Welfare Reform and Health Insurance of Immigrants

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Abstract

This paper investigates the effect of the Personal Responsibility and Work Opportunity Reconciliation Act (PRWORA) on the health insurance coverage of foreign- and US-born families. We find that PRWORA increased the proportion of uninsured among low-educated, foreign-born unmarried women by 9.9 to 10.7 percentage points. In contrast, the effect of PRWORA on the health insurance coverage of similar US-born women is negligible. We also find that PRWORA increased the proportion of uninsured among foreign-born children living with low-educated, single mothers by 13.5 percentage points. Again, the policy had little effect on the health insurance coverage of the children of US-born, low-educated single mothers. Finally, our investigation finds some evidence that the fear and uncertainty engendered by the law had real effects on immigrant health insurance coverage.

Keywords: Access to Healthcare, Social Policy, Immigrants.

INTRODUCTION

The Personal Responsibility and Work Opportunity Reconciliation Act (PRWORA) changed legal immigrants' access to public health insurance in two ways. Directly, by denying Medicaid benefits to immigrants who arrived in the US after August 1996, and indirectly, by denying or limiting immigrant participation in Temporary Aid to Needy Families (TANF), which is an important entry point into Medicaid. An explicit objective of Federal law was to restrict immigrant use of means-tested programs. However, many state governments responded to the immigrant provisions in PRWORA by creating substitute means-tested programs for those immigrants who were adversely affected by the Federal policy.

Despite this inclusive approach adopted by several states, immigrants' dependence on means-tested programs such as TANF, Medicaid and Food Stamps fell sharply subsequent to the passage of the Federal law, raising concerns that the fear or stigma associated with PRWORA may have had a "chilling" effect, causing even those immigrants who were eligible for benefits not to seek them (Fix and Passell 1999). The decline was particularly noticeable for Medicaid, but its cause is unclear. The decline in Medicaid may have been a consequence of the provisions in PRWORA, or of the stigma attached to it; or the decline may have been the result of other factors such as the economic boom of the nineties. To date, research has not clearly established the relative importance of these or other causes.

If PROWRA was responsible for a decrease in immigrant health insurance coverage, it would most likely reduce health care utilization by poor immigrant families, and possibly adversely affect their health. If, on the other hand, welfare reform induced immigrants to seek jobs that covered health insurance (reverse of crowd-out effect), the decline in Medicaid use may not have any adverse effect on immigrant health (Borjas 2003). Which of the two scenarios is accurate is an important policy issue.

In this paper, we investigate whether PRWORA had an effect on the health insurance of low-educated, unmarried foreign-born women and their children; and compare that with the effect of welfare reform on the health insurance of native-born families with similar characteristics. We also study if newly arrived immigrants were affected by PRWORA more than their older cohorts. Finally, we examine

the validity of the "chilling" hypothesis, which posits that immigrants responded not to the actual provisions of the law, but to the stigma or fear associated with it. To do so, we estimate the effect of PRWORA on new immigrants living in states with substitute TANF and/or Medicaid programs and on those living in states that do not provide these benefits to new immigrants. If the two groups were similarly affected by the policy change, it would be evidence consistent with the "chilling" hypothesis.

IMMIGRANTS, HEALTH INSURANCE AND PRWORA

PRWORA altered legal (i.e., legal permanent residents) immigrants' access to public health insurance by denying immigrants who arrived in the US after August 1996 Medicaid coverage for all but emergency care in the first five years of their residency. However, 15 states, including some large immigrant states such as California and Illinois, created substitute Medicaid programs for newly-arrived legal immigrants. In the remaining states, which also include a number of major immigrant states like Texas, Florida and New Jersey, newly arrived legal immigrants do not have access to Medicaid.[1] Legal immigrants who arrived prior to August 1996 continue to have access to Medicaid in all states except Wyoming and illegal (i.e., illegally residing in the United States) immigrants continue to not have access to Medicaid.

PRWORA also denied post-August 1996 legal immigrants TANF in the first five years of their residency in the US. TANF is an important entry point into Medicaid, so its denial may restrict immigrant use of public health insurance. Again, 19 states used state level funds to create substitute TANF programs to meet the welfare needs of newly arrived legal immigrants during the five-year bar. Illegal immigrants remain ineligible for TANF.

Finally, like citizens, all legal immigrants were potentially affected by the policy changes of PRWORA, which instituted time-limited benefits, imposed work requirements and sanctioned benefits if a recipient failed to meet the work requirements. The basic goal of PRWORA was to reduce dependence on public assistance and encourage economic self-sufficiency through work. As a result many low-

[1] Initially, new immigrants were ineligible for Medicaid in New York. A court decision in June 2001, however, rendered that unconstitutional.

income women were diverted from or encouraged to leave public assistance and this may have adversely affected their health insurance status. Women who leave TANF are eligible for transitional Medicaid benefits, but these benefits end after one year. Moreover, administrative hurdles may reduce take-up rates for transitional benefits. Since the jobs that low-income women typically get after leaving welfare do not provide health insurance coverage, a transition from welfare to work may also mean transition from state-provided insurance to no insurance. And there are no transitional benefits for women who are deterred from entering welfare. As many of these women are employed, their earnings may push them over the very low Medicaid income-eligibility thresholds for adults.

PRWORA did not distinguish between the pre-1996 legal immigrants and US citizens, and the post-1996 legal immigrants have access to means-tested programs in states that have created substitute programs for newly arrived immigrants. Since the law singles out only a small proportion of legal immigrants, the large relative declines in welfare and Medicaid observed among this group is a puzzle.[2] Many observers believe that PRWORA created an atmosphere of fear and confusion among immigrants (Fix and Passel 1999). Surveys by the National Health Law Program and the National Immigration Law Center indicate that fear of deportation from the US discouraged immigrants from obtaining publicly subsidized health care even when they were entitled to it (Schlosberg and Wiley 1998). This apparent unintended effect of PRWORA that caused fear, confusion and stigma among immigrants has been referred to as the "chilling" effect.

According to the "chilling" hypothesis, PRWORA may have influenced the health insurance outcomes of immigrants in a number of indirect ways. First, the pre-1996 immigrants who like citizens are eligible for Medicaid and TANF may be confused about the law or afraid that seeking benefits would adversely affect their chances of acquiring citizenship. Therefore, the pre-1996 immigrants may not be seeking benefits even when eligible. Second, foreign-born parents may not seek benefits for their US-born children in the fear that dependence on means-tested programs may jeopardize the parents' chances

[2] Increased naturalizations during the nineties fail to explain the trend (Fix and Haskins 2002, Kaestner and Kaushal 2004).

of acquiring the legal permanent residence status or citizenship or it may even become a cause of parents' deportation. Finally, post-1996 immigrants living in states with substitute programs may not know of the existence of these programs or may be just scared of accessing the substitute programs due to fears of deportation or anxiety that dependence on means-tested programs may jeopardize their visa status.

PREVIOUS RESEARCH

Several studies document a decline in Medicaid enrollment among low-income women and children after the implementation of welfare reform (Families USA Foundation 1999; Kronebusch 2001; Ku and Garrett 2000). Previous research also indicates that a substantial number of welfare "leavers" were uninsured in the year after leaving welfare (Moffitt and Slade 1997; Guyer 2000; Garrett and Holahan 2000; Garrett and Hudman 2002). However, a more comprehensive analysis of the issue covering the experience of both welfare "leavers' as well as those deterred from entering welfare found much smaller changes in health insurance coverage. Evidence in Kaestner and Kaushal (2003) suggests that the approximately 50 percent decline in caseload since 1996 raised the proportion of uninsured low-educated mothers by only two to nine percent. Kaestner and Kaushal (2003) also report that changes in the welfare caseload due to welfare reform had less adverse effects on health insurance coverage than changes in the welfare caseload due to other factors such as a strong economy.

The effect of PRWORA on the health insurance status of immigrants is less widely researched. Borjas (2003) investigated the effect of PRWORA on the health insurance of non-elderly immigrants and found that the policy did not reduce their health insurance coverage. Although he found that welfare reform was associated with a decrease in Medicaid coverage, this decline was offset by an increase in private insurance coverage.

