care. The vast majority of care children receive is in primary care,³⁵ but past research shows that specialty providers are substantially less likely to accept children with Medicaid compared to private coverage.¹ Third, the outcome measures do not reveal whether parents were ultimately able to access care for their children. Fourth, the public use data do not indicate whether children's privately purchased coverage is through Covered California. Given that this is a new insurance mechanism that required the state to negotiate new provider networks and added another level of insurance for providers to consider, this could be an important insurance option for future research to consider. Fifth, because of the 2013 change in income eligibility for Medi-Cal following the expansion, many children on the Children's Health Insurance Program switched to Medi-Cal, which resulted in some discontinuity and switching into narrow networks, which could affect our 2014 CHIS observations; however, we conducted sensitivity analyses excluding 2014 and found that most results for Medi-Cal were robust. Sixth, on a related note, our analyses included children who had been uninsured at some point in the past 12 months ($n=155$), which could mean that our findings are more attributable to the effects of discontinuity rather than provider acceptance of different types of coverage. Our models, however, control for this, and we ran sensitivity analyses excluding children who had been uninsured at some point in the past 12 months; the magnitude and significance of our results were robust (virtually unchanged). Finally, because the outcome measures asked about experiences over the past 12 months, some responses could be in reference to experiences in 2013. For this and previously noted reasons, our sensitivity analyses excluded observations from 2014.

CONCLUSION

This study found that there are disparities in provider availability by type of insurance coverage for children

in California. Policymakers, program implementers, researchers, and practitioners should continue to work toward equalizing provider availability for all children regardless of insurance type.

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Authorship Statement: J.K.P. conceptualized and designed the study, carried out the analyses, interpreted the results, drafted the initial manuscript, and approved the final manuscript as submitted. H.A. contributed to the design of the study, contributed to the initial drafting of the manuscript, reviewed and revised the manuscript, and approved the final manuscript as submitted. D.R. contributed to the design of the study, helped interpret the results, reviewed and revised the manuscript, and approved the final manuscript as submitted. D.G. helped interpret the results, reviewed and revised the manuscript, and approved the final manuscript as submitted. C.A. helped interpret the results, reviewed and revised the manuscript, and approved the final manuscript as submitted. R.M. contributed to the design of the study, helped interpret the results, reviewed and revised the manuscript, and approved the final manuscript as submitted. A.O. contributed to the design of the study, contributed to the initial drafting of the manuscript, reviewed and revised the manuscript, and approved the final manuscript as submitted.

SUPPLEMENTARY DATA

Supplementary data related to this article can be found online at [doi:10.1016/j.acap.2018.09.003](https://doi.org/10.1016/j.acap.2018.09.003).

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