The Unintended Impact of Welfare Reform on the Medicaid Enrollment of Eligible Immigrants

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Background. During welfare reform, Congress passed legislation barring legal immigrants who entered the United States after August 1996 from Medicaid for five years after immigration. This legislation intended to bar only new immigrants (post-1996 immigrants) from Medicaid. However it may have also deterred the enrollment of legal immigrants who immigrated before 1996 (pre-1996 immigrants) and who should have remained Medicaid eligible.

Objectives. To compare the Medicaid enrollment of U.S.-born citizens to pre-1996 immigrants, before and after welfare reform, and to determine if variation in state Medicaid policies toward post-1996 immigrants modified the effects of welfare reform on pre-1996 immigrants.

Data Source/Study Design. Secondary database analysis of cross-sectional data from 1994–2001 of the U.S. Census Bureau, Annual Demographic Survey of March Supplement of the Current Population Survey.

Subjects. Low-income, U.S.-born adults ($N = 116{,}307$) and low-income pre-1996 immigrants ($N = 24{,}367$) before and after welfare reform.

Measures. Self-reported Medicaid enrollment.

Results. Before welfare reform, pre-1996 immigrants were less likely to enroll in Medicaid than the U.S.-born (OR = 0.55; 95 percent CI, 0.51–0.59). After welfare reform, pre-1996 immigrants were even less likely to enroll in Medicaid. The proportion of immigrants in Medicaid dropped 3 percentage points after 1996; for the U.S.-born it dropped 1.6 percentage points ($p = 0.012$). Except for California, state variation in Medicaid policy toward post-1996 immigrants did modify the effect of welfare reform on pre-1996 immigrants.

Conclusions. Federal laws limiting the Medicaid eligibility of specific subgroups of immigrants appear to have had unintended consequences on Medicaid enrollment in the larger, still eligible immigrant community. Inclusive state policies may overcome this effect.

Key Words. Immigration, access, health insurance, welfare reform, racial/ethnic disparities

The Personal Responsibility and Work Opportunity Reconciliation Act (PRWORA) of 1996 restricted most legal immigrants entering the United

States after August 22, 1996, from receiving federally funded Medicaid for at least five years after immigration (Personal Responsibility and Work Opportunity Reconciliation Act of 1996). Since the passage of PRWORA, which is commonly known as welfare reform, legal immigrants have been divided into two eligibility categories. *Qualified* immigrants are noncitizens who immigrated to the United States before August 22, 1996. Qualified immigrants remained eligible for Medicaid. *Unqualified* immigrants are noncitizens who immigrated after August 22, 1996, and were barred from Medicaid for five years after entry. Illegal immigrants do not fall into either category; they have always been and continued to be Medicaid ineligible, except in emergency circumstances. Although welfare reform restricted unqualified immigrants' access to federally funded Medicaid, it gave states the option of using state funds to continue state Medicaid programs for unqualified immigrants. States would not receive any federal matching dollars for such programs. States have traditionally been given the authority to expand or deny Medicaid benefits to certain groups, however this was the first time that states were allowed to determine eligibility for immigrants. After welfare reform, eight states continued Medicaid for unqualified immigrants using their own funds.

In addition to these changes, welfare reform also reinforced the link between the use of public benefits by immigrants and the public charge law. Public charge has been part of immigration law for more than 100 years, but was rarely enforced. A public charge is, "an alien who has become or is likely to become primarily dependent on the government for subsistence, as demonstrated by either the receipt of public cash assistance for income maintenance, or institutionalization for long-term care at government expense" (Department of Health and Human Services 1998). Welfare reform gave the primary responsibility of enforcing this law to the Immigration and Naturalization Service (INS) (Schlosberg and Wiley 1998). If an INS officer deemed an immigrant a public charge, then this could result in the denial of a green card, denial of readmission to the United States after a trip abroad, or, very rarely, in deportation. In 1999, INS policy was revised to reassure immigrants

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that they would not be considered a "public charge" for using Medicaid and certain other benefits, such as food stamps (Immigration and Naturalization Service 1999). It remains unclear if this reassurance has been effective at changing immigrants' perceptions.