Three aspects of this study merit comment. First, only a small fraction of non-elderly immigrants are eligible for Medicaid and TANF and therefore PRWORA is likely to affect the health insurance coverage of a small portion of the sample. By using a sample of all non-elderly immigrants, Borjas (2003) assumes that the determinants of health insurance are the same for all sub-populations within this group. It is

possible that there may be significant heterogeneity in the determinants of health insurance coverage within the immigrant sample that may confound the effect of PRWORA. For example, the determinants of employer-sponsored health insurance may be quite different for young, single mothers than for older, married men. Thus, some effects of PRWORA may have been obscured in the Borjas (2003) study. Second, Borjas (2003) uses a definition of the policy environment that is broad, and not focused on policies relating to health insurance. For instance, he assumes that denial of food stamps and SSI benefits would have the same effect on the health insurance of immigrants as the denial of Medicaid or TANF. Finally, Borjas (2003) uses natives as a comparison group for immigrants and obtains estimates of the difference in the effect of PRWORA on immigrants relative to natives. This is not the same as measuring the effect of PRWORA on immigrant health insurance. Further, this approach assumes that in the absence of PRWORA, changes in immigrant and native health insurance status pre- and post-PRWORA would have been the same, which is inconsistent with the mean levels of health insurance that differ significantly between non-citizens and natives.

Our research differs from Borjas (2003) in several ways. First, we focus on a group that is more likely to be affected by welfare reform—low-educated, unmarried women and their children—than the group examined by Borjas (2003). Second, we use other immigrants instead of natives as a comparison group. Third, we specifically look at changes in Medicaid and TANF policies, the two aspects of PRWORA that are most likely to affect health insurance.

RESEARCH DESIGN

Our objective is to obtain estimates of the association between federal welfare reform (PRWORA) and health insurance coverage of low-educated foreign- and US-born single women and their children. Ideally, we would like to obtain estimates that can plausibly be given a causal interpretation. Therefore, we use multivariate regression methods and a pre- and post-test with comparison group research design. The starting point of this empirical approach is the following regression model:

$$\text{Insurance}_{icjt} = \alpha + \beta_j + \delta_{jt} + \lambda_c + \gamma \text{Policy}_{jt} + Z_{jt}\Delta + X_{ijt}\Gamma + u_{icjt}$$
$$i = 1,..., N \text{ (persons)}$$
(1) $$c = 1,...., C \text{ (country of birth)}$$
$$j = 1,...,51 \text{ (states)}$$
$$t = 1993,...,2000 \text{ (years)}$$

In equation (1), health insurance status (e.g., Medicaid) of woman i from country c (if foreign born) in state j and year t is a function of welfare reform (Policy_{jt}) in state j and year t; state characteristics (Z_{jt}) such as Medicaid income eligibility threshold, unemployment rate and lagged unemployment rate; individual characteristics (X_{ijt}) such as age, race, education, other family income, family composition, citizenship status (if foreign born), number of years lived in the US (if foreign born), and whether arrived in the US prior to 1996 (if foreign born); state fixed effects (β_j); and country fixed effects (λ_c). In addition, we include state-specific quadratic time trends (δ_{jt}) to capture unmeasured, time-varying state effects. Over a relatively short period, as in the current context, quadratic time trends may be expected to approximate reasonably well, unmeasured, time-varying state-specific influences. A similar model is used in the analysis of children's health insurance coverage.

We estimate equation (1) for two groups: those likely to be affected by PRWORA and those unlikely to be affected by it. We refer to the former as the target group and the latter as the comparison group. Since the comparison group is mostly unaffected by PRWORA, estimates of the effect of policy on this group quantify the effect of unmeasured variables that affect health insurance and are correlated with welfare reform. To obtain the "causal" effect of PRWORA on the health insurance of the target group, we subtract the effect of PRWORA on the comparison group from the effect on the target group. This approach is commonly referred to as difference-in-differences (DD). The DD estimates can also be obtained directly using the following specification:

$$
\begin{aligned}
\text{Insurance}_{icjt} = {} & \tilde{\alpha} + (\alpha - \tilde{\alpha})\text{Treat}_i + \tilde{\beta}_j + (\beta_j - \tilde{\beta}_j)\text{Treat}_i + \tilde{\lambda}_c + (\lambda_c - \tilde{\lambda}_c)\text{Treat}_i \\
& + \tilde{\delta}_{jt} + (\delta_{jt} - \tilde{\delta}_{jt})\text{Treat}_i + \tilde{\gamma}\,\text{Policy}_{jt} + (\gamma - \tilde{\gamma})(\text{Policy}_{jt} \text{ x Treat}_i) + \\
& Z_{jt}\tilde{\Delta} + (Z_{jt} \text{ x Treat}_i)(\Delta - \tilde{\Delta}) + X_{icjt}\tilde{\Gamma} + (X_{ijt} \text{ x Treat}_i)(\Gamma - \tilde{\Gamma}) + v_{icjt}
\end{aligned} \tag{2}
$$

The only new variable in equation (2) is "Treat", which is equal to one if the observation is from the target group, and zero if it is from the comparison group. The difference-in-differences estimate of the effect of welfare policy is $\gamma - \tilde{\gamma}$. Equation (2) is the least restrictive specification possible since it allows for a complete set of interactions between the covariates and the target group dummy variable (Treat). The only identifying restriction is that in the absence of PRWORA, unmeasured state-year influences on the health insurance status of the target and comparison groups would have been the same.[3] If this assumption is valid, then estimates of $\gamma - \tilde{\gamma}$ may be given a "causal" interpretation.

A second objective of the research is to provide evidence as to the importance of the "chilling" hypothesis. We employ three strategies to discern the presence of the "chilling" effect. The first model is a relatively simple one in which we divide the target group in two categories: those who arrived in the US less than five years ago and those who arrived five or more years ago. If the two groups are similarly affected by PRWORA that would provide evidence consistent with the "chilling" hypothesis. Next, we test the "chilling" hypothesis on the post-1996 immigrants. We exploit the heterogenous responses by states to create a substitute TANF or Medicaid program for newly arrived immigrants to investigate whether and to what extent the estimated effect of PRWORA on newly arrived immigrants is related to the actual provisions of the law. In this analysis, we divide immigrants in two groups: post- and pre-1996 immigrants. These two groups are further sub-divided depending on immigrant's state of residence, that is, whether an immigrant lives in a state with at least a substitute Medicaid or TANF program for newly arrived immigrants or in a state with neither of the two programs. If the two groups of post-1996

[3] To improve the efficiency of the DD estimates, we tested whether the state fixed effects and state-specific trends were equal for the target and comparison groups. In the majority of cases, we could not reject the restriction, which is evidence consistent with the identifying assumption that unmeasured state-specific effects are also equal for the target and comparison groups. Similarly, for the analysis of foreign-born persons, we constrained the effects of country dummy variables to be the same for the target and comparison group after tests of this restriction failed to reject the hypothesis of equality.

immigrants are similarly affected by PRWORA that would again be evidence consistent with the "chilling" effect. By allowing the effect of the policy to differ for the pre-1996 immigrant group we are able to test whether the difference in effect for the post-1996 immigrants is a state effect or a policy effect.

Finally, we test the chilling hypothesis in the children's analysis by comparing the effect of PRWORA on foreign-born children of foreign-born parents and US-born children of foreign-born parents. US-born children of foreign-born parents are not affected by the immigrant provisions since they are US citizens. Therefore, PRWORA should have a more muted effect on their health insurance status vis-à-vis foreign-born children of foreign-born parents. If not, this would again be evidence consistent with the "chilling" hypothesis.

