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Welfare Reform and the Perinatal Health of Immigrants

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Final Report Executive Summary
Welfare Reform and the Perinatal Health of Immigrants

I. Nature of the Research Problem

The passage of the Personal Responsibility and Work Opportunity Reconciliation Act of 1996 (PRWORA), was felt to have the potential to substantively alter the way in which prenatal care is rendered to some populations, particularly immigrants, within the United States. In some parts of the country, such as New York City and California, over 40% of births are to immigrant women. The failure to anticipate and catalogue health outcomes related to the welfare reform act would represent a lost opportunity to support rational discourse on the perinatal consequences of legislation and to thereby offer guidance to those who might wish to propose modifications designed to enhance the law's benefits and mitigate its burdens.

Our study undertook to improve on the research design used to assess the initial impact of welfare reform via its effect on the Medicaid eligibility of legal and illegal immigrants. While the number of immigrant women likely to lose Medicaid coverage for perinatal care may be substantial, U.S.-born women will not experience a loss in Medicaid even if they lose cash support. Therefore outcomes of U.S.-born women on Medicaid before and after welfare reform became useful controls with which to adjust for time-varying factors that affect outcomes of all poor women, natives and immigrants alike.

Data has also demonstrated that health care and health outcomes of individuals are often tethered to race. Care in turn is also linked to the structure of those institutions that render the service. Indigent women most often seek prenatal and intrapartum care in their own communities. However the degree to which the structure of care differs between hospitals providing maternity services to women of different races and immigration status has not been carefully assessed.

Almost 40 years after the passage of the Medicaid act and a well after its expansion to enhance access to entitlements by pregnant women, questions about the benefits derived from these programs continue to go without definitive answers. Overall, the research literature seems to demonstrate that eligibility for Medicaid is a necessary but not sufficient condition of improving perinatal outcomes. With the passage of the 1996 welfare reform law, the safety net for pregnant women was withdrawn to at least some extent for some populations of women. These reforms may have particular impact on immigrants who represent large percentages of pregnant women in many of the nation's cities. Our aim was to develop and implement appropriately designed, multi-state evaluation programs contemporaneously with the inauguration of these reforms in order to provide the opportunity for timely and reliable feedback to legislators and policy makers in regard to the law's perinatal consequence.

II. Study Design and Methods

The investigators undertook a four-year study which included a) a cohort analysis of women interviewed in hospitals and at postpartum and newborn care sites in three states b) vital data analysis of 1] pre and post legislative changes and 2] birth certificates in one

site {NYC} to evaluate structure of care and c) a case study following a modification of the standard explanatory case study methodology and involved interviews with both key informants (e.g. health officials) and pregnant and postpartum women as well as assessment of vital data sets. The interviews allowed for detailed analysis of outcomes not otherwise available (e.g. postpartum follow-up) and for contextual information. Data was obtained through several key activities:

1. Gathering ***consumer data*** in sentinel hospitals.
2. Accessing ***state-wide vital data*** (i.e., birth certificates).
3. Conducting a ***legislative and administrative evaluation*** to determine the legislation, regulations and policies that four states enacted in order to implement the reform bill.

The initial form of this proposal included analysis of client-level data, vital data, and policy in these four states and, through the procurement of private foundation grant funding, we were able to maintain the scope of the project as shown below:

State	Consumer Data	State-wide Vital Data	Legislative & Administrative Evaluation
California	□	□	□
Florida	□		□
New York	□	□	□
Texas		□	□

Through these activities, the study was designed to address the following hypotheses:

Hypothesis 1: The welfare reform act will affect the health of immigrant women and their newborns.
Specific Aim la. To describe changes in the categorical and income guidelines for Medicaid eligibility associated with welfare reform.
Specific Aim 1b. To determine rates of preterm birth, low birth weights, intrauterine growth restriction, low Apgar scores and congenital infections among women whose Medicaid status is altered by the bill.
Specific Aim lc. To determine the change in the adequacy of prenatal care use by immigrant women as related to access to Medicaid.
Specific Aim Id. To determine the change in the number and timing of postpartum visits, well baby checkups and immunizations as related to access to Medicaid.
Specific Aim 1 e. To describe through case studies, if resources available for the care of all pregnant women and newborns are affected by any financial encumbrance experienced by states and municipalities as they seek to replace federal funds.

Hypothesis 2: Maternal-newborn outcomes will vary according to the Medicaid policies of the state in which women reside and hosptial characteristics of the hospitals in which they birth..

Specific Aim 2a. To determine how rates of preterm birth, low birth weight, growth restriction, low Apgar scores and congenital infections vary between states, among women whose Medicaid status is altered by the bill (i.e., recent immigrants).
Specific Aim 2b. To determine if there are differences by state in the adequacy of prenatal care use by immigrant women as related to access to Medicaid.
Specific Aim 2c. To determine if there are differences by state in the frequency of well baby checkups and vaccinations as related to access to Medicaid.

III. Project Findings

The seminal finding of the consumer data gathered from nearly 4,000 patient interviews suggested that Medicaid status and site (city) of care were associated with adequacy of prenatal care, but immigration status was not. We found that rates of prematurity and low birth weight among Latina women are not related to immigration status. The number of prenatal visits that these women receive is linked to their insurance status and that status in turn, is linked to immigration status in some sites. These data suggest that states' efforts to mitigate the effect of the Welfare Reform Act of 1996 on immigrant's access to Medicaid have the potential to minimize any effect of PRWORA on prenatal care.

These findings were compatible with an analysis of birth certificate data from New York City, California and Texas during two years pre- and post-welfare reform (1995 and 1998). We examined changes in outcomes in three areas related to the health and health care of pregnant immigrants and their newborns that may be affected by welfare reform. First, we analyzed the percentage of women who were self-pay. Poor foreign-born women may have been confused as to their eligibility for publicly financed health insurance after PRWORA or fearful of negative immigration consequences. Second, since loss of Medicaid eligibility as well as confusion and fear of scrutiny may also have caused immigrants to initiate prenatal care later than they would have in the absence of PRWORA, we looked at changes in the proportion of births to women who began care in the first four months of pregnancy as well as the number of prenatal care visits. Finally, we analyzed changes in the proportion of low birth weight, very low birth weight and preterm births before and after PRWORA.

Using a time series methodology, we examined the annual percentage of births to all Latino women who were uninsured in California and New York City between 1989 and 1998 and found that among both for U.S.- and foreign-born Latino groups, there was a rapid decline in the proportion of births that were uninsured among foreign-born Latinos in both California and New York City between 1989 and 1991. U.S.-born Latinos experienced notable but lesser declines. Second, there was little evidence of an increase in births to women that were uninsured between 1995 and 1998. Thus, welfare reform appears to have left intact the gains in insurance coverage for pregnant Latinos associated with the Medicaid expansions in 1989-1990. We also examined the percent of births to Latino women who initiated prenatal care in the first four months of pregnancy in California, New York City and Texas using, as before, separate time-series for U.S.- and foreign-born Latinos. There was a steady rise in early initiation of prenatal care among all 6 groups without obvious indication that these upward movements were interrupted after 1995. Finally, we examined the percentage of low birth weight births among U.S.-

and foreign-born Latinos from our three states and again found no evidence of any increase in adverse birth outcomes after 1995.

We found little evidence that welfare reform altered the financing of prenatal care among foreign-born Latinos in California and New York City nor access to prenatal care in California, New York City or Texas. We also found no decline in the percentage of births to women who initiated care in the first four months of pregnancy in California, New York City or Texas. On the contrary, we reported gains in the early initiation of prenatal care and the number of prenatal visits among foreign- relative to U.S.-born Latinos, an unexpected finding. Even in Texas where state officials moved swiftly to end financial support for prenatal care among immigrants unqualified for Medicaid under PRWORA, we found gains in prenatal care among foreign-born Latinos. Finally, with one exception, we uncovered no increase in the incidence of low birth weight among foreign- relative to U.S.-born Latinos, an unsurprising result given the lack of change in the uninsured and prenatal care utilization.

In another analysis of New York City birth certificate data which were linked to death certificate data, we found that the distribution of African-American births and delivery volume and percentage of Medicaid births in were significantly different in hospitals used by different racial groups. Hospital grouping was associated with neonatal mortality and morbidity as well as rates of cesarean section and scalp sampling. Our data suggest that hospital factors, along with biologic and social factors should be considered in studies of racial disparities in perinatal outcomes.

Another analysis of our data examined the frequency of and factors associated with depressive symptoms in parturient Hispanic women. We were particularly interested in the relationship between Hispanic women's immigration status and acculturation to mainstream culture and depression in the immediate postpartum period, after adjusting for psychosocial and economic characteristics. We found that depressive symptoms were negatively associated with perceived level of social support and health insurance coverage but were not with immigration status or degree of acculturation. Our study suggested that better social support systems and prenatal health insurance coverage might reduce the risk of depression, even in the setting of illegal or undocumented immigration status and lower levels of acculturation.

The legislative and administrative evaluation component of our project sought to investigate the impact welfare reform on a systems level. Both the terms of the new laws and people's beliefs about what they provide could affect the way that pregnant women obtain health care and other needed services. Results from our case studies, summarized below, affirmed these predictions:

Eligibility Alone Does Not Equal Access: New York and California have maintained Medicaid coverage for prenatal care for all immigrants, each for distinct reasons. Despite California's then Governor Wilson's attempt to seek immediate repeal of the state's funding for prenatal care for undocumented immigrants and the federal government's challenge to the protective order in Lewis v. Grinker in New York State, coverage

remains unchanged at this time. However, attempts to curb prenatal care in California may by themselves have increased fears among immigrants about seeking prenatal care. While it is difficult to quantify the impact of attempted withdrawals of eligibility, public charge concerns, and the aura of lost access, it is clear that eligibility alone does not define access. Rather, access to care is the product of multiple factors, none of which exist in isolation. Changes in eligibility at the statutory level, unsuccessful efforts to change eligibility, facilitated enrollment processes like presumptive eligibility, media coverage of INS raids -- are all relevant factors that influence access.

Replacement Benefits Vary in Scope: In contrast to New York and California, Florida and Texas did not opt to use state funds to replace federally withdrawn Medicaid eligibility for post-enactment legal immigrants for 5 years. In both states, notably, other programs exist to at least partially replace the lost Medicaid coverage for pregnant immigrants. In Texas, pregnant women remain eligible for Title V-funded prenatal care services without regard to documentation status. Title V is not, however, an entitlement like Medicaid and Title V funds are reported to be inadequate to meet current demands. If demand increases when immigrants newly ineligible for Medicaid show up on the Title V doorstep, women may have to be turned away. In Florida, all pregnant immigrants continue to be eligible for Medicaid through the presumptive eligibility process for 45 days of the prenatal period. Presumptive eligibility, in effect, is a loophole that diminishes, to some extent, the impact of welfare reform's restrictions on immigrants' eligibility for Medicaid.