Immigrants are more likely than the U.S.-born to need Medicaid as a source of health insurance because they are poorer (Schmidley 2000) and are less likely to be covered by employer-based health insurance (Carrasquillo, Carrasquillo, and Shea 2000; Thamer et al. 1997). The role of Medicaid in improving access to medical care has been consistently demonstrated (Ayanian et al. 2000; Berk and Schur 1998; Lurie et al. 1984). Research also suggests that immigrants are less likely to have a usual source of care (Ku and Matani 2001), and that immigrants' utilization of health care services is lower than the U.S.-born (Frisbie, Cho, and Hummer 2001; Halfon et al. 1997). Immigrants face numerous cultural and linguistic barriers to care, however; policies that deter immigrants from Medicaid may play an important role in increasing disparities in access to health care. Prior studies have shown that after the passage of welfare reform, the Medicaid enrollment rates of immigrants declined more steeply than for the U.S.-born (Ellwood and Ku 1998; Fix and Passel 1999, 2000; Ku and Matani 2001). However, these studies are somewhat limited because they only examined Medicaid enrollment in the years immediately after welfare reform or they did not take into account whether the immigrant was qualified or unqualified.

The present study specifically compares the effect of welfare reform on the Medicaid enrollment of qualified immigrants (those who entered the United States prior to August 22, 1996) and U.S.-born citizens. To study this effect, we used cross-sectional data from the 1994 through 2001 March Supplements of the Current Population Survey (CPS) (U.S. Census Bureau, Annual Demographic Survey of March CPS Supplement) and asked two questions. First, did qualified immigrants experience greater declines in Medicaid enrollment than U.S.-born citizens after welfare reform? Qualified immigrants remained Medicaid eligible, just like U.S. citizens, in all 50 states and the District of Columbia. Our hypothesis is that after welfare reform, qualified immigrants were less likely to enroll in Medicaid compared to the U.S.-born, even though they continued to have the same eligibility. There are several possible reasons for this differential decline in enrollment. One possibility is that the policies aimed at unqualified immigrants had a spillover effect. Interviews conducted with immigrants soon after welfare reform, found that some qualified immigrants expressed both fear and misinformation about Medicaid eligibility (Feld 2000; Stuber et al. 2000). Qualified immigrants

thought that enrolling in Medicaid would prevent them from becoming U.S. citizens, that the government would try to keep track of them through the Medicaid program, and that the new welfare reform laws made all immigrants ineligible. Another mechanism through which welfare reform may have differentially affected qualified immigrants is through the delinking of welfare and Medicaid, which meant that individuals on welfare were no longer automatically eligible for Medicaid. Most states continued to have a single application process and made efforts to ensure that individuals did not lose Medicaid coverage. Despite this, there is evidence that individuals were inadvertently dropped from Medicaid after welfare reform because of the numerous administrative changes, confusion over Medicaid case rules, and failure to update automatic eligibility notification systems (Ku and Garrett 2000). It is plausible that immigrants may have had more difficulty negotiating these changes or reapplying for Medicaid if they were erroneously dropped.

Our second question asks: was the size of the decline in enrollment for qualified immigrants less in states that continued Medicaid eligibility for unqualified immigrants compared to those in states that did not continue Medicaid for unqualified immigrants? We hypothesized that qualified immigrants living in the eight states that continued Medicaid for unqualified immigrants would experience less of a decline in enrollment than qualified immigrants living in states that did not cover unqualified immigrants. States may have been able to shield immigrants from the spillover effect of federal welfare reform by continuing Medicaid for all immigrants. Again, the mechanisms of this are complex and may include differences in state Medicaid programs that extend beyond their immigrant policy. However, because variations in state Medicaid programs are extensive and continuously changing, we chose to focus on the one policy toward immigrants that has been most constant since 1996.

METHODS

Data

This study used pooled, cross-sectional data from the March supplement of the CPS from two time periods, before and after welfare reform. The CPS is a monthly survey of about 50,000 households and 130,000 persons conducted by the Census Bureau for the Bureau of Labor Statistics. The CPS collects detailed information on income and employment and is the primary source of information on the labor force characteristics of the U.S. population. The March supplement was used for this study because in addition to income,

employment, and demographics, the March supplement is the only one with detailed information about health insurance coverage in the previous year, country of birth, citizenship status, and year of entry into the United States.