Selecting Target and Comparison Groups

The efficacy of the pre- and post-test with comparison group research design depends critically on the validity of the target and comparison groups. Identifying a target group is relatively straightforward, as we need to identify a group likely to be affected by PRWORA. A good choice is single mothers and their children since these families constitute the majority of the welfare caseload (Kaestner and Kaushal 2003). However, due to sample size considerations, particularly with respect to immigrants, we cannot limit the analysis to women with children. Therefore, we use all low-educated unmarried women as our target group. According to the March Current Population Survey, in 1993, 20 percent of unmarried, foreign-born women aged 18 to 44 years, with 12 or fewer years of education received TANF and 31 percent were covered by Medicaid, which is a good indicator of potential risk of receipt of public assistance. Indeed, given that AFDC is the primary point of entry for Medicaid among adults, the significantly larger proportion of the sample that is covered by Medicaid is consistent with the notion that a larger proportion of the sample is at risk of entering the AFDC program.[4] Among the US-born unmarried women, 23

[4] The Medicaid income eligibility thresholds for adults are the same as those for AFDC; the Medicaid income eligibility expansions so prominent during this period pertain to children and pregnant women.

percent received welfare and 34 percent were covered by Medicaid. It is important to note that these figures on program participation represent the minimum proportion of women likely to be affected by PRWORA since a significantly larger proportion of women are at risk of receiving public assistance and therefore their behavior may be influenced by welfare policy. Nevertheless, the fact that not 100% of the target group is affected by changes in the policy will result in downward biased DD estimates of the effect of PRWORA on insurance status (i.e., the effect of treatment on the treated). For example, if only 50% of the target group is at risk, estimates obtained using this group will be half as large as the true effect of interest (i.e., treatment on the treated).

The choice of the comparison group is more difficult. Ideally, the comparison group should consist of those whose health insurance coverage, and the determinants of that coverage are similar to the target group, but who are unlikely to be affected by welfare reform. One comparison group we use is low educated, married women with the same nativity status. A drawback of using this comparison group is that a small fraction of this group is at risk of receiving public assistance. For instance, in 1993, 5.7 percent of the married, foreign-born women with 12 or fewer years of education received cash benefits and 15 percent received Medicaid. Similarly, four percent of the US-born married women with low-education received welfare and 10 percent received Medicaid. This results in additional downward bias. Continuing with the example above, if 50% of the target group is at risk and 10% of the comparison group is at risk, then estimated effect will be 40% of the true causal effect.

A second comparison group we use is low-educated (education $\leq$ 12 years) men, a group that is unlikely to be affected by welfare reform. The advantage of this group is that no members of this group are eligible for (federal) public assistance. However, given differences in male and female labor market opportunities, it is uncertain whether the determinants of health insurance coverage of this group are similar to that of unmarried, low-educated women. We comment further on this point below.

A second issue concerning our choice of target and comparison groups is the use of marital status to define the groups. Welfare reform may have affected marital status. Therefore the composition of our target and comparison groups may change pre- and post-welfare reform and the estimated effects will

consist of the behavioral response to welfare reform plus the effect of the compositional change. Existing evidence, however, does not suggest that welfare reform has caused significant changes in marital status (Grogger et al. 2002). Therefore, the compositional effect should be quite small. Moreover, compositional changes, if they occur, are a consequence of reform and therefore are part of the total effect of welfare reform on insurance status.

The target groups in the children's analysis are children of US-born, low-educated, single mothers and children of foreign-born, low-educated, single mothers. The latter is further stratified according to child's nativity status. Our comparison groups are children of low-educated, married mothers with the same nativity status as the target group. So, for example, in the analysis of foreign-born children of foreign-born single mothers, the comparison group is foreign-born children of foreign-born married mothers.

It is difficult to assess the validity of the comparison groups. We chose to compare families with similar levels of education given the importance of education in determining welfare participation and labor market opportunities. We also hold constant many important observed determinants of health insurance.

The most convincing test of the identifying assumption of the difference-in-differences methodology would be to implement the difference-in-differences procedure in the absence of the policy change. The expectation is that the difference-in-differences estimate would be zero because there was no intervention and the comparison group should adequately control for confounding trends. Unfortunately, we cannot implement such a test because we do not have information on health insurance coverage of immigrants prior to 1993 and state policies similar to PRWORA were being implemented in the period between 1993 and passage of PRWORA.

Another, perhaps less perfect, way to assess the validity of our research design is to compare the mean rates of insurance coverage of the target and comparison groups. Means of roughly similar magnitudes would suggest that the insurance status of the two groups is influenced by similar factors. This is not a definitive assessment because the difference-in-differences procedure only assumes that pre-

and post-policy *changes* in insurance status that are not caused by policy are the same for the target and comparison group, which does not require the two groups to have similar means. But we believe that the identifying assumption is on firmer ground when means are similar since it is difficult to explain mean differences without some appeal to different underlying (some unmeasured) influences between the two groups. Moreover, similar means also eliminate the need to choose between an analysis based on relative changes vis-à-vis absolute changes.

Table 1 presents mean rates of insurance coverage for the target and comparison groups used in the analysis. We focus on the 1993-95 period, which is the base period of analysis, to make our comparisons. The figures in Table 1 show prior to federal welfare reform, unmarried women had much higher rates of public health insurance coverage than either of the comparison groups, as would be expected given eligibility rules, which depend heavily on family structure. These disparities reflect the higher rates of labor force participation among persons (including spouse of married women) in the comparison groups and the higher rates of welfare participation among women in the target group. Welfare participation and Medicaid coverage are substitutes for employment (and marriage), and private health insurance coverage. Notably, the rates of uninsured are similar for the target group and two comparison groups, and the proportion of unmarried and married women covered by employer-sponsored insurance is similar. Low-educated men have a higher proportion of employer-sponsored insurance than either married or unmarried women.

The key question for our analysis is whether the target and comparison groups would have similar private insurance coverage in the absence of a cash assistance program, which is the relevant circumstance when a person is (exogenously) moved off welfare because of policy. A crude way to answer this question is to examine the distribution of health insurance coverage for those not enrolled in AFDC. Approximately 20% of the target group of unmarried women participates in the AFDC program. To adjust for this, we would increase the rates of private insurance coverage among the target group by 25 percent. This adjustment brings the target group mean for private insurance closer to that of the two comparison groups.

Children's insurance status is also reported in Table 1 and the figures show that public insurance coverage of children living with single mothers is much higher than public insurance of children living with married mothers, irrespective of their nativity status. Among children of foreign-born single mothers not covered by Medicaid approximately 48 percent have private insurance, which is close to the proportion of children living with two foreign-born parents who have private insurance. Among children of US-born parents who are not on Medicaid, 81 percent have private insurance. Again, the proportions are roughly similar for the target and comparison groups, suggesting that children living with both parents of corresponding nativity are a good comparison group for studying private insurance and uninsured outcomes.

To summarize, it is clear that we do not have a very good comparison group for the public insurance outcome, particularly for adult women. Welfare reform is intended to deter participation in AFDC/TANF and as a result will cause a decrease in Medicaid coverage. Married women and unmarried men are largely ineligible for AFDC/TANF and Medicaid. Therefore, changes in these two groups' public health insurance coverage may not provide the appropriate counterfactual. This is less true for children.[5] Accordingly, we place less emphasis on the difference-in-differences estimates for this outcome.[6] But for the private health insurance coverage (all types and employer-sponsored) and uninsured outcomes, we have identified reasonable comparison groups.

We recognize the difficulty of identifying "ideal" target and comparison groups. Therefore, we have used more than one comparison group to assess the sensitivity of our findings with respect to women. At the very least, the comparison group approach we employ identifies whether any observed effects of welfare reform on health insurance status are group-specific, and whether the effects are primarily found for the group of interest—the target group. If the identifying assumption of the difference-in-differences

[5] Medicaid eligibility for children does not depend on mother's marital status to the same extent that it does for adults. The Medicaid expansions were more effective at separating Medicaid eligibility from AFDC eligibility for children (and pregnant women). Therefore, our comparison group approach is more suitable for the public insurance outcome in the analysis of child insurance than is the analysis of adults.