The Mentality of Welfare Reform: Contrary to what might be expected, based on anecdotes and the limited data available, there is no greater evidence of decreased access to prenatal care in Florida and Texas, where Medicaid eligibility has been withdrawn, than in New York and California, where eligibility remains unchanged. In all four states, the *mentality* of welfare reform and confusion surrounding public charge issues appear to have been the primary factors leading to whatever decrease occurred in access to prenatal care among immigrant women. Shifting sands and patchwork policies have contributed to a climate of uncertainty among immigrants and service providers alike.

Lost in the Web: Implementation Challenges: Some of the lessons that emerged from our case study relate to the process of creating public policy. The withdrawal of Medicaid and other benefits from selected immigrant groups in welfare reform, and the incremental restoration of benefits through multiple acts have created a complex and fluid eligibility web. This web is difficult to understand, limiting the ability of patients, providers and government officials to effectively navigate the system.

Other Findings: In addition to the conclusions above, the following observations emerge from the case studies: 1) overall, there is consensus that PRWORA's reduction of federal responsibility for immigrants will result in an unprecedented cost shift to the states; 2) Federal laws and state implementation of them are a moving target, with new provisions under consideration at most times and ongoing and multiple court challenges to state policies contribute to confusion; 3) despite widespread reports that immigrants are staying away from prenatal care and other health care due to concerns about public

charge issues or fears of new reporting requirements to INS, there is little quantitative evidence to date regarding maternity care; 4) in all four states, public charge concerns are uniformly identified as the single most important deterrent to immigrants' use of benefits and health care and 5) both PRWORA and the climate of welfare reform appear to have had a greater impact on immigrants seeking legal status than on illegal immigrants. As a result of welfare reform and its climate, these legal immigrants face new barriers to care while the undocumented continue to access prenatal care through specific clinics or programs that were and are available for the uninsured and/or undocumented immigrants.

Final Report
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Table of Contents

I. Introduction

IA. Nature of the Research Problem

In 1965 the nation's first Medicaid bill was signed into law. Many have credited that legislation, at least in part, with the subsequent drop in rates of perinatal mortality seen over the ensuing 30 years. However, a conflicting literature, persistent differences in perinatal outcomes based on race and immigration status and the paucity of studies which have included client interviews and the type of follow-up which would permit assessment of detailed outcomes, leaves the degree to which these events are causally linked open to debate. Moreover, the Personal Responsibility and Work Opportunity Reconciliation Act of 1996, was felt to have the potential to substantively alter the way in which prenatal care is rendered to some populations, particularly immigrants, within the United States. In some parts of the country, such as New York City and California, over 40% of births are to immigrant women. Absent prospective evaluation of evolving programs for implementation of the new law and of the perinatal consequences thereof, the potential existed for the impact of key legislation to again be subject to intractable debate. The failure to anticipate and catalogue health outcomes related to the welfare reform act would represent a lost opportunity to support rational discourse on the Act's perinatal consequences and to thereby offer guidance to those who might wish to propose legislative modifications designed to enhance the new law's benefits and mitigate its burdens. Additionally the bill gives states wide latitude in implementing the act. This project was undertaken to address the important issues contrasting the approaches of different states to welfare reform and of determining the perinatal outcomes of women subject to those differing approaches. Even at a hospital level, variations in the structure of care have the potential to either mute or exaggerate outcomes related to status under the law.

IB. Purpose, Scope and Methods of the Investigation

The core goal of the project was to analyze four states' methods for implementing the prenatal components of the new welfare reform Act and determine, in three of these states, the clinical outcomes for mothers and children that resulted from these legislative changes. These outcomes were rigorously defined in manners that scientists have agreed best correlate with the outcomes for pregnant women and newborns, e.g. Kessner scales of care, Apgar scores, preterm birth, follow-up maternal health visits and immunizations. By objectively determining which policy maximized these outcomes, the data generated through this proposal can have a direct and substantive effect on the health of a large a minority of newborns in the United States. It was the intention of this project to utilize vital data analysis, case studies and, most importantly, client interviews and follow-up, to describe the various means by which this Act was applied, particularly in two states with high concentrations of immigrants, New York and California. Because existing laws in New York and California lay groundwork for two very different applications of welfare reform, the data from this study will allow an assessment of the relationship between the Act, its varying means of implementation, and maternal-newborn health with a particular focus on immigrants. Through the investigations of the study, it was felt possible for

health care providers and administrators providing maternal and child health to a largely immigrant, medically indigent population to learn from the experience of their colleagues in other regions and thereby structure services that will optimize perinatal outcomes. We also hoped to provide more detailed assessment in one site (NYC) of the relationship between race and immigration status and types of hospital care. Finally, we hoped to use this data to inform the public and policy makers about the consequences of legislative acts.

IC. Nature of the Findings

Preliminary analyses of the consumer data (patient interviews) suggested that Medicaid status and site (city) of care were associated with adequacy of prenatal care, but immigration status was not. However, women with no insurance had less care and at one site immigration status was linked to insurance status. Another analysis of our data found that depressive symptoms were negatively associated with perceived level of social support and health insurance coverage but were not with immigration status or degree of acculturation The findings from both of these analyses suggest that the potential adverse effects of the 1996 Welfare Reform Act may be attenuated when states maintain Medicaid eligibility independent of immigration status. Additional analyses to examine the utilization of prenatal care and perinatal outcomes, beliefs and barriers associated with childhood immunization, the impact of acculturation and perceptions of the impact of welfare reform on adequacy of prenatal care are underway.

Analysis of state-wide vital data (birth certificates) from New York City, California and Texas during two years pre- and post-welfare reform (1995 and 1998) found that the proportion of births to Latinas that initiated prenatal care in the first four months of pregnancy increased significantly for all foreign-born Latinas between 1995 and 1998. Except for non-Dominicans in New York City, there was no increase in the proportion of low- or very low-birthweight infants among foreign-born vs. US-born Latinas in these three localities.

In another analysis of New York City birth certificate data which were linked to death certificate data, we found that the distribution of African-American births and delivery volume and percentage of Medicaid births in were significantly different in hospitals used by different racial groups. Hospital grouping was associated with neonatal mortality and morbidity as well as rates of cesarean section and scalp sampling. Our data suggest that hospital factors, along with biologic and social factors should be considered in studies of racial disparities in perinatal outcomes.

The legislative and administrative evaluation component of our project sought to investigate the impact welfare reform on a systems level. A chilling effect was predicted and the indirect consequences of welfare reform, it was argued, were likely to create new and unintended barriers to prenatal care. Both the terms of the new laws and people's beliefs about what they provide could affect the way that pregnant women obtain health care and other needed services. Results from the four states' case studies both affirm these predictions and add new dimension. Key findings are that eligibility alone does not define access; that other programs have at least partially replaced Medicaid coverage

where it was withdrawn; that the mentality of welfare reform created barriers to care beyond statutory changes in eligibility; and that the complexity of welfare reform's restrictions on immigrant eligibility may in fact exceed the doable.

II. Review of the Literature

On August 22, 1996, President Clinton signed the Personal Responsibility and Work Opportunity Reconciliation Act of 1996, a sweeping Federal welfare reform measure. That act ends the guarantee of cash welfare assistance to all eligible families and replaces it with a block grant to states to provide time-limited support for low-income families who comply with work requirements. While this law did not repeal the Federal entitlement to health insurance under the Medicaid program, and the Congress and the President did not intend reform to affect the ability of low-income *citizens* to obtain health coverage through the Medicaid program, the law prohibits the provision of health services to some immigrants.

The number of women potentially affected by these changes is quite large. As of 1990, Federal law required states to provide coverage to pregnant women with incomes up to 133% of the poverty level, and each state had the option of covering women with incomes up to 185% of the poverty level. Those Medicaid eligibility expansions of the late 1980's increased the number of births financed by Medicaid nationally from 15 percent in 1986 to 31 percent by 1991(1). What proportion of this increase was to foreign-born women was not known. In California for example, of the 211,905 Medicaid financed fee-for-service deliveries, 74,897 or 35.4 percent were to undocumented immigrants (California Department of Health Services 1996). In Texas 16.2 percent or 24,549 of the 151,614 Medicaid financed deliveries in fiscal year 1995 were to illegal immigrants (personal communication with Tim Varian, Texas Department of Health, Austin, Texas). In New York City, we do not know how many births financed by Medicaid were to undocumented immigrants, but tabulations based on the 1992 birth tape for New York City revealed that 51.8 percent or 65,340 births financed by Medicaid. Of those, 36, 147 or 55.3 percent were to foreign-born women (figures obtained from public use birth file for New York City by Theodore Joyce). The proportion of Medicaid financed births to undocumented immigrants is undoubtedly substantial in New York City since providers are permitted to submit claims to Medicaid for prenatal and delivery care irrespective of a client's immigration status.

Policy analysts and advocates were concerned that the effect of welfare reform on Medicaid-financed births would be significant in certain states, including California and New York, even if only undocumented immigrants lost coverage under Medicaid. Debate and pending legislation in these states however, suggested that many legal immigrants will also lose coverage under Medicaid. How states' choices regarding immigrant eligibility would redound to the health of women and children was unknown. There is a relatively, large, somewhat conflicting, body of literature examining the impact of Medicaid expansions on perinatal outcomes of medically indigent women as well as the differences in perinatal outcomes between native born and immigrant women.

However, there is substantially less information on how Medicaid expansions have impacted the perinatal outcomes of medically indigent immigrant women.

Buescher reported a statistically significant drop in the rate of low birth weight births among Medicaid recipients enrolled in North Carolina's augmented care program relative to Medicaid recipients not enrolled (2). Reichman and Florio found similar effects associated with New Jersey's enhanced prenatal care program under Medicaid as did researchers from the NewYork Department of Health in an analysis of New York State's Prenatal Care Assistance Program (PCAP) (3). They reported that African-American and Hispanic PCAP clients had significantly lower rates of low birth weight births than their non-PCAP counterparts (4). Currie and Gruber also found that expanded health insurance eligibility led to improvements in health outcomes for pregnant women but that the effects were much greater when eligibility was limited to targeted low income women as opposed to when states expanded eligibility to women with higher income levels. The researchers used aggregate data on low birth weight and infant mortality rates by state and year from vital statistics and then regressed these state/year outcomes on an index of Medicaid eligibility generosity. They found that the Medicaid expansions had indeed reduced infant mortality but that eligibility changes targeted to specific need groups such as first time pregnant women, teenagers and other groups of "medically needy" women had a much greater impact than eligibility changes that brought in higher income pregnant women (i.e. those with incomes between 133 and 185 percent of poverty level) (5).