The CPS March sample includes the main CPS sample and an additional sample of Hispanic households. The basic CPS sample is selected from multiple frames using multiple stages of selection. This sample allows for national and state-level estimates. In order to increase the number of observations in the qualified immigrant group, data from all survey years were combined into a single dataset and then categorized into two time periods. Pre-welfare reform survey years were combined from March 1994 through March 1996 and post-welfare reform years were from March 1998 through March 2001. Data from the March 1997 supplement were not included because the immigration variables from that year are constructed in such a way that it is not possible to clearly determine which immigrants arrived in the United States before 1996, and also because we considered it a transition year.

Study Subjects

The sample for this analysis was restricted to qualified immigrants and U.S.-born citizens, ages 19–64. Naturalized U.S. citizens and unqualified immigrants were excluded from this analysis. United States-born citizens were defined as persons who were born in the United States, Puerto Rico, or other U.S. territories. In the pre-welfare reform sample (March 1994–March 1996), all foreign-born noncitizens were classified as qualified immigrants because the CPS interviews were conducted in March 1996, prior to the welfare reform cutoff date of August 22, 1996. In the post-welfare reform sample (March 1998–March 2001), only foreign-born noncitizens who reported immigrating prior to 1996 were classified as qualified and included in the sample. This cutoff was used because the CPS only reports year of immigration. If an individual in the post-welfare reform surveys reported immigrating in 1996, it was not possible to determine if this was before or after August 22, 1996.

All analyses included only individuals living in families with incomes below 200 percent of the federal poverty level (FPL). Although 200 percent of FPL does not by itself qualify most individuals for Medicaid, we limited our analysis to these low-income individuals, a group that includes the great majority of those likely to qualify for Medicaid. This approach has been previously used as a way to capture individuals most likely to enroll in Medicaid (Kronebusch 2001; Pezzin and Kasper 2002). In the combined 1994–1996 sample, there were 12,446 qualified immigrants and 56, 228 U.S.-born citizens.

In the 1998–2001 sample, there were 11,921 qualified immigrants and 60,079 U.S.-born citizens.

Study Variables

The dependent variable in this analysis was an individual's self-reported Medicaid enrollment. The independent variables were grouped into two domains—sociodemographic variables and state-level variables. Demographic variables included characteristics used by Medicaid programs to determine Medicaid eligibility, such as poverty level, income, household structure, and employment status, as well as variables that prior research has shown to be associated with Medicaid enrollment, such as gender, race, and level of education (Cromwell et al. 1997). Indicator variables were used to identify individuals as qualified immigrants versus U.S.-born citizens and post-welfare reform survey respondents (1998–2001) versus pre-welfare reform respondents (1994–1996). Family income was corrected for inflation over time by using the consumer price index. These independent variables are all independently associated with Medicaid enrollment. Because immigrants differ in their distribution of these independent variables, these variables are potential confounders and were included in the regression model.

To examine how state policy affected the impact of welfare reform on the Medicaid enrollment of qualified immigrants, we created two state groups based on state Medicaid policy toward unqualified immigrants. States that used state funds to continue Medicaid for unqualified immigrants were classified as "covered" states, and states that did not continue Medicaid for unqualified immigrants were classified as "not covered." "Covered" states were California, Massachusetts, Connecticut, Pennsylvania, Delaware, Maine, Minnesota, and Nebraska. The remaining 43 states and the District of Columbia were "not covered" states. Many of the states in the "not covered" group have extended Medicaid to specific subgroups of unqualified immigrants, such as the elderly, pregnant women, or children for some or all of the study period. However, these states all place restrictions on the eligibility of unqualified immigrants that are not applied to U.S.-born citizens. These state groupings were created using extant databases such as the State Policy Documentation Project (State Policy Documentation Project 1999), the National Governor's Association (National Governor's Association, State Welfare websites), and information provided directly from state Medicaid agencies. The other state-level variable in the analyses is the mean state unemployment level for each state from 1994–1996 and 1998–2001.