[6] Note that the comparison group approach is used to control for unmeasured determinants of health insurance and that many, if not most, of the important determinants of Medicaid that vary by state-year such as Medicaid income

procedure is valid, then our estimates may be given a causal interpretation. Finally, the estimates we obtain using the difference-in-differences procedure will be biased toward zero because not all members of the target group are at risk of being affected by welfare reform and because a small proportion of those in the comparison group are at risk.

DATA

The data for the analysis come from the March series of the Current Population Surveys for 1994 to 2001, which provide information on respondent's health insurance status for the years 1993-2000. A key aspect of this data for our analysis is that since 1994, the CPS has been providing information on the respondent's citizenship status, country of birth and year of arrival in the US. The sample in our analysis consists of low-educated women and men aged 18 to 44. We stratify the sample according to respondent's nativity status.

We also study the effect of PRWORA on children. This sample is limited to children aged 0-14 whose mothers have 12 or fewer years of education and are 18-44 years of age. We study the children of US-born and foreign-born parents. Almost 75 percent of the children with foreign-born parents in our sample are US-born, and are governed by the same policies as children with US-born parents. To see if PRWORA affected the US-born children of immigrants differently from their foreign-born children, we further stratify the samples by children's nativity.

The target of immigrant provisions in PRWORA is non-citizens. Foreign-born citizens are not treated differently from US-born citizens. Ideally, foreign-born citizens should be excluded from the analysis as they are unaffected by the policy change. However, if PRWORA induced immigrants to become citizens so that they could continue to have access to means-tested programs, exclusion of citizens would result in a selectivity bias. There is evidence of increased naturalization throughout the 1990s. According to Fix and Haskins (2002), the increase in naturalizations during this period was mainly the result of increased

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eligibility level and strength of the economy (unemployment rate) are held constant. The models also include state effects, state-specific trends and personal characteristics, so the omitted variable problem may not be severe.

immigration in the early 1990s and the 1986 Immigration Reform and Control Act, which granted permanent legal status to approximately 2.7 million immigrants. However, it is not possible to rule out that some immigrants naturalized in response to welfare reform and its differential treatment of non-citizens. To address this issue, we do the analysis by combining the samples of foreign-born citizens and non-citizens.[7] This approach eliminates the selection bias relating to naturalization.[8]

The CPS contains all the necessary data to complete our analysis. Most importantly, the CPS provides information on the insurance status last year of all persons including whether the person was covered by Medicaid, private insurance, employer-sponsored insurance in her own name, or some other type of public insurance.[9] We define four categories of insurance: public insurance, which includes Medicaid, SCHIP and other publicly provided insurance; private insurance, which includes employer-sponsored and individual private insurance plans; employer-sponsored insurance in respondent's own name; and uninsured.[10] Starting with the 2000 survey (1999 health insurance information), the CPS has an additional health insurance "verification question," that has caused to a reduction in the estimates on the percent uninsured (Nelson and Mills 2001). To control for the change in CPS estimation measures, we include a post-1998 dummy in the multivariate analysis.

The CPS also contains basic demographic information that is used to construct control variables and information that allows us to link children to their mothers. Other personal characteristics in the model include: family size, other family income,[11] age, race, education, total number of children and number of young children in the family, citizenship status, country of birth, whether person arrived in the US before 1996 and number of years since arrived in the US. In the children's analysis, we control for

[7] A quarter of the sample in the analysis on the foreign-born consists of citizens.
[8] We also repeat the analysis by limiting the sample to foreign-born non-citizens. The results do not differ. We elect not to present those results.
[9] There is some question as to whether respondents are referring to last year or the current period when providing information about health insurance coverage. We assume that it refers to the last year as specified in the question and accordingly, match policy information to the last calendar year.
[10] In the analysis, persons covered by CHAMPUS or Indian Health Service are excluded from both public and private insurance categories.
[11] Other family income= family income – woman's earnings.

family income (instead of other family income), mother's education and number of years since mother arrived in the US.

Finally, the CPS provides respondents' state of residence, which allows us to append state-level information such as state and federal welfare policy, Medicaid income eligibility threshold and the unemployment rate–current and lagged by one-year.[12] For women, state Medicaid eligibility variables are defined on the basis of Medicaid eligibility of pregnant women; we use the following categories: 0 to 133 percent of federal poverty line, 134 to 199 percent of federal poverty line, and above 199 percent of the federal poverty line. For children, Medicaid eligibility is specific to a child's age and is the higher of the Medicaid or SCHIP income eligibility threshold. We use the following categories: 0 to 49 percent of the federal poverty line; 50 to 100 of federal poverty line; 101 to 133 percent of the federal poverty line; 134 to 199 percent of the federal poverty line; and above 199 percent of the federal poverty line. The data on welfare policies is drawn from Assistant Secretary for Planning and Evaluation of the Department of Health and Human Services, the Urban Institute (www.urban.org/content/Research/NewFederalism/Data/StateDatabase/StateDatabase.htm) and from the information reported in Zimmermann and Tumlin (1999). All state level variables are merged to the CPS data in the year prior to the survey year. So the 1998 welfare policies are merged to the 1999 CPS.

RESULTS

Descriptive Analysis

Table 1 presents the health insurance status of various demographic groups, which define our target and comparison groups, in three years prior to the passage of PRWORA and three years after its passage, and provides some preliminary evidence of the effect of the policy change on the health insurance status of these groups. It shows that Medicaid coverage of unmarried, low-educated foreign-born women, the group most vulnerable to the policy change among foreign-born adults, fell by 12 percentage points after

[12] We thank Aaron Yellowitz for providing us with the Medicaid income eligibility data.

the passage of PRWORA. In comparison, Medicaid coverage of unmarried low-educated US-born women, the most vulnerable group among the US-born adults, fell by 8.2 percentage points. While the private insurance of US-born women rose by 5.4 percentage points during this period, the increase in the private coverage of foreign-born women was just 1.8 percentage points. These changes resulted in a 10 percentage point increase in the proportion of the uninsured among foreign-born women and a 2.4 percentage point increase in the proportion uninsured among US-born women.

The changes in health insurance of the two target groups reported above could be due to PRWORA or due to other factors such as the economic boom of the 1990s. To investigate the effect of these other factors, we study the pre-and post-PRWORA changes in health insurance of low-educated, married women and low-educated men, two groups much less likely to be affected by PRWORA, but likely to be affected by other factors that influence health insurance coverage in the same manner as the target group. Table 1 shows that after the passage of PRWORA, Medicaid coverage of foreign-born low-educated married women fell by 4.5 percentage points, their private insurance rose by 2.3 percentage points and the proportion uninsured among this group rose by 2.2 percentage points. In contrast, Medicaid coverage of US-born married women with low-education fell by 1.8 percentage points, their private insurance rose by 1.2 percentage points and proportion without insurance remained almost constant. After the passage of PRWORA, public health insurance of foreign-born men fell by 3.1 percentage points, their private insurance rose by a modest 0.6 percentage points and proportion uninsured rose by 2.4 percentage points. The trend for US-born men is quite similar: their public insurance fell by 1.3 percentage points, private insurance rose by 1.2 percentage points and proportion uninsured remained constant.

Assuming that changes in insurance status of the comparison groups capture the influence of factors other than PRWORA, we can obtain unadjusted DD estimates by subtracting the pre-post change in insurance outcome of the comparison groups from the pre-post change in the insurance outcome of unmarried low-educated women.

Using married women as the comparison group, the above mentioned calculations indicate that welfare reform: decreased public insurance of foreign-born single women by 7.5 (12.0-4.5) percentage

points; raised the employer-sponsored coverage of foreign-born single women by 2.1 percentage points (1.6+0.5); and raised the proportion uninsured by 7.8 percentage points (10.0-2.2). Among US-born women, welfare reform: decreased public insurance coverage by 6.4 (8.2-1.8) percentage points; increased employer-sponsored insurance by 4.3 percentage points (2.8+1.5); and increased the proportion uninsured by two percentage points (2.4-0.4). Similar results are obtained when low-educated men are used as a comparison group. These data provide some preliminary evidence to support the widely held view that welfare reform caused a decrease in insurance coverage among low-educated single women, and the effect appears more severe on foreign-born women as compared to US-born women.