When Haas and her colleagues (6) assessed the impact of a statewide health coverage plan in Massachusetts, they found that such coverage alone did not markedly improve maternal health. Their results comported with earlier reports that suggested that provision of health coverage to uninsured women does not always improve neonatal outcomes(6,7). Many of these reports did sustain the belief, however, of a direct relationship between prenatal care and satisfactory perinatal outcomes and did not undermine the long established link between socioeconomic status and increased risk of low birth weight (8). These findings were essentially confirmed in a four state study undertaken by researchers from the Urban Institute to understand the impact of extending Medicaid coverage to pregnant women whose family incomes reach up to 185 percent of poverty level. Case studies were conducted in four states: Michigan, California, Georgia, and Tennessee. Data was collected in two phases: first through interviews with state Medicaid and MCH directors as well as with advocacy groups like the American College of Obstetricians and Gynecologists. Additional data was collected from national as well as state-specific data sources including the natality file at the National Center for Health Statistics. The case studies presented a mixed picture regarding the effectiveness of the expansions in these states, showing that while a greater share of births were paid for by Medicaid funds, improvements in the initiation of prenatal care were only found in Tennessee. The authors concluded that while Medicaid policies have the potential to reduce many barriers faced by low income women to prenatal care, the program in no way addresses socioeconomic factors that affect prenatal care use and birth outcomes, i.e. poverty, lack of education and discrimination(9). No attempt was made to assess the care, subsequent to birth, of mothers or children.

The impact on perinatal outcomes of the way in which entitlements are provided has also shown mixed results. A study in Tennessee assessed the impact of presumptive eligibility (i.e. permitting prospective Medicaid enrollees to obtain services during the application period) on the receipt of prenatal care and the occurrence or low-birth weight births and neonatal, perinatal and infant mortality .The investigators used outcome rates for pregnant women who enrolled in Tennessee Medicaid in the 6-month period before presumptive eligibility was enacted and compared this data with those obtained for pregnant women who enrolled in the 6-month period after presumptive eligibility had been in effect for 5 months. The study showed that pregnant women who enrolled under presumptive eligibility regulations were 40% more likely to enroll and 30% more likely to obtain prenatal care in the first trimester. However, the groups were similar in terms of occurrence of adverse perinatal outcomes (10). A comparable study by the same authors linked birth and fetal death certificates to Medicaid enrollment files and then compared outcome rates in the 12-month period before and after the regulatory change expanding eligibility up to 100% of poverty level. While the changes brought in a greater proportion of populations at risk for poor outcomes (i.e. teenage mothers) there was no improvement in either birth outcomes or first-trimester use of prenatal care (11). Again, care subsequent to delivery was not studied.

A difficulty that has hampered analyzes of the Medicaid eligibility expansions is the lack of a well-defined control group. The before and after studies by Piper et al (7,11). for instance, compared women enrolled in Medicaid after a expansion to women eligible for Medicaid prior to the expansion generally for categorical reasons (i.e, AFDC). In addition, there are no controls for time-varying confounders. Piper and her colleagues tried to minimize the impact of temporal changes on adverse birth outcomes by narrowing the before and after study periods to no more than 12 months each. Nevertheless, Joyce showed that the rate of low birth weight among African-Americans in New York a City increased almost 2 percentage points between 1986 and 1988 (12). In addition, there have been dramatic changes in the practice of neonatology that could confound analyzes of infant mortality. In short, rapid changes in birth outcomes are possible.

Shifts in the composition of the treatment group may also have contaminated the analysis by Haas (6). Haas compared birth outcomes of all uninsured women in 1984 to uninsured women enrolled in Healthy Start in 1987. The years 1984 to 1987 were a period of substantial economic growth in Massachusetts. A proportion of uninsured women of relatively low risk for adverse birth outcomes in 1984 might have obtained employer-sponsored insurance by 1987 and not enrolled in Healthy Start. Similarly, the spread of"crack" cocaine was rapid in large eastern cities in the mid-to-late 1980's. Both trends may have confounded the effects of Healthy Start.

It is important to note that results found among U.S.-born women cannot be assumed to hold true for immigrants. Research on the impact of immigration status on perinatal health has shown outcomes that are divergent from native- born women. For example a study that linked birth and infant death records for the San Diego metropolitan area from

1978 through 1985 proved that Indochinese refugees had a lower infant mortality rate than either native born non- Hispanic whites or African-Americans. These findings held even after controlling for birth weight and onset of prenatal care (13). A comprehensive study utilizing data derived primarily from the National Center for Health Statistics examined whether there are significant differentials between U.S.-born and foreign-born mothers in adverse perinatal outcomes. Three years of data from linked birth-infant death records were classified and analyzed according to maternal race and ethnicity. Multivariate logistic regression was used to analyze overall as well as ethnicity-specific nativity differentials in the pregnancy outcome measures. Foreign-born women had lower infant mortality rates than U.S.-born women for all race/ethnic groups except for Central and South Americans. Of all ethnicity and nativity groups, Chinese and Japanese immigrants had the lowest infant mortality rates, while U.S.-born African-Americans, Cubans and Puerto Ricans had the highest rates (14).

It is also worth noting that foreign-born women's favorable birth outcomes compared with native-born women occurs despite a documented lower participation in prenatal care, especially in the first trimester. A study conducted in San Diego showed that 11.5% of births to undocumented mothers in the U .S. occurred with either no prenatal care or prenatal care commencing in the third trimester versus 3.6% for births to Mexican women who resided in the country legally and 3.8% in the general San Diego population. *In addition, undocumented women in the same sample were much less likely than their legal counterparts to return for postpartum examinations for themselves and to seek neonatal care for their infants*(15). A study conducted in Arizona showed similar results for Mexican women born in the U.S. compared to non-Hispanic whites. The study collected data from office records, birth certificates and household interviews on a random sample of Mexican-American and non-Hispanic white mother-infant dyads all of which were enrolled in a health maintenance organizations-oriented Medicaid demonstration project. The outcome measures used were timing and number of prenatal visits and a modified Kessner Index, postpartum visits, number and purpose of office visits during the infants first year, and immunizations received. The results of the study show that while both groups of women were below the 68% of women nationally who receive adequate prenatal care, Mexican Americans averaged fewer prenatal visits and were less likely to receive adequate care (16). We know little about immunizations associated with the Medicaid expansions. We do know that inadequate prenatal care is an important predictor of incomplete immunizations at 3 and 7 months (17). Immigrants may be particularly vulnerable to missed immunizations. Welfare reform did not revoke free vaccines, but a loss of Medicaid may inhibit access to a regular source of care and perceived availability of immunization.

Our study undertook to improve on the research design used to assess effects of the Medicaid eligibility expansions of the1980's by using a well-defined set of controls. The initial impact of welfare reform will be on the Medicaid eligibility of legal and illegal immigrants. As we noted above, the number of immigrant women likely to lose Medicaid coverage for perinatal care in California is substantial. U.S.-born women, however, will not experience a loss in Medicaid even if they lose cash support. Outcomes of U.S.-born women on Medicaid before and after welfare reform become useful controls with which

to adjust for time-varying factors that affect outcomes of all poor women, natives and immigrants alike.

Data has also demonstrated that the care of individuals is often tethered to race. Care is also linked to the structure of health care in those institutions that render the service. Prenatal and intrapartum care is most often sought by poorer individuals in their own communities. However the degree to which the structure of care differs between hospitals providing maternity services to women of different races and immigration status has not been carefully assessed.

In sum, almost 40 years after the passage of the Medicaid act and a well after its expansion to enhance access to entitlements by pregnant women, questions about the benefits derived from these programs continue to go without definitive answers. Overall, the research literature seems to demonstrate that eligibility for Medicaid is a necessary but not sufficient condition of improving perinatal outcomes. Some of the controversy can be linked to the differing methodologies employed in various research settings around the nation, absence of appropriate control populations and the failure to link vital data set analyzes with client interview and follow-up. With the recent passage of the welfare reform law, the safety net for pregnant women was apparently be withdrawn to at least some extent for some populations of women. These reforms may have particular impact on immigrants who represent large percentages of pregnant women in many of the nation's cities. Our aim was to develop and implement appropriately designed, multi-state evaluation programs contemporaneously with the inauguration of these reforms in order to provide the opportunity for timely and reliable feedback to legislators and policy makers in regard to the law's perinatal consequence.

III. Study Design and Methods

IIIA. Study Design

The investigators undertook a four-year study which included a cohort analysis of women interviewed in hospitals and at postpartum and newborn care sites in three states and performed a series of cross-sectional analyzes pre- and post-legislative changes with vital data from each of these states. The design followed a modification of the standard explanatory case study methodology as described by Yin (18) and will involved interviews with both key informants (e.g. health officials) and pregnant and postpartum women as well as assessment of vital data sets. The interviews allowed for detailed analysis of outcomes not otherwise available (e.g. postpartum follow-up) and for contextual information. Data was obtained through several key activities:

1. Gathering ***consumer data*** in sentinel hospitals in three states, California, Florida and New York.
2. Accessing ***state-wide vital data*** (i.e., birth certificates) from California Florida, New York and Texas.
3. Conducting a ***legislative and administrative evaluation*** to determine the legislation, regulations and policies that four states (California, Florida, New York and Texas) enacted in order to implement the reform bill. The initial form of this proposal included

analysis of client-level data, vital data, and policy in these four states and through the procurement of private foundation grant funding we were able to maintain the scope of the project as shown below:

State	Consumer Data	State-wide Vital Data	Legislative & Administrative Evaluation
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Florida	☒		☒
New York	☒	☒	☒
Texas		☒	☒

Through these activities, the study was designed to address the following hypotheses:

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Specific Aim 1 e. To describe through case studies, if resources available for the care of all pregnant women and newborns are affected by any financial encumbrance experienced by states and municipalities as they seek to replace federal funds.

Hypothesis 2: Maternal-newborn outcomes will vary according to the Medicaid policies of the state in which women reside.
Specific Aim 2a. To determine how rates of preterm birth, low birth weight, growth restriction, low Apgar scores and congenital infections vary between states, among women whose Medicaid status is altered by the bill (i.e., recent immigrants).
Specific Aim 2b. To determine if there are differences by state in the adequacy of prenatal care use by immigrant women as related to access to Medicaid.
Specific Aim 2c. To determine if there are differences by state in the frequency of well baby checkups and vaccinations as related to access to Medicaid.

The independent (predictor) variable for Hypothesis 1 of the study was participants' eligible for Medicaid and other cash benefits. For the purposes of this study, participants were defined as the women who were interviewed in post-partum wards in the sentinel hospitals. These participants included both low-income immigrant women as well as low-income native-born women who served as a control group. The criterion for Medicaid eligibility was different from native-born women based upon a number of factors

including the date of entry into the United States. The independent (outcome) variables for both Hypothesis I and Hypothesis II were perinatal events which, for the purposes of this study, were defined as preterm births and inadequate prenatal, postpartum or newborn care. Data regarding these events was gathered from both interviews with mothers in a post-partum ward as well as through the extraction of data from delivery records. The adequacy of prenatal care was defined using the Kotlechuck Index (18)..

IIIB. Population Studied

As noted previously, the population under study was immigrant childbearing women in the post-PRWORA enactment era. For the consumer data component of the project, we studied childbearing Latina women in cities with large immigrant populations in New York, California and Florida and compared immigrants to citizens. The vital data component of the project assessed births toUS and foreign-born Latinas in New York City, California and Texas using a pre-post design with a comparison group. The legislative and administrative evaluation featured descriptive analysis of the development and implementation of post-welfare reform act policies affecting immigrant childbearing women in New York, California, Florida and Texas.