Statistical Analysis

First we computed the unadjusted proportions of qualified immigrants and U.S.-born citizens enrolled in Medicaid before and after 1996. To answer our first question, whether the enrollment of qualified immigrants declined more than the enrollment of U.S.-born citizens after welfare reform, we used multivariate logistic regression, with Medicaid enrollment as the dependent variable. The model was adjusted for the individual sociodemographic factors previously described and the state unemployment variable, to account for changes in the labor market that may have caused individuals to move from Medicaid to private insurance.

We also present our results as absolute differences in probabilities, across subgroups and time, net of other factors. We generated adjusted predicted probabilities of Medicaid enrollment from 1994–1996 and 1998–2001 for both qualified immigrants and U.S.-born citizens, using the demographic distribution of the qualified immigrants. The U.S.-born probabilities were adjusted to the demographic characteristics of the qualified immigrants. We did this by taking every qualified subject in the dataset and artificially setting their immigration status and year of the survey to each of four values (qualified pre-welfare, U.S.-born pre-welfare, qualified post-welfare, U.S.-born post-welfare). Next, for each setting we generated predicted probabilities of Medicaid enrollment. We then compared the difference in the predicted probabilities generated for the U.S.-born, before and after welfare reform, to the difference in the predicted probabilities for qualified immigrants, before and after welfare reform. The standard errors of the adjusted probabilities and the associated contrasts were obtained from the estimated variance–covariance matrix of beta-hat using the delta method. The delta method computes standard errors for functions of the parameter estimates (Rao 1983). The parameter estimates are beta-hat, and the adjusted probabilities are functions of beta-hat. The delta method uses the standard errors of beta-hat and generated standard errors of functions of beta-hat, which, in this case, are the adjusted probabilities.

To answer the second question, "was the size of the decline in enrollment less for qualified immigrants in 'covered' states than 'not covered' states," we add indicator variables and interaction terms to the logistic regression model that allow us to estimate the period effect for four groups: U.S.-born living in "not covered" states, qualified immigrants in "not covered" states, U.S.-born in "covered" states, and qualified immigrants in "covered states." While we do not present the entire model, we use the coefficients from the model to calculate the effect of welfare reform on enrollment within each of the four

population groups, adjusted for all of the potential confounders. We present the effect of welfare reform on enrollment by comparing post-welfare reform enrollment to pre-welfare enrollment within each of the four population groups. For this comparison, each group acts as its own referent (Table 3).

Next, we sought to examine if these results were consistent across states or were influenced by divergent patterns in particular states. The majority of immigrants reside in six states (California, New York, Florida, Texas, New Jersey, and Illinois). Among these, only California was a "covered" state. We tested the sensitivity of the results by rerunning the regression model excluding each of the six large immigrant states one at a time. Only California significantly affected the results. At least one-third of all immigrants live in California, and in this sample, 90 percent of the qualified immigrants in "covered" states were in California. California may not accurately represent what happened in the other "covered" states because of factors unique to California, such as Proposition 187, a widely publicized and controversial 1994 law denying health and social service benefits to illegal immigrants. Proposition 187 and the public dialogue around it may have sent mixed messages to legal immigrants in California and potentially also had a spillover effect. Therefore we repeated the full analysis with separate indicator variables for California and for the remaining seven "covered" states to determine if the results were being driven by California.

Standard regression diagnostics were performed on our logistic regression models, including the Hosmer-Lemeshow test (Hosmer and Lemeshow 1989) and examination of residual plots. The regression analysis and all population estimates were weighted using sampling weights provided by the Census Bureau for the March supplement of the CPS; robust estimates accounted for weighting in the variance estimation. Statistical significance was measured at the 95 percent confidence interval level ($p<0.05$). Data were analyzed using *STATA 7.0* (Stata 2001).