A similar story emerges for children of single mothers. Medicaid dependence among children of foreign-born women is greater than that among children of native-born women. Children of foreign-born single mothers also registered a greater decline in Medicaid coverage since the passage of PRWORA—11.8 percentage points as compared to 7.1 percentage points for the children of US-born single mothers. Private insurance of children of foreign-born single mothers rose by 3.6 percentage points, which was less than the 5.7 percentage point increase in the case of children of US-born single mothers. As a result, the number of uninsured children living with unmarried, low-educated foreign-born mothers rose by 8.7 percentage points after the passage of PRWORA, while the rise in the uninsured among children of US-born mothers with the same education and marital status was two percentage points.

Again, it is likely that part of the pre- and post- PRWORA change in the insurance status of the children of single low-educated mothers is due to factors correlated with PRWORA. To control for these other factors, we investigate the pre- and post-PRWORA change in the health insurance of children living with both parents. Table 1 shows that there is a marginal increase in Medicaid coverage of children living with both parents irrespective of the nativity of the parent. The private insurance of children living with foreign-born parents rose by four percentage points after PRWORA, and of those living with US-born parents by 1.9 percentage points. As a result of these changes, the proportion of uninsured children living with foreign-born parents fell by 4.6 percentage points and those living with US-born parents fell by 2.5 percentage points. Assuming that these changes capture the effect of other factors, we subtract these from

the increase in proportion of uninsured children living with single parents and arrive at a rough estimate of the effect of policy change on the insurance coverage of the latter group. Our calculations indicate that as a result of policy change the proportion of the uninsured rose by 13.3 percentage points (8.7 +4.6) among children of foreign-born low-educated single mothers and by 4.5 percentage points (2.0+2.5) among children of US-born low-educated single mothers.

In short, the data in Table 1 suggest that PRWORA has adversely affected the health insurance of foreign-born unmarried women and their children more than that of natives. This analysis is based on unadjusted data. Arguably, the effect of welfare policy could be due to other factors that may be correlated with the policy change. To address these issues, we now turn to the multivariate analysis outlined above.

Multivariate Analysis-Women

Table 2 presents estimates of the effect of TANF (the cash assistance component of PRWORA), Medicaid eligibility thresholds and unemployment on the health insurance coverage of low-educated US- and foreign-born women. All estimates are obtained by ordinary least squares. Standard errors, reported in parenthesis, are calculated under the assumption that observations from the same state are not independent. Dependent variables are listed in the column headings. Each column of Table 2 is from a different regression and each regression controls for family size, other family income, age, race, education, number of kids and number of young kids, state Medicaid eligibility, unemployment rate – current and with a lag, whether a state had an AFDC waiver prior to TANF implementation, state fixed effects and state-specific quadratic trends.[13] Each regression also includes a post-1998 dummy to control for the changes in health insurance measures after the introduction of the "verification" question in the

[13] We decided to introduce time-effects as a quadratic state-specific trend because there is a high degree of collinearity between the policy variable and year effects. A regression of policy on state and year fixed effects yields an R-square of 0.91. To test the validity of our model, we first estimated a model with year effects and then a model with state-specific quadratic trends. The second model used 102 parameters to measure state-specific time effects while the first used eight parameters (for eight years). An F-test rejected the first model.

CPS. The analysis on foreign-born women also controls for citizenship status, country-of-birth fixed effects, whether arrived prior to 1996 and year of arrival in the US.[14]

Row 1 in Table 2 presents the effect of TANF on the health insurance of unmarried, low-educated foreign-born and US-born women. It shows that TANF reduced the Medicaid coverage of foreign-born single women by a statistically insignificant 3.4 percentage points, reduced their private insurance by a statistically insignificant 1.5 percentage points and increased the proportion uninsured by a statistically insignificant 4.8 percentage points. The analysis on US-born single women suggests that TANF had small and statistically insignificant effects on their health insurance outcomes.

It is interesting to compare the estimates of the associations between TANF and insurance status in Table 2 to the figures in Table 1. For example, figures in Table 1 indicate that between 1993/95 and 1998/2000, the proportion of foreign-born, unmarried women with Medicaid decreased by 12 percentage points. Estimates in Table 2 show that TANF is associated with a 3.4 percentage point decrease in Medicaid coverage for this group. The difference between the two estimates suggests that there was substantial downward trend in Medicaid coverage that preceded the passage of PRWORA and continued after its passage. Similar differences are observed for US-born women; figures in Table 1 indicate that between 1993/95 and 1998/2000, the proportion of unmarried, low-educated US-born women with Medicaid coverage declined by 8.2 percentage points. In Table 2, TANF is associated with a 1.0 percentage point decline in Medicaid. In general, the different inferences that are derived from estimates in Tables 1 and 2 reveal that there were significant trends in insurance coverage during this period and that care needs to be taken to isolate the effect of policy from these trends. The difference-in-difference procedure is designed to account for these trends.

[14] Non-citizen legal residents who arrived in the US after 1996 have been denied Medicaid and welfare benefits in certain states. Our estimates would be biased if the post-1996 immigrants chose to stay in states that provide them benefits. To see whether our estimates carry that bias we redo the entire analysis after excluding from the sample individuals who arrived in the US after 1996. The results are similar to what we obtain with the full sample including post-1996 immigrants. This is expected as research shows that new immigrants do not choose their state of residence on the basis of benefit availability (Zavodny 1998; Kaushal 2004). This is also an indicator that the results presented here are not driven by the presence of post-PRWORA immigrants in the sample.

Before turning to the DD estimates, we review some of the estimates associated with the other variables in Table 2. Medicaid eligibility has a positive but statistically insignificant effect on the Medicaid coverage of both foreign- and US-born low-educated women. This is not that surprising since there was little real expansion in Medicaid eligibility for adults. Virtually all of the expanded eligibility during this period pertains to pregnant women and children. Medicaid eligibility has a statistically significant negative effect on the private coverage of both foreign- and US-born women, providing evidence consistent with crowding-out (Cutler and Gruber 1996; Yazici and Kaestner 2000). When the outcome is "employer-sponsored insurance in own name", the estimated coefficients on Medicaid eligibility are substantially higher (in absolute terms) for foreign-born women as compared to US-born women indicating that the crowd out effect is relatively more evident for foreign-born women. It is surprising that Medicaid eligibility has such a strong association with private insurance coverage since the eligibility thresholds refer to pregnant women and only a small portion of our sample are affected. As noted, there was virtually no change in Medicaid eligibility for non-pregnant women during this period. It is more likely that the strong association between Medicaid eligibility and private insurance is due to the influence of unmeasured factors affecting private insurance that are correlated with Medicaid eligibility. Finally, lagged unemployment increased Medicaid coverage of US-born women but had no effect on any other outcome.

Table 3 presents the difference-in-differences estimates based on equation (2). Each cell in this Table is from a different regression. We use the least restrictive difference-in-differences model in which all the controls are allowed to have a different effect on the target and comparison groups, except for those that statistical tests suggested could be constrained. Row 1 of the Table presents the difference-in-differences estimates with married low-educated women of corresponding nativity as the comparison group, and row 2 presents the estimates with low-educated men of the same nativity as the comparison. Although we present the DD estimate for Medicaid (as for the other outcomes), we remind the reader that the comparison group approach may be least valid for this outcome.

Estimates in Row 1 and 2 show that for foreign-born women, TANF significantly reduced Medicaid coverage by between 7.4 and 8.5 percentage points; reduced private insurance coverage by between 2.6 to 3.3 percentage points, but these estimates are not statistically significant; lowered employer-sponsored insurance by a statistically insignificant 0.3 to 0.8 percentage points; and raised the proportion uninsured by a statistically significant 9.9 to 10.7 percentage points. The increase in the proportion of uninsured is approximately equal to the decrease in Medicaid. As can be seen, the choice of comparison group makes little difference to the estimates.