IIIC. Sample Selection

IIIC1. Consumer Data: Client level data collection began March 1999 and follow-up ended in November 2001. Subjects were recruited from the post-partum wards of three hospitals in San Francisco, CA, one hospital in Miami, FL and three hospitals in New York City, all of which serve areas with sizable Hispanic populations. Screening criteria for eligibility were: 1) 17 years of age or older; 2) identification as a Latina/Hispanic; 3) one or more parents or grandparent who were born in a Latin American or Latin Carribean county (excluding Brazil or Puerto Rico); 4) intent to care for child herself and to remain in area for at least six months and; 5) able to understand and answer interview questions in English or Spanish. Throughout the study we operated under a Federal Certificate of Confidentiality. Final enrollment and follow-up numbers are shown by site in Table 1 below.

Table 1: Enrollment and Follow-up by Site

	Screened	**Enrolled**	**Followed-up**
New York, NY	5,808	1,745	1,705 (92.2%)
San Francisco, CA	2,470	1,142	877 (80.1%)
Miami, FL	1,975	1,441	941 (79.1%)
Total	10,253	3,990	3,390 (85.0%)

IIIC2. State-wide Vital Data: In this analysis we used birth certificates from California, New York City and Texas to characterize changes in perinatal outcomes among foreign-born as compared to U.S.- born Latinos between 1995 (pre-PRWORA) and 1998 post-PRWORA). We constructed time-series of perinatal outcomes for all singleton births to

U.S.- and foreign-born Latino residents. We excluded Puerto Ricans from all analyses since, although they are Latino, they are all U.S.-born.

IIIC3. Legislative and Administrative Evaluation: The methodology for identifying the study states' statutory, regulatory and policy framework for implementing welfare reform consisted of relevant document review/analysis and a series of semistructured interviews with Health/Social Service Commissioners, the CFO of sentinel hospitals, the Chairs of Obstetrics and policy analysts.

IIID. Instruments Used

The data gathered and the data gathering measures that were employed by the study are as follows:

IIID1. Consumer Data was gathered from sentinel hospitals (Interview and Chart Review): The independent (predictor) variable for Hypothesis 1 (The welfare reform act will affect maternal-newborn health) was the participants' eligibility for Medicaid and other cash benefits. Interviews with health officials allowed us to define the criterion for eligibility for Medicaid and other benefits in each state. Interviews with the women allowed us to determine which of them meet those criteria. For immigrants those criteria include the date of entry into the United States and the kind of immigrant they are: qualified (lawful permanent residents, refugees, asylees, parolees after one year, persons granted conditional entry, those whose deportation is withheld, veterans and their immediate families, and those with 40 quarters of Social Security eligible employment) or non-qualified (all other aliens, including the undocumented). Initial interviews were conducted on the postpartum ward. Consent was obtained in the appropriate language and patients were assured of the confidentiality of the instrument and of the interviewer's independence from the hospital and all governmental agencies. We were cognizant of the possibility of mis-classification bias in regard to legal vs. illegal status. However, we believed our use of same language interviewers and assuring the patients of our independence from both the hospital and all governmental agencies, as well as contacting patients outside the hospital during follow-up would enhance the reliability of responses. We also contacted patients outside the hospital during follow-up which also facilitated more reliable reporting. This was supported, as will be described later, in that a large percentage of parturient women enrolled in our study did report that they were undocumented.

The face-to face initial interview elicited information necessary to determine an individual's eligibility for Medicaid and other benefits in the state in which she resided as well as what her eligibility would be if she resided in the other state under -study. In addition to assessing information necessary to categorize the patient vis a vis Medicaid and cash entitlements (that categorization serving as the predictor variable in the primary analysis), we ascertained information regarding potential confounding variables such as drug use, smoking, alcohol use, etc. The major components of the client interview instrument were socioeconomic status, demographic data, drug and alcohol use, obstetrical history, and determinants of health seeking behavior (e.g., health belief model,

cultural factors, financial constraints and perceptions of the law). The core components were derived from instruments utilized and validated in previous studies.

Items unique to this study, such as perceptions of the welfare reform act and cultural determinants of health seeking behaviors, were developed. These items were included as one portion of a battery of self-report measures designed to assess knowledge, beliefs, attitudes, subjective norms and behavioral intentions regarding welfare reform laws and the impact of these laws on health care seeking behavior.

The independent (outcome) variables for both Hypothesis I and Hypothesis II were perinatal events such as preterm births and inadequate prenatal, postpartum or newborn care. Interviews of women in the hospital and in-patient peripartum records and follow-up of women to the time of scheduled postpartum and newborn visits were the source of information used to determine these outcomes. Delivery records contained fetal outcomes including birth weight, gestational age, Apgar scores, stillbirths, gestational age at first prenatal visit and number of prenatal visits. To examine the relationship between Medicaid and benefit status and adequacy of prenatal care we categorized the adequacy of prenatal care using the Kotlechuck Index (18).

IIID2. State-wide Vital Data: State birth certificates were used to achieve a broader assessment of the differential impact of entitlement reform on perinatal outcomes than could be obtained by client data from specific institutions. We analyzed outcomes of women in California, Texas and New York City (New York City is a separate vital registration area with a birth certificate distinct from that for New York State). We limited the analysis of New York to New York City given the large numbers of births to foreign-born women in New York City and the fact that New York City's birth certificate has more detailed information on payor status, tobacco, alcohol and illicit drugs than does the certificate for New York State. Vital data lack the specificity that was obtained from client interviews. Nevertheless, in California and New York, we know mothers' country of origin and whether the birth was financed by Medicaid, self-pay, or some other third party. Thus, we are able to compare prenatal care utilization and birth outcomes of foreign-born women whose birth was financed by Medicaid or self-pay, before and after welfare reform, to the same outcomes of U.S.-born women whose births were also financed by Medicaid or self-pay.

IIID3. Legislative and Administrative Evaluation: The predictor variable for Hypothesis II (maternal-newborn outcomes will vary according to the Medicaid policies of the state in which women reside) is the state in which the patient gives birth. The essential factor in that regard is state legislation dealing with Medicaid and cash outlays available to immigrants and the needy and the means by which those laws are implemented at municipal and hospital levels. As previously noted, federal law allows for great leeway in the administration of welfare reform. For example, states may be "liberal" or "conservative" in the provision of Medicaid to aliens. Each state has utilized a different approach. Each state's legislative approach in turn was implemented through health departments and ultimately put into operation at the level of the individual hospital.

Certain municipalities may also have chosen to utilize local resources to mitigate the effect of some of the directives emanating from state agencies.

In order to discern the variation in approach at each site, to permit a contextual analysis of that inter-state variation and to catalogue it in a manner that will allow it to be used as a predictor in the analysis of Hypothesis II, an instrument was designed which was administered in a semi-structured interview with key informants in each state. Examples of the factors assessed through interviews with key informants are as follows:

Commissioner of Health/Social Services (State and Local)
The objective was to determine the actual or anticipated impact of welfare reform on the perinatal health of pregnant immigrants through an examination of changes in eligibility for public benefits, changes in sources and levels of funding for health and health-related services, any impact of new reporting requirements and perceived or actual changes in utilization and health status. Factors were assessed through interviews with Commissioners of health at the state and local levels were elucidated via a series of specific questions in the following areas:

1) Medicaid eligibility for pregnant immigrants
2) Eligibility of pregnant immigrants for other benefits
3) Immigration status reporting requirements
4) Sources and levels of prenatal care funding for immigrants
5) Service utilization and health status
6) Public charge issues
7) Outreach and education efforts

Hospital Chief Financial Officer (CFO)
In order to understand the anticipated/actual impact of welfare reform on the hospital's ability to obtain reimbursement for providing care to pregnant immigrants and their infants, the following questions were asked:

1) Determination of Medicaid eligibility and reporting
2) Sources of funding of prenatal care and delivery - Medicaid and other
3) Impact of any loss of sources of funding

Chairpersons of Obstetrics
To better understand the anticipated/actual impact of welfare reform on the department's ability to provide care to pregnant immigrants and their infants; where eligibility has not been changed, to examine possible changes in patient behavior notwithstanding continued eligibility and anticipated or hypothetical impact, we asked questions in the following areas:

1) Service utilization and health status
2) Changes in eligibility and sources of funding - Medicaid and other
3) Referrals and outreach efforts
4) Impact of Medicaid Managed Care

In sum, through interviews with individuals charged with the health care of women, ranging from those with responsibility at the field level through those whose responsibilities encompass the entire state, we were able to carefully categorize our independent variable for Hypothesis II (*Maternal-newborn outcomes will vary according to the Medicaid policies of the state in which women reside*).

IIIE. Statistical Techniques Employed

As noted previously, the overall research design followed a modification of the standard explanatory case study methodology as described by Yin and colleagues (19). Qualitative and quantitative analytic techniques appropriate to the type of analysis conducted were used for data collected in the three components of this project. Data collected as a part of the administrative and legislative evaluation were presented by state in descriptive case studies. Analysis of the consumer data was conducted using general linear regression models when outcomes were continuous (eg, birth weight) or logistic regression models when the outcomes were discrete (eg, prematurity). When a discrete outcome had more than two levels, a multinomial logit model was used. Interactions in were examined in the models and models were be assessed for goodness of fit and outliers identified and analyses redone excluding outliers or highly leveraged observations (20). Analysis of the state-wide vital data employed a pre-post design with a comparison group. Bivariate and multivariate analyses were conducted to assess changes in outcomes -pre and -post welfare reform enactment using a time series methodology.

IV. Presentation and Discussion of Findings

IVA. Consumer Data

IVA1. Relationship of State of Residence to Adequacy of Prenatal Care

As one of our first analyses of the consumer data, we studied women who were recruited between March 1999 and May 2000. The principal predictor variables were immigration status and eligibility for federal Medicaid. A detailed algorithm for determination of federal Medicaid eligibility was developed based upon review of the welfare reform law and subsequent legislative changes. This algorithm only defines which women are eligible for Medicaid as defined under PRWORA, but does not indicate which women are eligible for state-funded Medicaid (California) or federally funded Medicaid due to a court order (New York). Thus we hoped to be able to discern differences between women who had the same status under federal law but who were subject to differences in access to government funded insurance based on variations between states. Each participant's eligibility status under federal welfare reform was determined using the following algorithm:

Eligible for Federal Medicaid as determined by PRWORA:

- US born citizen
- Naturalized citizen
- Qualified immigrant arriving before 8/22/96
- Qualified immigrant arriving on or after 8/22/96 who is exempt from five year bar

on benefits
- Non-qualified immigrant receiving SSI on 8/22/96

Ineligible for benefits
- Qualified immigrant arriving on or after 8/22/96 who is subject to five year bar on benefits
- Non-qualified immigrant, undocumented, permanent resident under color of law (PRUCOL)

Categories of qualified immigrants are noted below. If they arrived in the U.S. on or after 8/22/96, they are either subject to or exempt from the five-year bar on federal Medicaid eligibility as noted.