RESULTS

In the CPS sample, qualified immigrants were significantly younger, poorer, more likely to have dependent children, to be married, and to be unemployed than the U.S.-born (Table 1). These characteristics are important determinants of Medicaid eligibility. Qualified immigrants were also much more likely to be Hispanic or Asian and much less likely to be black or white (Table 1). Before 1996, 19 percent of low-income qualified immigrants reported enrollment in

Table 1: Characteristics of Qualified Immigrants and the U.S.-Born, before and after Welfare Reform

	Before Welfare Reform (1994–96)		*After Welfare Reform (1998–2001)*	
	Qualified Immigrants	*U.S.-Born Citizens*	*Qualified Immigrants*	*U.S.-Born Citizens*
Medicaid enrollment (%)	18.5	22.4	13.8	20.4
Age (years)	35.4	37.4	36.4	38.2
Education (%)				
Less than HS	57.1	26.6	58.3	24.2
HS diploma	21.4	40.3	22.5	40.8
Some college	9.7	19.8	9.4	20.3
College and above	11.8	13.3	9.8	14.7
Married (%)	55.0	40.1	58.1	36.7
Dependent children (%)	61.3	48.0	65.3	45.3
Single parent with dependent child (%)	17.7	20.5	17.6	21.9
Family size				
0–2 persons	32.6	49.0	29.2	53.1
3–4	34.2	33.7	37.0	30.6
5–6	23.1	14.1	25.1	13.5
>7 persons	10.0	3.2	8.7	2.9
Annual family income ($)	15,058	13,831	18,159	15,101
Unemployed (%)	39.0	35.7	34.0	35.9
Poverty level				
<.50 FPL	18.2	16.2	14.8	16.4
.50–.74 FPL	13.3	11.3	10.6	10.9
.75–.99 FPL	15.2	12.4	14.2	12.2
1.00–1.24 FPL	14.3	13.2	16.2	13.9
1.25–1.49 FPL	13.9	14.8	15.7	14.8
1.50–1.74 FPL	12.8	16.0	14.9	15.5
1.75–1.99 FPL	12.2	16.0	13.8	16.2
Race/Ethnicity				
White (Non-Hispanic)	11.8	67.0	9.2	65.4
Black	6.9	22.7	7.6	22.9
Asian	13.6	0.64	11.8	0.81
Hispanic	66.9	8.3	71.2	9.2
Other	0.72	13.4	0.12	16.0

Medicaid compared to 22 percent of the U.S.-born (Table 1). After 1996, the proportion of qualified immigrants enrolled in Medicaid fell by 25 percent to 13.8 percent, whereas for U.S.-born it fell by 9 percent to 20.4 percent (Table 1).

The results of the baseline regression model confirm these descriptive results after adjusting for demographic factors that might affect enrollment

Table 2: Logistic Regression of Medicaid Enrollment for U.S.-Born Citizens and Qualified Immigrants before Welfare Reform, 1994–1996

Medicaid Enrollment	*Odds Ratio*	*95% Confidence Interval (CI)*
U.S.-born, before welfare reform (referent)	1.00	
Qualified immigrant, before welfare reform	0.55	0.51, 0.59*
U.S.-born, after welfare reform	0.90	0.87, 0.93*
Qualified immigrant, after welfare reform	0.42	0.38, 0.45*
Sex (Female)	1.47	1.41, 1.52*
Married	0.43	0.41, 0.45*
Unemployed	3.82	3.69, 3.96*
Family income (per $1000)	0.66	0.65, 0.68*
Having dependent children		
Age <6 years	3.65	3.49, 3.82*
Ages 7–18 years	2.54	2.42, 2.65*
Education (<HS, referent)		
High school graduate	0.61	0.58, 0.63*
Some college	0.47	0.45, 0.50*
College graduate	0.35	0.33, 0.37*
Race (non-Hispanic white, referent)		
Black	1.40	1.34, 1.47*
Asian	1.35	1.21, 1.52*
Hispanic	0.95	0.91, 1.00
Other race	1.76	1.56, 1.99*
Covered state	1.57	1.51, 1.63*
State unemployment (%)	1.01	1.00, 1.01*

*$p \leq 0.01$.

(Table 2). Prior to welfare reform, qualified immigrants were less likely to enroll in Medicaid than U.S.-born citizens (odds ratio [OR] = 0.55; 95 percent confidence interval [CI], 0.51, 0.59) (Table 2). After welfare reform, there was a negative period effect on enrollment for both the U.S.-born and qualified immigrants (Table 2). Medicaid enrollment fell among the U.S.-born (OR = 0.90; 95 percent CI, 0.87, 0.93) and qualified immigrants (OR = 0.42; 95 percent CI, 0.38, 0.45) (Table 2). The test of whether the decline was greater for qualified immigrants is significant ($p = 0.008$); after welfare reform, qualified immigrants had a significantly greater decline in Medicaid enrollment than U.S.-born citizens.