Among US-born women, TANF resulted in a statistically significant decrease in Medicaid coverage of between 2.9 and 3.4 percentage points, and a statistically significant increase in employer-sponsored health insurance coverage of between 1.5 and 3.7 percentage points. Consistent with these results, TANF had little effect on the rate of uninsured. To sum up, estimates indicate that TANF is associated with an increase in the proportion of foreign-born women who are uninsured. This is a result of a decrease in Medicaid coverage that was not offset by an increase in employer-sponsored coverage, as was the case among US-born women.

We are interested in assessing whether the effect of welfare reform on immigrants differed by the length of their stay in the US. Previous research shows that new immigrants have particularly low rates of health insurance coverage (Camarota and Edwards 2000). Policies under PRWORA also singled out new immigrants. Immigrants who have been living in the US for more than five years were treated in the same manner as the native-born. To see whether PRWORA affected newly arrived immigrants differently, we study the effect of PRWORA on two groups: those who arrived in the last five years and those who arrived more than five years ago. The difference-in-differences estimates of the analysis are presented in Table 4, and these models have the same controls as the analysis in Table 3.

Estimates in Table 4 indicate that the effect of TANF on the health insurance coverage of foreign-born unmarried women did not differ by their length of stay in the US. Statistical tests also reject the hypothesis that two groups of women defined on the basis of the length of stay in the US have been differentially affected by PRWORA. This finding is consistent with the "chilling" hypothesis since the

estimated effect of TANF is approximately the same even though groups were subject to different policies. On the other hand, if most new immigrants lived in states that created substitute TANF and Medicaid programs, we may expect this result. However, there is little empirical evidence to support that this is in fact the case (Kaushal 2004). Finally, the evidence in Table 4 may be the result of differing degrees of bias in the DD estimates. The two groups of immigrants may have different proportions of women in the target and comparison groups likely to be affected by PRWORA. Therefore the (downward) bias of the DD estimates may differ and obscure true underlying differences in effects. Data on welfare receipt from the CPS in 1994 (referring to 1993) suggests that this may be the case. Among low-educated, unmarried foreign-born women (i.e. members of the target group), 11 percent of the newly arrived received AFDC income in the past year as compared to 22 percent of those who have been living in the US for five years or more. This suggests that the downward bias in the DD estimates for newly arrived foreign-born women is greater than that for those living in the US for five years or more, and that perhaps PRWORA had a larger effect on new immigrants.

Chilling Hypothesis

In this section, we investigate more thoroughly the "chilling" hypothesis, which suggests that PRWORA caused eligible immigrants to forgo benefits because the anti-immigrant sentiment of the law created widespread confusion and fear among all. To test the "chilling" hypothesis, we exploit the variation in state policies that were intended to offset the changes in TANF and Medicaid embedded in PRWORA. In response to PRWORA, 19 states provided TANF benefits, and 15 states provided Medicaid benefits to post-1996 immigrants during the five-year Federal ban. If the "chilling" hypothesis is correct, the effect of PRWORA on new immigrants living in states that provide TANF/Medicaid should be approximately the same as the effect on those living in states that do not provide these benefits.

We construct two variables to describe the policy environment for newly arrived immigrants: "Medicaid and/or TANF" is equal to 1 if a state has a substitute TANF and/or Medicaid program for post-1996 immigrants, 0 otherwise; "Neither" is equal to 1 if a state provides new immigrants neither TANF

nor Medicaid, 0 otherwise. The effect of the policy is allowed to be different for both the pre-1996 and post-1995 immigrants, which allows us to test whether any observed differences are due to differences in policy as opposed to differences in unmeasured state effects. Also, it is important to note that recency of immigration is held constant in this analysis. Thus, we are comparing the health insurance status of recently arrived immigrants after PRWORA to the health insurance status of recently arrived immigrants before PRWORA. The analysis also has all the controls of the previous analyses. Table 5 has the DD results.

Estimates in Table 5 are similar to previous estimates and are not greatly affected by the choice of comparison group. Among foreign-born women, PRWORA reduced Medicaid coverage and increased the proportion uninsured. Statistical tests reject the hypothesis that the two groups of newly arrived foreign-born women defined on the basis of substitute TANF and Medicaid policies in their state of residence were differentially affected by PRWORA even though they faced different policy environment. This finding suggests that the fear or confusion caused by the policy may have had a "chilling" effect. Statistical tests also reject the hypothesis that the pre-and post-1996 foreign-born were differentially affected by the policy. Note that although the DD estimates for post-1996 foreign-born single women may have a greater downward bias as compared to the DD-estimates for the pre-1996 foreign-born single women, there is no reason to believe that the degree of bias in the DD estimates for the two groups of post-1996 immigrants would be significantly different.

Multivariate Analysis-Children

We also investigated the effect of PRWORA on the health insurance status of children of low-educated single mothers. We focus on three groups: foreign-born children of foreign-born women, US-born children of foreign-born women and children of US-born women. Table 6 presents the first-difference results of the effect of PRWORA on the target groups and Table 7 presents the difference-in-differences estimates. Estimates reported in each cell of rows 1 and 4 of the two Tables are from a separate regression; estimates in rows 2 and 3 of each column are from a single regression involving two

dummy variables for the target groups: foreign-born children of foreign-born single mothers and US-born children of foreign-born single mothers. Each regression controls for family size, mother's education, family income, age, race, number of kids and number of young kids in the family, state Medicaid eligibility, unemployment rate – current and with a lag, whether a state had AFDC waivers prior to PRWORA, a post-1998 dummy, state fixed effects and state specific trends in the quadratic. Analyses in rows 1-3 also control for length of mother's stay in the US, child's citizenship status and country-fixed effects.

The first row of Table 6 shows that PRWORA lowered the Medicaid coverage of children of foreign-born, single mothers by a statistically significant 13.5 percentage points, raised their private insurance by a statistically insignificant 5.6 percentage points, and raised the proportion uninsured by a statistically insignificant 10.5 percentage points. In contrast, PRWORA had a much modest effect on the children of US-born women. TANF lowered the Medicaid coverage of the children of the US born by a statistically insignificant three percentage points and had no effect on the proportion uninsured.

Table 7 presents the DD results and suggests that PRWORA lowered Medicaid coverage of the children of foreign-born single women by 17.5 percentage points, raised their private insurance by 8.1 percentage points and increased the proportion without health insurance by 12.9 percentage points. Note that the federal law does not distinguish between the US-born children of foreign-born parents and the children of the US-born. However, the analysis in Table 7 suggests that PRWORA lowered the Medicaid coverage of the US-born children of foreign-born parents by 18 percentage points, raised their private coverage by nine percentage points and increased those without health insurance by 12.8 percentage points. In contrast, PRWORA reduced the Medicaid coverage of the children of US-born parents by 4.7 percentage points and had modest and statistically insignificant effects on their private insurance and proportion uninsured. This is evidence in support of the chilling hypothesis. Further, statistical tests reject the hypothesis that PRWORA differentially affected the proportion uninsured among US-born children of foreign-born parents as compared to foreign-born children of foreign-born parents. This also supports the chilling hypothesis, but it is also possible that the two groups of immigrants' children may

have different proportions in the target and comparison groups likely to be affected by PRWORA. Therefore the (downward) bias of the DD estimates may differ and obscure true underlying differences in effects. To sum up, the results of our analysis suggest that while PRWORA does not appear to have affected the proportion uninsured among the children of US born single mothers, it raised the number of uninsured among the children of foreign-born single mothers.

CONCLUSION

This paper investigated the effect of PRWORA on the health insurance coverage of low-educated, foreign- and US-born, unmarried women and their children. We find that federal welfare reform is associated with a 9.9 (21%) to 10.7 (23 %) percentage point increase in the proportion of uninsured low-educated, foreign-born single women. We also find that welfare reform had no statistically significant effect on the insurance coverage of US-born single women, which is in line with some earlier research on this issue (Kaestner and Kaushal 2003). The larger effect of PRWORA on immigrants than natives is consistent with the "chilling" hypothesis. For the large majority of immigrant women in the sample, the immigrant provisions of PRWORA were not binding since they arrived before 1996 and faced the same policy changes as US-born women. Therefore the much larger effects of PRWORA on the health insurance coverage of this group of women suggests that they were less likely to seek benefits when eligible. An alternative hypothesis is that the jobs that these women obtained in response to PRWORA were much less likely to provide health insurance; there is some evidence that PRWORA was associated with a modest increase in employer-sponsored insurance for US-born women.