Legal resident, no exemptions	Subject
Alien being paroled into the U.S. for a year or more	Subject
Alien being granted conditional entry into U.S.	Subject
Battered alien	Subject
Refugee or asylee	Exempt
Deportation currently being withheld by the INS	Exempt
Cuban or Haitian entrant	Exempt
Amerasian immigrant	Exempt
Veteran, on active military duty or a dependent of someone who is	Exempt

We ultimately defined three groups based on the algorithm; eligible and either US born or naturalized citizens, eligible non-citizens and ineligible immigrants. The primary outcome was adequacy of prenatal care and we also assessed infant birthweight and infant gestational age. We defined adequacy of prenatal care according to the gestational age at the time of first prenatal visit, the total number of prenatal visits and the duration of gestation according to the Kotlechuck index (18).

Statistical design: This is a cohort study in which the cohorts are based on eligibility status for Medicaid. Some of the data such as history of prenatal care were gathered during the study interview following delivery. Data on outcomes such as birth weight, gestational age and Apgar score were abstracted from medical records. Data were analyzed using logistic regression or analysis of covariance models depending on whether the outcome was continuous such as birth weight or discrete such as adequacy of care. Initial models include main effects as well as interactions. Reduced models started with terms that were significant at $P<0.10$ in the full model and were retained if $P <0.05$ in the reduced model. All models were assessed for goodness of fit and outliers. The adjusted means shown in Tables 3 and 4 are least-square estimates and equal the value

that would be expected for a balanced design that includes the independent variables in the model as well as the covariates at their mean levels.

A total of 3,140 eligible women were approached for participation (829 from San Francisco, 1,118 from New York City and 1,193 from Miami). The percentage of eligible patients who agreed to participate was 81.5% (n=2548). The most frequently cited reason for not participating was imminent discharge from the hospital. There were 177 women for whom information on prenatal care was not available. Thus, we are reporting on 2,371 of the 2,548 women who agreed to participate and for whom complete data were available. There were 625 participants from San Francisco, 964 from New York City and 782 from Miami. They ranged in age from 15.4 years to 50.0 years with a mean of 27.1years. Seventeen percent were citizens, 31% were eligible non-citizens and 52% were ineligible immigrants.

Table 2 shows the relationship between site, eligibility, immigration status and type of prenatal insurance (Medicaid, private insurance or self-pay). An interaction was found in the relationship between immigration and insurance status by site (p=0.001). In San Francisco and New York ineligible immigrant had the highest rate of Medicaid coverage, followed by eligible non-citizens. In San Francisco and New York, only 3.1% and 5.3% of ineligible women had no prenatal insurance. In Florida by contrast, ineligible women were the least likely group to be on Medicaid and over 30% of the ineligible women had no prenatal insurance. Since site was related to insurance status and insurance status was related to some of the outcomes of interest, we stratified subsequent analyzes by site.

Table 2: Type of Insurance by Site and Eligibility

Site (Insurance)	Citizen #	Citizen %	Eligible #	Eligible %	Ineligible #	Ineligible %	P Value
New York:							
Medicaid	109	56.2	180	87.0	459	90.7	
Private	73	37.6	22	10.6	20	4.0	.001
None	12	6.2	5	2.4	27	5.3	
California:							
Medicaid	73	76.0	125	83.3	332	92.2	
Private	21	21.9	23	15.3	17	4.7	.001
None	2	2.1	2	1.3	11	3.1	
Florida:							
Medicaid	77	74.8	257	73.9	201	64.6	
Private	16	15.5	23	6.6	16	5.1	.001
None	10	9.7	68	19.5	94	30.2	

Table 3 shows the average month that participants' prenatal care started stratified by their site of care, eligibility status and Medicaid status. Although there was some variation among sites in the month at which prenatal care began, within each site and Medicaid stratum, there was no significant difference in the month that prenatal care began based on immigration status. There was a relationship between prenatal insurance status and the month at which prenatal care began, and women with no insurance started care later. In New York and Florida the differences were significant (p= 0.02).

Table 3: Month Prenatal Care Starts by Site, Insurance Status, and Eligibility*

Site (Insurance)	Citizen #	Citizen Adj. Mean*	Citizen SE	Eligible #	Eligible Adj. Mean	Eligible SE	Ineligible #	Ineligible Adj. Mean	Ineligible SE	P Value
New York:										
Medicaid	106	3.8	.20	173	3.8	.13	443	3.8	.09	
Private	71	3.1	.24	20	4.1	.39	20	3.9	.38	.02
None	11	5.0	.59	4	4.7	.86	6	3.5	.70	
P				.51						
California:										
Medicaid	70	3.8	.23	118	4.0	.16	322	3.9	.10	
Private	20	4.0	.41	22	3.8	.38	17	3.6	.43	.46
None	2	2.9	1.25	2	6.0	1.24	5	2.6	.79	
P				.53						
Florida:										
Medicaid	69	4.8	.26	224	4.3	.14	177	4.8	.16	
Private	11	4.8	.62	19	4.4	.47	15	4.2	.53	.02
None	8	5.0	.72	48	4.8	.29	69	5.3	.25	
P				.02						

*Adjusted for age at birth and parity, education and ability to speak English

Table 4 illustrates that a similar pattern was found when the number of prenatal visits was used as the outcome. Women with no prenatal insurance had fewer prenatal visits than women with Medicaid or private insurance. When stratified by site and adjusted for insurance status, there was no difference in number of prenatal visits by eligibility status. However, since in Florida, as opposed to the other states, ineligible immigrants were less likely to receive Medicaid and consequently more likely to be without insurance, ineligible immigrants in that state were found to have fewer prenatal visits when insurance status was not controlled.

Table 4: Number of Prenatal Care Visits by Site, Insurance Status, and Eligibility*

Site (Insurance)	Citizen Adj. Mean*	Citizen SE	Eligible Adj. Mean	Eligible SE	Ineligible Adj. Mean	Ineligible SE	P Value
New York:							
Medicaid	9.3	.43	9.4	.33	9.5	.21	
Private	9.5	.53	8.2	.98	9.6	.98	.014
None	5.7	1.46	4.9	2 .20	8.2	1.66	
P			.28				
California:							
Medicaid	9.6	.50	9.2	.39	10.0	.23	
Private	7.6	.96	8.9	.90	8.7	.90	.06
None	10.5	2.96	4.1	2.95	8.4	1.71	
P			.35				
Florida:							
Medicaid	7.0	.40	6.8	.22	6.4	.24	

Private	6.0	1.00	7.1	.76	7.2	.86	.001
None	4.7	1.11	5.6	.47	5.0	.39	
P			.58				

*Adjusted for age at birth and parity, education and ability to speak English

Finally, in regard to prenatal care, we assessed adequacy as measured by the Kotelchuck index. We collapsed the categories into adequate (adequate and adequate plus) and inadequate (inadequate and intermediate). As shown in Tables 5 and Table 6, immigration status did not correlate with adequacy of care (nor was an effect seen when the categories were not collapsed). Overall the odds ratio of a citizen receiving adequate care vs. an ineligible receiving adequate care was 1.2 (95%CI-0.9-1.6) whereas the odds ratio for an eligible vs. ineligible was 0.9 (95%CI-0.7-1.1). In Florida and New York women with no insurance were less likely to receive adequate care. Overall, the odds ratio of receiving adequate care for women with no insurance compared to those with private insurance was 0.34 (95%CI-0.23-0.62). Older women (OR=1.04; 95%CI-1.02-1.06) and those of lower parity (OR=0.83; 95%CI-0.77-0.92) were also more likely to receive adequate care. This suggests that since immigration status is tied to payment status, that controlling for payment status could mask the effect of immigration status on prenatal care. In other words, the central effect of immigration status may be to change women's prenatal insurance status.

Although we did not have large enough cohort to determine if there were clinically relevant changes in rates of low birthweight or very low birthweight within subgroups, we did assess the association of immigration status with gestational age at delivery as well as with birth weight. No relationship was seen between immigration status and either outcome measured as continuous variables in a multivariate analysis after stratifying by site of care.

Table 5: Inadequate Prenatal Care by Type of Insurance, Eligibility and Site

Site (Insurance)	Citizen #	Citizen %	Eligible #	Eligible %	Ineligible #	Ineligible %
New York:						
Medicaid	50	48.1	77	44.8	231	53.6
Private	31	44.9	14	70.0	10	52.6
None	7	77.8	3	75.0	4	66.7
California:						
Medicaid	32	45.7	60	53.1	138	44.1
Private	14	70.0	13	61.9	12	70.6
None	--	----	2	100.0	1	20.0
Florida:						
Medicaid	55	82.1	157	71.7	141	82.0
Private	8	80.0	12	63.2	12	80.0
None	6	75.0	39	81.3	58	89.2

Table 6. Odds Ratios of Adequate Prenatal Care by Eligibility, Type of Insurance, Education, Age Parity and Spanish Speaking Only

New York	Odds Ratios	95% CI
Status		
Citizen vs. Eligible	1.6	0.9 – 2.7
Eligible vs. Ineligible	1.3	0.9 – 1.8
Insurance		
Medicaid vs. Private	1.1	0.7 – 1.8
None vs. Private	0.4	0.1 – 1.1
Education		
HS vs. <HS	1.4	0.8 – 2.2
>HS vs. <HS	1.5	0.9 – 2.3
Spanish Speaking Only	1.2	0.8 – 1.8
Age at Birth	1.04	0.8 – 1.8
Parity	0.89	0.78 – 1.02
California	**Odds Ratios**	**95% CI**
Status		
Citizen vs. Eligible	0.8	0.5 – 1.4
Eligible vs. Ineligible	0.7	0.5 – 1.1
Insurance		
Medicaid vs. Private	2.3	1.3 – 4.2
None vs. Private	3.6	0.8 – 16.4
Education		
HS vs. <HS	0.5	0.7 – 1.9
>HS vs. <HS	1.2	0.7 – 2.0
Spanish Speaking Only	0.8	0.5 – 1.1
Age at Birth	1.04	1.00 – 1.08
Parity	0.77	0.65 – 0.92
Florida	**Odds Ratios**	**95% CI**
Status		
Citizen vs. Eligible	1.1	0.6 – 1.7
Eligible vs. Ineligible	1.8	1.2 – 2.8
Insurance		
Medicaid vs. Private	0.8	0.4 – 1.7
None vs. Private	0.5	0.2 – 1.2
Education		
HS vs. <HS	1.1	0.6 – 2.0
>HS vs. <HS	1.3	0.8 – 2.1
Spanish Speaking Only	0.9	0.6 – 1.4
Age at Birth	1.07	1.03 – 1.11
Parity	0.83	0.67 – 1.01

Discussion: In a study of 2,371 Latina parturients giving birth in six hospitals in California, Florida and New York, we found no apparent differences in patterns of prenatal care or birth outcomes related to immigration status in those sites in which immigration status was not linked to insurance status. However, in one site ineligible

immigrants were less likely to receive Medicaid and, similar to other Latina women with the same insurance status, had fewer prenatal visits. This finding suggests that the effect of the 1996 law on the prenatal care of immigrant women may be mediated by its effects on insurance eligibility. It also implies that potential adverse effects may be abrogated or at least attenuated by state efforts to maintain Medicaid eligibility for pregnant women independent of their immigration status.