We also calculated the change in Medicaid enrollment by adjusting the U.S.-born population to the demographic characteristics of the qualified immigrants and generating absolute predicted probabilities of Medicaid enrollment and the associated confidence intervals for both groups by time period, from 1994–1996 and 1998–2001. The adjusted predicted probability

of Medicaid eenrollment of low-income qualified immigrants dropped from 0.176 (95 percent CI, 0.169, 0.183) to 0.146 (95 percent CI, 0.139, 0.153). For the U.S.-born it dropped from 0.259 (95 percent CI, 0.252, 0.265) to 0.242 (95 percent CI, 0.236, 0.249). Thus, the enrollment dropped three percentage points (standard error [s.e.] = 0.005, $p < 0.01$) for the qualified immigrants and 1.6 percentage points (s.e. = 0.003, $p < 0.01$) for the U.S.-born; this 1.4 percentage point difference (s.e. = 0.006) is statistically significant ($p = 0.012$).

To answer the second study question about the effect of state policy on Medicaid enrollment after welfare reform, we examined enrollment for the U.S.-born and qualified immigrants in "not covered" and "covered" states using logistic regression (Table 3, Model 1). After welfare reform, Medicaid enrollment declined for both the U.S.-born (OR = 0.87; 95 percent CI, 0.84, 0.91) and qualified immigrants (OR = 0.73; 95 percent CI, 0.65, 0.83) in "not covered" states, with the decline being greater among qualified immigrants (Table 3, Model 1). In the "covered" states, enrollment also declined for qualified immigrants (OR = 0.80; 95 percent CI, 0.70, 0.91), but did not change for U.S.-born citizens (Table 3, Model 1). To determine whether the

Table 3: Logistic Regression of Medicaid Enrollment after Welfare Reform Compared to before Welfare Reform

	Odds Ratio[†]	*95% CI*
Model 1		
Not covered states		
U.S.-born citizens	0.87	0.84, 0.91*
Qualified immigrants	0.73	0.65, 0.83*
Covered states (all 8)		
U.S.-born citizens	1.01	0.94, 1.10
Qualified immigrants	0.80	0.70, 0.91*
Model 2		
California		
U.S.-born citizens	0.97	0.85, 1.10
Qualified immigrants	0.76	0.66, 0.87*
Seven covered states, excluding California		
U.S.-born citizens	1.00	0.90, 1.10
Qualified immigrants	1.29	0.86, 1.95

Note: Adjusted for sex, marital status, employment, income, household structure, education, race, and state unemployment level.

*$p \leq 0.01$

[†]These odds ratios for Medicaid enrollment represent a period effect, comparing post-1996 to pre-1996 enrollment within each population group (defined by state policy and immigrant status). Each group is its own referent, and each odds ratio is in comparison to a pre-1996 odds ratio of enrollment, which is 1.00.

decline in enrollment for qualified immigrants was less in "covered" states than in "not covered" states, we performed a significance test using an interaction term between immigrant status, time period, and state policy. The test was not significant ($p = 0.52$), suggesting that Medicaid enrollment dropped similarly among qualified immigrants in "covered" and "not covered" states, and that state Medicaid policy did not buffer the negative effects of federal welfare reform.

Next, we constructed a regression model separating California from the other seven "covered" states (Table 3, Model 2), and determined whether the period effect of welfare reform on Medicaid enrollment was similar across states. A different picture emerges. Although the period effects on enrollment for the U.S.-born and qualified immigrants in "not covered" states shows a decline that is similar to the previous model (OR, U.S.-born = 0.88; 95 percent CI, 0.85, 0.92; OR, qualified immigrants = 0.73; 95 percent CI, 0.65, 0.83), the effect in the "covered" states is different when California is analyzed separately. When California is separated, Medicaid enrollment among qualified immigrants and the U.S.-born in the remaining 7 covered states does not decline significantly after welfare reform (OR, U.S.-born = 1.00; 95 percent CI, 0.90, 1.10; OR, qualified immigrant = 1.29; 95 percent CI, 0.86, 1.95) (Table 3, Model 2). In California, enrollment decreases significantly for qualified immigrants (OR = 0.76; 95 percent CI, 0.66, 0.87), but does not change for the U.S.-born (Table 3, Model 2).