The study also suggests that although policies under PRWORA were more severe towards new immigrants, the health insurance status of new immigrants was not differentially affected by the policy change as compared to the insurance status of immigrants who arrived earlier. This is also consistent with the "chilling" hypothesis. Finally, our analysis shows that among the post-1996 immigrants, single women living in states with a substitute program for either TANF or Medicaid (or both) seem to have

been as adversely affected by the policy change as women living in states with neither program. This is perhaps the most direct evidence in support of the "chilling" hypothesis.

Our analysis of children's insurance status suggested that PRWORA adversely affected the health insurance of the children of foreign-born mothers. We find that welfare reform is associated with a 12.9 (68%) percentage point increase in the proportion of uninsured among this group. PRWORA also adversely affected the health insurance coverage of US-born children living with foreign-born mothers. In contrast, welfare reform had no statistically significant effect on the health insurance of the children of US-born single mothers. Again this is an indication that PRWORA may have engendered fear among immigrants and dampened their enrollment in safety net programs, as PRWORA did not differentiate between US-born children of foreign-born parents and US-born children of US-born parents.

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Table 1. Health Insurance Status
Men and Women Aged 18-44, Education <= 12 Years; Children Aged 0-14

Sample Description	Sample Size [1]	Proportion Covered by											
		Public Insurance			Private Insurance			Employer Sponsored Insurance in Own Name			Uninsured		
		1993-1995	1998-2000	Diff.	1993-1995	1998-2000	Diff.	1993-1995	1998-2000	Diff.	1993-1995	1998-2000	Diff.
		(1)	(2)	(2)-(1)	(1)	(2)	(2)-(1)	(1)	(2)	(2)-(1)	(1)	(2)	(2)-(1)
Foreign-born													
Unmarried Women	7134	0.312	0.192	-0.120	0.248	0.266	0.018	0.181	0.197	0.016	0.462	0.562	0.100
Married Women	12063	0.136	0.091	-0.045	0.458	0.481	0.023	0.185	0.180	-0.005	0.414	0.436	0.022
Men	20339	0.084	0.053	-0.031	0.389	0.395	0.006	0.315	0.322	0.007	0.537	0.561	0.024
US-born													
Unmarried Women	41445	0.322	0.240	-0.082	0.456	0.510	0.054	0.301	0.329	0.028	0.260	0.284	0.024
Married Women	41466	0.095	0.077	-0.018	0.749	0.761	0.012	0.328	0.313	-0.015	0.163	0.167	0.004
Men	82844	0.095	0.082	-0.013	0.639	0.651	0.012	0.480	0.474	-0.006	0.273	0.272	0.001
Children of Foreign-born Parents Living with													
Single Mother	5938	0.712	0.594	-0.118	0.137	0.173	0.036	--	--	--	0.190	0.277	0.087
Both Parents	19060	0.284	0.297	0.013	0.387	0.427	0.040	--	--	--	0.356	0.310	-0.046
Children of US-born Parents Living with													
Single Mother	25588	0.632	0.561	-0.071	0.301	0.358	0.057	--	--	--	0.132	0.152	0.020
Both Parents	51852	0.168	0.173	0.005	0.721	0.740	0.019	--	--	--	0.139	0.114	-0.025

Notes: [1] Sample size pertains to the combined total for 1993-2000.

Table 2. OLS Estimates of the Effect of Welfare Reform, Medicaid Eligibility and Unemployment on the Health Insurance Status of Low-educated, Foreign-born and US-born Unmarried Women

Dependent Variables	**Medicaid Coverage**		**Private Insurance**		**Employer Sponsored Insurance in Own Name**		**Uninsured**	
	Foreign-born	US-born	Foreign-born	US-born	Foreign-born	US-born	Foreign-born	US-born
TANF	-0.034 (0.032)	-0.010 (0.012)	-0.015 (0.040)	-0.017 (0.015)	-0.014 (0.033)	-0.014 (0.012)	0.048 (0.040)	0.017 (0.016)
Medicaid Eligibility 134-184% of Federal Poverty Line	0.012 (0.014)	0.016 (0.014)	-0.049** (0.020)	-0.043** (0.017)	-0.065*** (0.014)	-0.020 (0.018)	0.007 (0.018)	0.012 (0.020)
Medicaid Eligibility >184 % of Federal Poverty Line	0.044 (0.030)	0.009 (0.022)	-0.047 (0.031)	-0.045* (0.025)	-0.064* (0.034)	-0.022 (0.021)	-0.045 (0.030)	0.026 (0.027)
Unemployment Rate	-0.005 (0.017)	0.005 (0.006)	-0.021 (0.023)	-0.006 (0.009)	-0.025 (0.024)	-0.006 (0.008)	0.010 (0.019)	-0.002 (0.007)
Lagged Unemployment Rate	-0.023 (0.016)	0.014** (0.007)	0.030 (0.018)	-0.006 (0.006)	0.024 (0.021)	-0.004 (0.006)	-0.024 (0.023)	-0.008 (0.007)

Note: Estimated coefficients in each column are from a different regression. Dependent variables are listed in column headings. Each regression controls for family size, other family income, age, race, education, number of kids and number of young kids, state Medicaid eligibility, unemployment rate – current and with a lag, AFDC waivers prior to PRWORA, a post-1998 dummy, state fixed effects and state specific trends in the quadratic. The analysis on foreign-born women also controls for citizenship status, country fixed effects, year of arrival in the US and whether arrived prior to 1996. State Medicaid eligibility variables are defined on the basis of Medicaid eligibility of pregnant women. Standard errors (assuming non-independence within states) are in parentheses.
*0.05<p<=0.10, ** 0.01<p=<0.05, *** p=<0.01

Table 3. Difference-in-differences Estimates of the Effect of Welfare Reform on the Health Insurance Status of Low-educated Foreign-born and US-born Unmarried Women

Dependent Variables		**Medicaid Coverage**		**Private Insurance**		**Employer Sponsored Insurance in Own Name**		**Uninsured**	
	Comparison Group	Foreign-born	US-born	Foreign-born	US-born	Foreign-born	US-born	Foreign-born	US-born
TANF	Married Women; Education <= 12 Years	-0.085*** (0.018)	-0.034*** (0.008)	-0.033 (0.034)	0.016 (0.010)	-0.003 (0.017)	0.037*** (0.009)	0.107*** (0.026)	0.012 (0.009)
TANF	Men; Education <= 12 Years	-0.074*** (0.022)	-0.029*** (0.007)	-0.026 (0.019)	0.017* (0.008)	-0.008 (0.015)	0.015* (0.008)	0.099*** (0.019)	0.009 (0.009)

Note: Estimated coefficients in each cell are from a different regression. Dependent variables are listed in column headings. Each regression controls for family size, other family income, age, race, education, number of kids and number of young kids, state Medicaid eligibility, unemployment rate – current and with a lag, AFDC waivers prior to PRWORA, state fixed effects and state specific trends in the quadratic. The analysis on foreign-born women also controls for citizenship status, country fixed effects, year of arrival in the US and whether arrived prior to 1996. State Medicaid eligibility variables are defined on the basis of Medicaid eligibility of pregnant women. Standard errors (assuming non-independence within states) are in parentheses. All the controls are allowed to have a different effect on the target and comparison groups – except for country fixed effects, state effects and state specific trends in the quadratic that are restricted to be the same for the treatment and comparison groups. Each regression also has a post-1998 dummy to control for the changes in CPS insurance measures during this period, and the variable is restricted to have the same effect on the treatment and comparison groups.