In work by this group that utilized vital data sets we were unable to discern a major effect of welfare reform on perinatal outcomes (see Section IVB1 below).That study used a comparison of the differences between immigrants and non-immigrants both before and after the implementation of the 1996 law. That study however was limited by the inability to discern from birth certificates women's precise immigration status. In the current analyses we were able to take advantage of data unavailable on birth certificates. Those data allowed us to gather information on the patterns of health care of Latina women and to determine how that care varied depending upon women's eligibility or ineligibility for Medicaid as defined by the new federal welfare law.

Our failure to discern a major perinatal disadvantage among ineligible immigrants in most instances in the wake of welfare reform, as measured by either patterns of prenatal care utilization or birth outcomes, could be related to efforts at the state level to mute the law's effect. In fact different states have taken dramatically different approaches to the implementation of the immigration aspects of the Welfare reform act. In New York, for example, due to a long-standing federal court decision (Lewis v. Grinker) (21). Medicaid eligibility for all pregnant women remained intact. The state welfare reform law, in fact, references the holding in Lewis v. Grinker. All non-citizen pregnant women in New York continue to be eligible for Medicaid without regard to documentation status. Following welfare reform, the federal government challenged that court order, seeking to make Medicaid eligibility conform to the requirements of PRWORA. The district court denied the federal government's motion, and an appeal is currently pending with the US Second Circuit Court of Appeals (22). In the mean time, eligibility remains intact.

In California no state law changing Medi-Cal eligibility after the 1996 Federal law was enacted. Instead, existing programs were changed to conform to federal requirements by replacing federally matched Medi-Cal with state-only funded Medi-Cal where required (23-25). In essence, prenatal care coverage for all immigrant women remained unchanged. However, Florida did not create a state funded Medicaid program to provide coverage where federal funds were not available. All undocumented immigrants in Florida continue to be ineligible for Medicaid with the exception of emergency medical services. The federal law's immigration restrictions were implemented in Florida effective July 1, 1997 (25).

Despite the fact that local activities blunted the *de jure* effect of the law the possibility of a de facto consequence persisted. Beliefs about guidelines, laws and regulations have the potential to effect behavior whether or not they reliably reflect actual statutes. In California for example Proposition 187, a ballot initiative passed by voters in 1994 by a 59 to 41 percent margin, attempted to restrict undocumented immigrants' access to a

wide array of state-funded health and social services, including prenatal care. Although most of its provisions were immediately stalled in litigation, and the Federal District court eventually struck down almost all provisions of that proposition, the fear and confusion in immigrant communities that it triggered had the potential to act as a barrier to immigrants' access to health services. Further, shortly after passage of Proposition 187, the California Department of Health Services began a joint project with the federal Immigration and Naturalization Service to screen non-residents returning to the country for use of public benefits, including Medi-Cal, as part of an anti-fraud initiative. Some immigrants who were enrolled in public benefits were denied re-entry, others were required to repay the costs of benefits they legally received, and others were forced to dis-enroll from programs to which they were legally entitled. Again, although legal challenges led to elimination of these programs in March 1998, these policies raised widespread concerns among immigrants about the wisdom of using Medi-Cal.

Welfare reform thus arrived in a context of heightened concern and confusion about immigrants' eligibility for public benefits, and the potentially adverse consequences of using such benefits. While the policies discussed above were declared invalid and discontinued, they could have contributed to a sense in immigrant communities that it may be wise to stay away from Medi-Cal. However, no discernable effect of these atmospherics could be detected in our analysis.

Previous research has demonstrated that immigrant Latina women have surprisingly good pregnancy outcomes (26). The data comparing perinatal outcomes between foreign- and US-born women from other ethnic groups are mixed, with some studies showing favorable outcomes for foreign-born women (13) and other studies finding no difference between foreign and US-born women (26). A comprehensive study utilizing data derived primarily from the National Center for Health Statistics found that foreign born women had lower infant mortality rates than US-born women for all race/ethnic groups except for Central and South Americans (27). These outcomes are somewhat surprising because they occurred despite prenatal care that was often inadequate. A study conducted in San Diego showed that 11.5% of births to undocumented mothers in the U.S. occurred with either no prenatal care or prenatal care commencing in the third trimester versus 3.6% for births to Mexican women who resided in the country legally and 3.8% in the general San Diego population (15).

We also were unable to discern differences in a few outcomes (birth weight, gestational age), despite differences in some sites in patterns of care. However, the consequences of inadequate care should not be ignored simply because birth outcomes are not worse than those of native-born minority women. The observation that immigrants are healthier than comparable non-immigrants, perhaps because of self-selection, is well known. Under these circumstances, "no difference" in perinatal outcomes may actually reflect a poorer result. And in any event, it makes social and economic sense to prevent adverse outcomes rather than waiting for problems to develop. Additionally, it is particularly important in these populations to maximize efforts to link women with the health care system. Undocumented women are reported to be much less likely than their legal counterparts to return for postpartum examinations for themselves and to seek neonatal care for their

infants (16). Thus we felt that it was important to determine whether the 1996 law would further erode the utilization of health services by immigrant women and to determine if trends varied by state. It is encouraging to note, that when immigration status is not demonstrated to be a barrier to insurance coverage, it also did not appear to result in decreased utilization of prenatal care. Further studies are ongoing in order to track any effect on newborn care.

It is worth noting a few caveats in regard to our results. Although we took several steps to assure the confidentiality of participants, it is still possible that there was misclassification bias in regard to immigration status, i.e., women may not to have acknowledged undocumented status. However 52% of women acknowledged being "ineligible" immigrants, suggesting that misclassification was not a major issue. Generalizability is also a potential problem. Although we interviewed women in three different states, as noted above, many of the legislative approaches to immigration vary. Local (hospital) effects may also vary. Thus our findings to not necessarily extend to other sites within the states studied or to other states with large numbers of Latina immigrants, such as Texas. However, the fact that we limited our sample to Latina women and used other Latina women as controls, gives us some confidence in the reliability of these results in regard to Latina women within the sites studied.

In sum we found that rates of prematurity and low birth weight among Latina women are not related to immigration status. The number of prenatal visits that these women receive is linked to their insurance status and that status in turn, is linked to immigration status in some sites. It would appear that states' efforts to mitigate the effect of the Welfare Reform Act of 1996 on immigrant's access to Medicaid have the potential to minimize any effect of PRWORA on prenatal care.

IVA2. Depression in the Post-Partum Period

Depression is frequent during pregnancy and the postpartum period. Postpartum depression in this context includes women who meet all DSM-IV (28) criteria for depression as well as those who experience clinically significant depressive symptoms but who do not necessarily fulfill the diagnostic criteria of major depression (29). As the mental health of women is a cornerstone of the psychological health of their offspring (30), failure to recognize and assist women experiencing postpartum depression is potentially a major public health problem.

Although research on postpartum depression has received substantial attention, (30,31) relatively little research to date has evaluated the prevalence of and risks for depression in ethnic minority groups or in women of lower socioeconomic status, especially Hispanic women (32-35). The Hispanic population is the fastest growing ethnic group in the United States and recently became the largest minority group in the country (36,37). It is estimated that by 2050, Hispanics will constitute 25% of the US population (38).

The primary goal of this analysis was to examine the frequency of depressive symptomology and factors associated with depressive symptoms in parturient Hispanic women. We were particularly interested in the relationship between Hispanic women's

immigration status and acculturation to mainstream culture and depression in the immediate postpartum period, after adjusting for psychosocial and economic characteristics. A delineation of these factors, using one of the largest populations of parturient Hispanic women studied to date, may offer health care providers better insight into the perinatal health and health risks of their patients.

Methods: As noted previously, over 10,000 women were screened for eligibility and, of the 4,724 eligible women from the three cities, 3,952 (83.6%) were available and agreed to participate.

Dependent Variable: Depression was measured with the Center for Epidemiologic Studies Depression Scale (CES-D) (39). The CES-D contains 20 items assessing depressive symptoms in the past 7 days, with item responses ranging from 0 (rarely/none of the time) to 3 (most of the time). This scale has been used extensively in population-based studies. The score was dichotomized into a binary variable whereby women who scored 16 points or higher were classified as "probable cases of depression." (39,40) The CES-D has good sensitivity (88%), but somewhat lower specificity (73%) (41,42). The CES-D showed high internal consistency among our study respondents ($\alpha = 0.86$).

Independent Variables:
Acculturation. A 12-item acculturation scale for Hispanics (43) was used to measure degree of acculturation to mainstream American culture. Three factors were constructed in the scale: "language use," "media," and "ethnic social relationship." Responses to each item were provided on a 5-point scale, which ranges from "only Spanish," "more Spanish than English," "both equally," "more English than Spanish," to "only English" for language use and media factors, and "almost all Latinos/Hipanics," "more Latinos than Americans," "about the same," "more American than Latino," to "almost all Americans" for ethnic social relationship factors. The total score of the scale ranged from 12 to 60, with higher score indicating greater acculturation to mainstream American culture. The scale displayed very high internal consistency among our study respondents ($\alpha = 0.93$).

Immigration status. Immigration status was determined through a set of self-report questions developed in consult with legal professionals in the field. Participants were categorized using the algorithm described previously according to whether they had a legal status at the time of giving birth (US citizens or legal residents) or were undocumented immigrants.

Social support. Perceived social support was measured through the 12–item Multidimensional Scale of Perceived Social Support (MSPSS) (44), with each item rated on a 5-point Likert scale ranging from "strongly agree," "agree but not strongly," "undecided," "disagree but not strongly," to "strongly disagree." Mean scores of the 12 items were calculated and the score ranged from –2 to +2, with higher score indicating stronger social support perceived. The MSPSS showed high internal consistency among our study respondents ($\alpha = 0.87$).

Health insurance coverage. Respondents were asked "during your pregnancy, did you have any health insurance?" Choices included Medicaid (MediCal for California residents), other public insurance, and private insurance.

Sociodemographic variables. These included age, education, marital status, monthly household income, employment status, and national origin. National origin was categorized into seven groups: Mexican, Cuban, Dominican, Central American, South American, multiple groups, and others. Mexicans, currently the largest Hispanic group in the US, were the reference group in the analysis.

Substance Use. Use of illicit substance was measured. Illicit substances included marijuana, cocaine, heroin, crack, illegal methadone, speed, ecstasy, and amphetamines. We measured any use of the above illicit substance in the previous 12-month period. Due to its comparatively high prevalence in this sample, marijuana use was measured separately from other illegal substances.

Statistical Analysis: Univariate analyses of association between depression and factors of interest were calculated with _ ² analyses, using $p = 0.05$ as the level set to determine statistical significance. Multiple logistic regression with forced entry method was utilized for multivariate analyses (45). Statistical Package for Social Sciences (SPSS) version 10.1 (SPSS Inc., Chicago, IL) was used for our analyses.