DISCUSSION

The results of this study indicate that welfare reform, which limited the Medicaid eligibility of specific subgroups of immigrants, appears to have had unintended consequences on Medicaid enrollment in the larger, still eligible immigrant community. Nationally, the disparity in Medicaid enrollment between low-income qualified immigrants and U.S.-born citizens increased after welfare reform. Several studies have documented that immigrants are less likely than U.S.-born citizens to have health insurance and Medicaid (Carrasquillo, Carrasquillo, and Shea 2000; Ku and Matani 2001; Thamer et al. 1997). In contrast, this study looks only at enrollment of qualified immigrants who remained eligible after welfare reform. Although there are many reasons unrelated to policy that an immigrant might not enroll in Medicaid, this analysis demonstrates a steeper decline in the Medicaid enrollment of low-income qualified immigrants after welfare reform compared to the U.S.-born. This

disparity in Medicaid enrollment exists after controlling for socioeconomic differences, state policy, and state unemployment. There are several mechanisms through which welfare reform may have deterred qualified immigrants from applying for Medicaid. Welfare reform may have raised fear in immigrants, resulted in misinformation about eligibility and how Medicaid affects applications for citizenship (Feld 2000; Nolan et al. 2000; Stuber et al. 2000). Qualified immigrants may have also been disproportionately affected by the delinking of welfare and Medicaid, which may have exacerbated an already complex application process. Although policymakers claimed they only intended to deter the Medicaid enrollment of future immigrants, they appear to have also deterred the Medicaid enrollment of immigrants already in the United States. Policies that attempt to target only a subset of a larger group may fail in their effort to be specific, and instead, have spillover effects. These results should raise concern about the negative and differential effect that federal welfare reform has had on low-income qualified immigrants.

In this analysis, the odds of Medicaid enrollment among qualified immigrants appeared to drop equally in states that did and did not offer coverage to unqualified immigrants after welfare reform, and could lead to the conclusion that inclusive state policies had a minimal effect on immigrants' Medicaid enrollment. However, this finding primarily reflects what happened in California. California's continued Medicaid coverage did not avoid a spillover effect on qualified immigrants. However, comprehensive Medicaid eligibility for legal immigrants in the other seven covered states did appear to buffer the spillover effect of welfare reform. This analysis cannot determine how much of this is due to differences in state policy versus other differences in how states implement or tailor Medicaid programs to the needs of their immigrants groups. It is also possible that the social and political climate in individual states both affected the policy choices that the state made and also directly affected immigrants in ways that influenced their Medicaid enrollment decisions. There is no single characteristic or set of characteristics that distinguishes the eight states that continued Medicaid for all immigrants after welfare reform (Zimmerman and Tumlin 1999). Some had sizeable immigrant populations (California and Massachusetts), while others had a negligible immigrant population (Nebraska and Maine). The states also varied with regards to their budget surplus, per capita income, strength of their safety net, and prior Medicaid generosity (Zimmerman and Tumlin 1999). The majority of states that continued Medicaid coverage were led by Republican governors, a party generally less likely to support increases in welfare eligibility. Although the states do not seem obviously similar with regard to their social and political

environment, states that continued Medicaid coverage for immigrants may have sent a more positive message to their immigrant communities and created an atmosphere that promoted Medicaid enrollment. This may be why California is different from the remaining seven covered states. California continued eligibility for qualified and unqualified immigrants, while at the same time pursuing an aggressive campaign against undocumented immigrants' use of Medicaid and other services. This mixed message may have created an atmosphere that deterred all immigrants from enrolling in Medicaid.