*0.05<p<=0.10, ** 0.01<p=<0.05, *** p=<0.01

Table 4. Difference-in-differences Estimates of the Effect of Welfare Reform on the Health Insurance Status of Foreign-born Unmarried Women, Based of Number of Years Lived in the US

Dependent Variables			**Medicaid Coverage**	**Private Insurance**	**Employer Sponsored Insurance**	**Uninsured**
	Arrival in the US	Comparison Group				
TANF	< 5 years ago	Married Women; Education <= 12 years	-0.088*** (0.022)	-0.038 (0.040)	-0.017 (0.021)	0.108*** (0.038)
TANF	>= 5 years ago	Married Women; Education <= 12 years	-0.085*** (0.018)	-0.026 (0.033)	-0.004 (0.016)	0.101*** (0.026)
TANF	< 5 years ago	Men; Education <= 12 years	-0.068*** (0.020)	-0.025 (0.024)	-0.024 (0.021)	0.088*** (0.027)
TANF	>= 5 years ago	Men; Education <= 12 years	-0.062*** (0.022)	-0.013 (0.018)	-0.003 (0.015)	0.079*** (0.018)

Note: Estimated coefficients in the top two rows of each column are from a different regression. Estimated coefficients in the bottom two rows of each column are also from a different regression. Dependent variables are listed in column headings. Each regression controls for family size, other family income, age, race, education, number of kids and number of young kids, state Medicaid eligibility, unemployment rate – current and with a lag, AFDC waivers prior to PRWORA, state fixed effects and state specific trends in the quadratic, citizenship status, country fixed effects and year of arrival in the US. State Medicaid eligibility variables are defined on the basis of Medicaid eligibility of pregnant women. Standard errors (assuming non-independence within states) are in parentheses. All the controls are allowed to have a different effect on the target and comparison groups – except for country fixed effects, state effects and state specific trends in the quadratic that are restricted to be the same for the treatment and comparison groups. Each regression also has a post-1998 dummy to control for the changes in CPS insurance measures during this period, and the variable is restricted to have the same effect on the treatment and comparison groups.

*0.05<p<=0.10, ** 0.01<p=<0.05, *** p=<0.01

Table 5. Difference-in-differences Estimates of the Effect of TANF and Medicaid Eligibility on the Health Insurance Status of Foreign-born Unmarried Women, Based on when Arrived in the US

Dependent Variables			**Medicaid Coverage**	**Private Insurance**	**Employer Sponsored Insurance**	**Uninsured**
Living in States with substitute	Arrived in the US	Comparison Group				
Medicaid and/or TANF	After 1995	Married Women; Education <= 12 years	-0.099*** (0.031)	-0.013 (0.049)	-0.019 (0.029)	0.087* (0.048)
Neither	After 1995	Married Women; Education <= 12 years	-0.085*** (0.034)	0.004 (0.048)	-0.041* (0.024)	0.067 (0.060)
Medicaid and/or TANF	Before 1996	Married Women; Education <= 12 years	-0.090*** (0.023)	-0.028 (0.039)	0.006 (0.021)	0.096*** (0.034)
Neither	Before 1996	Married Women; Education <= 12 years	-0.083*** (0.018)	-0.038 (0.037)	-0.009 (0.018)	0.115*** (0.031)
Medicaid and/or TANF	After 1995	Men; Education <= 12 years	-0.050* (0.027)	-0.019 (0.034)	-0.032 (0.028)	0.083** (0.035)
Neither	After 1995	Men; Education <= 12 years	-0.059** (0.027)	0.011 (0.032)	-0.012 (0.032)	0.060* (0.032)
Medicaid and/or TANF	Before 1996	Men; Education <= 12 years	-0.054** (0.025)	-0.028 (0.023)	-0.018 (0.020)	0.076 (0.024)**
Neither	Before 1996	Men; Education <= 12 years	-0.073*** (0.021)	-0.015 (0.019)	0.002 (0.016)	0.090 (0.023)**

Note: Estimated coefficients in the top four rows of each column and bottom four rows of each column are from different regressions. Each regression controls for family size, other family income, age, race, education, number of kids and number of young kids, state Medicaid eligibility, unemployment rate – current and with a lag, AFDC waivers prior to PRWORA, state fixed effects and state specific trends in the quadratic, citizenship status, country fixed effects and year of arrival in the US. State Medicaid eligibility variables are defined on the basis of Medicaid eligibility of pregnant women. Standard errors (assuming non-independence within states) are in parentheses. All the controls are allowed to have a different effect on the target and comparison groups – except for country fixed effects, state effects and state specific trends in the quadratic that are restricted to be the same for the treatment and comparison groups. Each regression also has a post-1998 dummy to control for the changes in CPS insurance measures during this period, and the variable is restricted to have the same effect on the treatment and comparison groups. *0.05<p<=0.10, ** 0.01<p=<0.05, *** p=<0.01.

Table 6. OLS Estimates of the Effect of Welfare Reform on the Health Insurance Status of Children of Foreign-born and US-born Low-educated Unmarried Women

Dependent Variables			**Medicaid Coverage**	**Private Insurance**	**Uninsured**
	Nativity of the child	Nativity of the parent			
TANF	US-born or Foreign-born	Foreign-born	-0.135* (0.070)	0.056 (0.047)	0.105 (0.069)
TANF	Foreign-born	Foreign-born	-0.110 (0.079)	0.012 (0.052)	0.103 (0.086)
TANF	US-born	Foreign-born	-0.138* (0.070)	0.062 (0.047)	0.105 (0.068)
TANF	US-born	US-born	-0.030 (0.025)	0.017 (0.022)	0.001 (0.021)

Note: Estimate reported in each cell of rows 1 and 4 is from a separate regression; estimates in rows 2 and 3 of each column are from a single regression. Dependent variables are listed in column headings. Each regression controls for family size, mother's education, family income, age, race, number of kids and number of young kids in the family, state Medicaid eligibility, unemployment rate – current and with a lag, AFDC waivers prior to PRWORA, a post-1998 dummy, state fixed effects and state specific trends in the quadratic. Analyses in rows 1-3 also control for length of mother's stay in the US, child's citizenship status and country-fixed effects. Standard errors (assuming non-independence within states) are in parentheses. *0.05<p<=0.10, ** 0.01<p=<0.05, *** p=<0.01.

Table 7. Difference-in-differences Estimates of the Effect of Welfare Reform on the Health Insurance Status of the Children of Foreign-born and US-born Low-educated Unmarried Women
(Children living with both parents of corresponding nativity as the comparison group)

Dependent Variables			**Medicaid Coverage**	**Private Insurance**	**Uninsured**
	Nativity of the child	Nativity of the parent			
TANF	US-born or Foreign-born	Foreign-born	-0.175*** (0.041)	0.081* (0.043)	0.129*** (0.031)
TANF	Foreign-born	Foreign-born	-0.142*** (0.050)	0.023 (0.055)	0.135** (0.051)
TANF	US-born	Foreign-born	-0.180*** (0.042)	0.090** (0.042)	0.128*** (0.030)
TANF	US-born	US-born	-0.047*** (0.015)	0.028 (0.017)	0.017 (0.010)

Note: Estimate reported in each cell of rows 1 and 4 is from a separate regression; estimates in rows 2 and 3 of each column are from a single regression. Dependent variables are listed in column headings. Each regression controls for family size, family income, age, race, number of kids and number of young kids in the family, mother's education, state Medicaid eligibility, unemployment rate – current and with a lag, AFDC waivers prior to PRWORA, state fixed effects and state specific trends in the quadratic. Analyses in rows 1-3 also control for length of mother's stay in the US, child's citizenship status and country-fixed effects. All the controls are allowed to have a different effect on the target and comparison groups, except for country-fixed effects, state effects and state-specific trends that are allowed to have a different effect on the treatment and comparison groups. Standard errors (assuming non-independence within states) are in parentheses. Each regression also has a post-1998 dummy to control for the changes in CPS insurance measures during this period, and the variable is restricted to have the same effect on the treatment and comparison groups. *0.05<p<=0.10, ** 0.01<p=<0.05, *** p=<0.01.