Results of depression assessment: One thousand six hundred and seventy-two (42.3%) participants were from New York City, 1,093 (27.7%) from San Francisco, and 1,187 (30%) from Miami. The majority of the participants were between the age of 18 and 34 (87%), with an average age of 23.3 (SE=2.52). Most participants were either married (41.4%) or living with a partner (33.7%). However, 19% of our participants were never married and did not live with a partner; whereas 5.8% of the participants were divorced, separated, or widowed. Other sociodemographic characteristics are shown in Table 7.

Table 7. Characteristics of the Study Participants, by City (N=3988)

Variable	No. (%)			
	New York	San Francisco	Miami	All sites
Overall Population	1672 (42.3)	1093 (27.7)	1187 (30.0)	3952
Sociodemographic Characteristics				
Age				
- Under 18	21 (1.3)	9 (0.8)	14 (1.2)	44 (1.1)
- 18 to 24	723 (43.2)	422 (38.8)	370 (31.3)	1515 (38.4)
- 25 to 34	775 (46.4)	548 (50.3)	587 (49.6)	1910 (48.5)
- 35 and older	150 (9.0)	110 (10.1)	212 (17.9)	472 (11.9)
Education				
- Lower than high school	649 (39.3)	472 (45.0)	410 (35.0)	1531 (39.5)
- High school or equivalent	656 (39.7)	341 (32.5)	384 (32.8)	1381 (35.7)
- Some college or higher	347 (21.0)	236 (22.5)	378 (32.3)	961 (24.8)
Monthly income and monetary resource				
Less than $1000	577 (43.6)	485 (50.3)	403 (40.9)	1465 (44.8)

$1000-$2000	585 (44.2)	351 (36.4)	466 (47.3)	1402 (42.8)
$2000 and higher	161 (12.2)	129 (13.4)	116 (11.8)	406 (12.4)
Marital Status				
- Married	573 (34.3)	513 (47.2)	547 (46.1)	1633 (41.4)
- Separated or Divorced	78 (4.7)	39 (3.6)	103 (8.7)	220 (5.6)
- Widowed	3 (0.2)	0 (0)	4 (0.3)	7 (0.2)
- Living with a partner	822 (49.3)	349 (32.1)	161 (13.6)	1332 (33.7)
- Never married	193 (11.6)	185 (17.0)	371 (31.3)	749 (19.0)
Currently Unemployed				
Yes	1410 (84.7)	899 (82.8)	1016 (85.7)	3325 (84.5)
Any Health Insurance coverage				
Yes	1570 (95.0)	1051 (97.5)	889 (75.1)	3510 (89.7)
National Origins				
- Mexican	701 (42.5)	627 (58.3)	49 (4.4%)	1377 (35.9)
- Cuban	9 (0.5)	2 (0.2)	209 (18.8)	220 (5.7)
- Central American	170 (10.3)	321 (29.8)	510 (45.9)	1001 (26.1)
- Dominican	454 (27.5)	0 (0)	59 (5.3)	513 (13.4)
- South American	171 (10.4)	26 (2.4)	219 (19.7)	416 (10.8)
- Multiple Groups	141 (8.5)	83 (7.7)	61 (5.5)	285 (7.4)
- Others	5 (0.3)	17 (1.6)	5 (0.4)	27 (0.7)
Number of Welfare Benefits Received				
- None	6 (0.4)	19 (1.7)	31 (2.6)	56 (1.4)
- One	654 (39.1)	198 (18.1)	711 (59.9)	1563 (39.5)
- Two	850 (50.8)	746 (68.3)	277 (23.3)	1873 (47.4)
- Three and More	162 (9.7)	130 (11.9)	168 (14.2)	460 (11.6)
Substance Use				
- Marijuana in the past 12 mos.	8 (0.5)	30 (2.8)	9 (0.8)	47 (1.2)
- Other illegal Drugs* in the past 12 mos.	3 (0.2)	17 (1.6)	4 (0.3)	24 (0.6)
Immigration Status				
Illegal or undocumented	811 (50.6)	632 (59.5)	527 (45.2)	1970 (51.4)
Born in the United States				
Yes	309 (18.5)	127 (11.6)	74 (6.2)	510 (12.9)

* Including cocaine, heroin, methadone, crack, crank, speed, ecstasy, and amphetamine

** Permanent resident under color of law

Mexicans were the largest group in the sample (35.9%). Compatible with distribution differences of nationalities across different geographic regions in the U.S., the distribution was significantly different between sites ($\_^2$=2019.5, df=16, p<0.001). Mexicans represented more than half of the sample in the San Francisco site (58.3%), 42.5% in New York, but only 4.4% in Miami; Dominicans comprised more than a quarter of the sample in New York (27.5%), but none in San Francisco site; Central Americans, South Americans and Cubans were over-represented in Miami, where Central Americans were the single largest group (45.9%).

The overwhelming majority of the participants were unemployed (84.5%); however, most women had health insurance coverage for prenatal care (89.7%, with as high as 95% of New York participants being covered). Among the unemployed women, only 7% were in school. Ninety-eight percent of the respondents received at least one type of social

welfare benefit and 11.6% reported receiving at least three types of social welfare benefits at the time of interview. While many respondents were either US citizens (20.8%) or legal residents (27.9%), more than half of the participants were undocumented immigrants at the time of interview (51.3%). Only 12.9% of the participants were born in the U.S.

Perceived social support was relatively high in this sample (Table 8). With a score ranging from –2 to +2, the average score of our overall sample was 1.47 (95% C.I.=1.23, 1.71). There was no significant difference in perceived social support across the three sites. The average acculturation score was 22.01 (ranged from 12 to 60) for all participants. New York respondents had significantly lower average acculturation scores than respondents from the other two sites (Table 8) even though New York participants had the highest rate of being US-born (18.5%). The use of illicit substances was uncommon in this population, with only 1.2% of respondents using marijuana and 0.6% reporting the use of other drugs in the past 12 months.

Table 8. Psychosocial Indicators of the Study Participants (N=3988)

	New York	San Francisco	Miami	All sites
Social Support				
Average Score	1.58 [1.27, 1.89]	1.56 [1.18, 1.93]	1.25 [0.73, 1.77]	1.47 [1.23, 1.71]
Acculturation				
Average Score	21.11 [20.55, 21.67]	22.60 [22.03, 23.17]	22.78 [22.26, 23.30]	22.01 [21.72, 22.30]
Depression				
Mean score [95%CI]	15.42 [14.97, 15.87]	13.28 [13.00, 13.56]	15.94 [15.60, 16.30]	14.99 [14.79, 15.15]
Probable cases of depression* [95%CI]	48.4% [45.9, 50.9]	34.4% [31.5, 37.3]	42.5% [39.6, 45.4]	42.8% [42.0, 43.6]

* CES-D scores were 16 or greater

Depression and its correlates: The average CES-D score was 14.99 across sites (Table 8). However, San Francisco respondents had significantly lower CES-D scores than respondents from the two other sites. Using a CES-D score ≥ 16 as threshold, 42.8% of respondents were classified with probable depression.

In univariate analyses, marital status, education, income levels, and employment status were all associated with level of postpartum depression, with more educated, employed, and participants with higher income at significantly lower risk for depression. Compared to currently married women, women who were separated/divorced and women living with a non-married partner reported higher levels of postpartum depression (Table 9). After adjusting for covariates in a multivariate model, most of the aforementioned socioeconomic characteristics remained protective factors against depression. In the multivariate model, the effect of marital status on depression was weakened: only women living with a partner but not married were at higher risk for depression, compared to married women. (Table 9)

Table 9. Univariate and Multivariate associations among Depression, Sociodemographic Characteristics, Immigration Status, AND psychosocial Indicators. (OR, odds ratio)

	P	Univariate Odds Ratio (95% CI)	*p*	Multivariate Odds Ratio (95% CI)
Age (years)				
- Under 18		1.00	-	1.00
- 18 to 24	0.479	1.26 [0.67, 2.36]	0.800	0.89 [0.37, 2.15]
- 25 to 34	0.658	1.15 [0.61, 2.16]	0.848	0.92 [0.38, 2.22]
- 35 and older	0.350	1.36 [0.71, 2.61]	0.821	1.11 [0.45, 2.77]
Nationalities				
- Mexican	-	1.00	-	1.00
- Cuban	0.004	0.64* [0.48, 0.86]	0.134	0.74 [0.49, 1.10]
- Central American	0.007	0.79* [0.67, 0.94]	0.335	0.89 [0.70, 1.13]
- Dominican	<0.001	0.55* [0.44, 0.68]	0.097	0.77- [0.57, 1.05]
- South American	0.108	0.83 [0.66, 1.04]	0.544	1.10 [0.80, 1.52]
- Multiple Groups	<0.001	0.59* [0.45, 0.78]	0.045	0.69* [0.48, 0.99]
- Others	0.977	0.99 [0.45, 2.18]	0.347	0.59 [0.19, 1.79]
Marital Status				
- Married	-	1.00	-	1.00
- Separated or Divorced	0.028	1.39* [1.04, 1.87]	0.318	1.23 [0.82, 1.83]
- Widowed	0.286	2.26 [0.51, 10.2]	0.360	2.33 [0.38, 14.3]
- Living with a partner	<0.001	1.74* [1.50, 2.03]	<0.001	1.63* [1.34, 1.99]
- Never married	0.182	1.13 [0.94, 1.36]	0.578	1.08 [0.83, 1.39]
Education				
- Lower than high school	-	1.00	-	1.00
- High school or equivalent	0.629	0.96 [0.83, 1.12]	0.436	1.08 [0.89, 1.32]
- Some college or higher	<0.001	0.57* [0.48, 0.68]	0.027	0.76* [0.59, 0.97]
Income				
Less than $1000	-	1.00	-	1.00
$1000-$2000	0.021	0.84* [0.72, 0.97]	0.952	1.00 [0.83, 1.20]
$2000 and higher	<0.001	0.45* [0.35, 0.57]	0.044	0.73* [0.53, 0.99]
Currently Employed				
Yes	<0.001	0.56* [0.47, 0.68]	0.028	0.76* [0.59, 0.97]
Illegal or undocumented immigrants				
Yes	<0.001	1.59* [1.38, 1.83]	0.808	0.97 [0.76, 1.23]
Illicit drug use				
- Marijuana	0.062	1.77- [0.97, 3.23]	0.354	1.42 [0.68, 2.99]
- Other illegal Drugs[#]	0.085	2.09- [0.90, 4.84]	0.235	1.86 [0.70, 5.14]
Prenatal Health Insurance Coverage				
Yes	0.013	0.77* [0.62, 0.95]	0.021	0.68* [0.49, 0.94]
Social Support Score				
Odds per point of increase	<0.001	0.58* [0.53, 0.64]	<0.001	0.59* [0.53, 0.67]
Acculturation Score				
Odds per point of increase	<0.001	0.98* [0.97, 0.99]	0.954	1.00 [0.99. 1.01]

[#] Including crack/cocaine, heroin, amphetamine, and ecstasy.