This study has several limitations, some of which are inherent to the use of the CPS. The CPS data are based on self-report and individuals are asked about Medicaid coverage in the prior year, rather than at the present time. The CPS tends to underestimate Medicaid coverage when compared to Medicaid administrative data. Immigration status has never been shown to be a predictor of underreporting Medicaid status in the CPS (Mills 2000). It is possible that immigrants were less likely to report being in Medicaid after 1996, especially if they were afraid of providing personal information to government authorities. The CPS also does not contain any information on the legal status of the immigrants surveyed and we may have misclassified illegal immigrants as qualified immigrants. If the post-1996 sample had more illegal immigrants, then they would not have qualified for Medicaid. Because the sample was restricted to individuals who immigrated prior to 1996, the proportion of illegal immigrants in the survey population should have been similar in the pre- and post-welfare reform samples. Changes in the names of Medicaid programs after 1996 may have also affected individual reporting, despite CPS interviewers being trained to use state Medicaid program names when interviewing individuals in different states. This analysis also did not account for many individual- and state-level factors that might affect an individual's willingness to enroll in a Medicaid program. It is also difficult to isolate the role of the anti-immigrant legislation on the decline in Medicaid enrollment among qualified immigrants. We cannot exclude the possibility that concurrent factors may have influenced changes in Medicaid enrollment. Other limitations include pooling together several survey years and grouping states together based only on the absence or presence of one type of Medicaid policy toward immigrants. This was done to increase the sample size of the qualified immigrants living below 200 percent of the FPL; examining enrollment trends on a more detailed level was not feasible, especially at the state-level. Although there are limitations to the CPS data, this dataset has several advantages. It is one of the largest datasets that is representative of the U.S. population, includes data collected to represent all 50 states and the

District of Columbia, and also collects information on immigration status, year of entry into the United States, as well as detailed health insurance and demographic information.

IMPLICATIONS

Our finding that qualified immigrants living below 200 percent of the FPL have lower rates of Medicaid enrollment than U.S.-born citizens has several policy implications. While the 1996 welfare reform policy only intended to prevent the Medicaid enrollment of future waves of immigrants, it also had a negative impact on the Medicaid enrollment of low-income immigrants already in the United States Although California's continued coverage of more recent immigrants did not prevent declines in Medicaid enrollment among qualified immigrants, the other seven states that continued coverage of all legal immigrants after August 22, 1996, were able to counteract the negative effects of welfare reform. Future research should seek to determine if inclusive state policies are the mechanism through which "covered" states maintained the Medicaid enrollment of their qualified immigrants, or if there are other differences in the programs and their implementation, or other characteristics of the states, that can explain this finding. Inclusive state policies may be one way to improve Medicaid enrollment among immigrants. However, current state fiscal crises have already resulted in several states eliminating Medicaid for previously eligible immigrants (Ku and Nimalendran 2003). It is unlikely that states will be willing to shoulder the cost of Medicaid for immigrants without federal matching funds. In May 2003, Congress approved increasing the federal Medicaid matching percentages (FMAP) to provide fiscal relief to states and prevent further cutbacks in state Medicaid. This increase did not include state Medicaid programs that cover unqualified immigrants. In addition to the fiscal relief already provided, Congress should consider expanding federal matching funds to state Medicaid programs that cover unqualified immigrants.

United States government policy plays a significant role in determining new immigrants' access to social and economic resources. Growing evidence suggests that immigrants have many unmet health needs (Ayanian et al. 2000; Swan et al. 2003), some of which may be due to or exacerbated by a lack of health insurance. Immigrants tend to be poorer than U.S.-born citizens and are much less likely to have employee-sponsored or private health insurance. Although safety-net systems may shoulder some of the burden of uninsured immigrants, these systems are increasingly overburdened (Baxter and

Mechanic 1997) and have been shown to have only a modest effect on reducing disparities in access (Hargraves and Hadley 2003). Medicaid could potentially insure many immigrants and lead to improved access and utilization of health services. Medicaid programs should target qualified immigrants (adults and children) and make it clear that they remain eligible for Medicaid. Other efforts that may aid in the enrollment of qualified immigrants include easing the application process and providing materials and enrollment services in languages other than English. Although more research is needed to understand the health consequences of welfare reform, policies that limit the Medicaid eligibility of legal immigrants are significant obstacles to improving the quality of care for immigrants and meeting their health needs. Policymakers should address the factors that are impeding the Medicaid enrollment of potentially eligible immigrants and should consider interventions to increase their enrollment.

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