* $p<0.05$

_ 0.1>p>0.05

Health insurance coverage was associated with a lower risk of depression (OR= 0.77, with 95% C.I.=0.62, 0.95). Even after adjusting for other sociodemographic factors, insurance coverage remained a significant protective factor for depression (adjusted OR= 0.68, with 95% C.I.=0.49, 0.94).

Compared to Mexican women, Cubans, Dominicans, Central Americans, and Hispanic women with multiple national identity reported significantly lower levels of depression. However, after adjustment, only women with multiple national identity, and to a lesser extent, Dominicans (.05<p<.1) were at significantly lower risk for depression than Mexicans. After re-analyzing the data by individual sites, the significant effect of national origins only appeared in New York participants: Dominican women (OR=0.43, 95% C.I.=0.26, 0.69) and women with multiple national identity were at significantly lower risk for postpartum depression than Mexican women (OR=0.23, 95% C.I.=0.12, 0.45). The association between marijuana use and depression was only marginally significant in the univariate analysis (OR=1.77, .05<p<.1). The marginal association was reduced to an insignificant level after the multivariate adjustment (p=0.35). A similar relationship was found between use of other illegal drugs and depression (Table 9).

Undocumented immigration status was associated with a higher level of depression in univariate analysis (OR=1.59, with 95% C.I.=1.38, 1.83). However, after adjusting for sociodemographic factors such as income, education, and employment status, immigration status was no longer independently associated with depression (p=0.81).

A similar situation was detected between acculturation and depression. Acculturation was significantly associated with depression in the univariate model (OR=0.98 per point of score increase, with 95% C.I.=0.97, 0.99) but the association disappeared in the multivariate model (p=0.95). Self-perceived social support was the strongest protective factor against depression (p<.001) and its effect remained significant in the multivariate model (p<.001).

Discussion: This study examined self-rated depressive symptoms, measured by the CES-D, in a large sample of postpartum Hispanic women in three US urban centers. To our knowledge, this is the largest such study of parturient women of Hispanic origin in the United States. With 42.8% of women showing probable signs of depressive disorders, our study is comparable with earlier studies. In a study of women at four inner-city clinics in Dallas, 35% of minority women (including both Hispanic and African American women) had significant depressive symptoms about 3 weeks postpartum (34). In another study of minority parturient women in New York City, using the Beck Depression Inventory – Second Edition (BDI-II), 51% reported depressive symptoms above their cutoff score (35). However, their sample also included African American women and was not comprised exclusively of Latinas.

Our finding is consistent with other studies reporting a relationship between socioeconomic status and postpartum depression (30,46-48). Among sociodemographics

and associated factors examined in our analysis, higher education, higher level of income, employment, and health insurance coverage during pregnancy were all significantly protective against depression.

Mexican-origin Hispanic women seem to experience higher levels of postpartum depression than Hispanic women of Caribbean origins, such as Dominicans and Cubans. This association was not substantially diminished by other factors (such as participants' socioeconomic characteristics, immigration status, and perceived social support). However, the association between national origin and depression was found only in New York, where 42% of our study population was based. These findings suggest that Hispanic women of Caribbean origin in New York may have better coping mechanisms and strategies than Mexican-origin Hispanics. In New York, Latinos of Caribbean origin, primarily Puerto Ricans and Dominicans, are the dominant national origin subgroups (49), and this geographic concentration may contribute to stronger group identity, close-knit support structure, lower sense of isolation, and in turn, better mental health among these groups.

Neither immigration status nor degree of acculturation was significantly associated with the risk of depression in our study. While earlier studies demonstrated that the risk of depression increases as Hispanic women become more acculturated, (50-52) our results did not show such an association. Though acculturation was associated with a lower level of depression in the univariate analysis, this association was diminished after socioeconomic factors were adjusted. Acculturation score had a positive correlation with being employed (β=.29, p<.001), level of education (β=.29, p<.001), income level (β=.29, p<.001), and health insurance coverage (β=.04, p<.05). Those associations suggest that higher acculturation may have contributed to lower depression through its association with various socioeconomic factors. Thus, it seems that socioeconomic factors, including health insurance coverage, are more important to Hispanic immigrants' mental health than their level of acculturation, and these issues may be especially important for childbearing women. For Hispanic immigrant women, it may be especially important to assist them in improving their social circumstances if their mental health is to benefit.

Similarly, the relationship between immigration status and depression is affected by socioeconomic factors. Undocumented immigrants were less likely to be employed (β=-.30, p<.001), educated (β=-.32, p<.001), earn a higher income (β=-.30, p<.001), and to have health insurance coverage (β=-.03, p=0.05). These relationships obviated the independent association between immigration status and depression.

There are a few limitations that must be acknowledged: First, our study measured depression in the immediate postpartum period, which is loosely defined as symptoms arising a few days after giving birth. Earlier studies have focused on depression in periods lasting as long as 6 months postpartum. The shorter postpartum period utilized in our study might have reduced the reported rates of depression and may limit the comparability of our results to other studies. Second, the CES-D contains certain items measuring factors that could just be a function of having just given birth ("I did not feel

like eating/my appetite was poor" and "my sleep was restless," for example). Using the traditional threshold of 16 points or higher might have elevated overall prevalence of depression in our sample. Third, our outcome of interest was measured using the CES-D, instead of using a more standard diagnostic instrument, such as Diagnostic Interview Schedule (DIS) (53) or Composite International Diagnostic Interview (CIDI) (54). CES-D measures levels of depressive mood, but not DSM-IV defined depressive disorders. However, we were interested in identifying women at risk for depression rather than identifying "cases." Fourth, due to the exclusion criteria (our study was originally designed to measure the effects of Welfare Reform on Hispanic women, which did not influence the prenatal health care of US nationals), Puerto Rican women were excluded at enrollment. As the largest Hispanic group in the New York Metro area (49), this exclusion might have resulted in the loss of important information pertinent to acculturation issues and mental health in Hispanic women as whole. Finally, our study was a cross-sectional study, in which the temporal association between postpartum depression and its risk factors could not be delineated as in a longitudinal study.

Despite these limitations, this study is, to our knowledge, the largest study of parturient Hispanic women in the United States and is the first to examine the intertwining associations between signs of postpartum depression, socioeconomic status, acculturation issues, immigration status, and coping mechanisms, such as social support. Although our study did not find the influence of immigration status and acculturation on postpartum depression to be significant, the importance of socioeconomic conditions and social support was reconfirmed. We also found there might be different risk profiles for postpartum depression between different Hispanic groups.

As stated by Amaro and de la Torre (55), research on factors affecting the health of Latinos will provide opportunities to further our understanding of a number of more universal contextual factors affecting immigrant and socially marginalized populations. The population in our study was mostly immigrants (only 13% were US-born) and largely marginal due to their lower socioeconomic status. In summary, there was a relatively high level of depression in this sample of postpartum Hispanic women, and the level of depression was related to social and socioeconomic factors. Our study suggested that better social support systems and prenatal health insurance coverage might reduce the risk of depression, even in the setting of illegal or undocumented immigration status and lower levels of acculturation. This population should be monitored in the perinatal period for depressive levels, and an appropriate support structures should be established.

IVB. State-wide Vital Data

IVB1. Perinatal Health and Health Care Utilization

In this analysis we used birth certificates from California, New York City and Texas to characterize changes in perinatal outcomes among foreign-born as compared to U.S.-born Latinos between 1995 and 1998. Specifically, we compared changes in the financing of births (Medicaid and self pay), prenatal care utilization (early initiation of care and prenatal visits) and birth outcomes (low birth weight, very low birth weight and preterm delivery) between U.S.- born and foreign-born Latinos from 1995 to 1998. We focused on Latinos for several reasons. First, they constitute the largest proportion of

births to foreign-born women in California, New York City and Texas : in 1995 over 71 percent of all births to foreign-born women in California, 45 percent in New York City and 81 percent in Texas were to women from Latin American countries. Second, 65 percent of all births to Latinos regardless of nativity were financed by Medicaid in California and 74 percent in New York City. Thus, Latinos were particularly vulnerable to the potential withdrawal of benefits under PRWORA or to confusion regarding eligibility. Third, there was a relatively large number of births to U.S.- born Latinos in California, New York City and Texas. These women were U.S. citizens and, unlike many immigrants, did not lose Medicaid under the terms of PRWORA. Thus, U.S.-born Latinos constitute a natural comparison group with which to analyze effects of PRWORA on the perinatal health and behavior of their foreign-born counterparts.

Methods: We used birth files from California, New York City and Texas. We limited the New York analysis to New York City because 80 percent of the births to mothers of Latin American ancestry in the state were to residents of New York City (56). In addition, New York City is a separate vital registration area with a birth certificate that is distinct from the rest of the state. An advantage of birth certificates from California and New York City is that they include information on the method of payment for prenatal care and delivery. Thus, we can document changes in the proportion of births financed by Medicaid and the proportion self pay. The Texas birth certificate does not record method of finance.

We examined changes in outcomes in three areas related to the health and health care of pregnant immigrants and their newborns that may be affected by welfare reform. First, we analyzed the percentage of women who were self-pay. Poor foreign-born women may have been confused as to their eligibility for publicly financed health insurance after PRWORA or fearful of negative immigration consequences. If such responses were widespread, then we would expect to observe a decrease in the proportion of birth financed by Medicaid and an increase in the proportion of births to women that were self-pay in California and New York City. We heretofore refer to births that were self-pay as uninsured.

Second, since loss of Medicaid eligibility as well as confusion and fear of scrutiny may also have caused immigrants to initiate prenatal care later than they would have in the absence of PRWORA, we looked at changes in the proportion of births to women who began care in the first four months of pregnancy as well as the number of prenatal care visits. Finally, we analyzed changes in the proportion of low birth weight, very low birth weight and preterm births before and after PRWORA.

We first constructed time-series of perinatal outcomes for all singleton births to U.S.- and foreign-born Latino residents of California, New York City and Texas between 1989 and 1998. We then analyzed more detailed breakdowns by ethnicity. In California and Texas the largest group of Latinos were Mexican. We grouped all other Latinos together. Thus, we compared U.S.- to foreign-born Mexicans and we did the same for other Latinos. In New York City Dominicans constituted the largest group of Latinos after Puerto Ricans. Again, all other Latinos were combined. Comparisons in New York,

therefore, were between U.S.- and foreign-born Dominicans and all other U.S.- and foreign-born Latinos. We excluded Puerto Ricans from all analyses since, although they are Latino, they are all U.S.-born.

Statistical Methods: We used 1995 as the pre-PRWORA period and 1998 as the post period. PRWORA was signed into law on August 16, 1996. The actual implementation of PRWORA varied by state. California did not enact a state law changing Medi-Cal eligibility after PRWORA. Instead, existing programs were changed to conform to federal requirements by replacing federal funds with state funds by the end of 1997. The New York State Welfare Law passed on August 4, 1997. New systems were up and running in New York City by January, 1998. Texas responded most quickly. Financing for prenatal care among previously Medicaid- eligible immigrants was cut off in September, 1996, one month after passage of PRWORA.

In bivariate comparisons we used z-statistics to test differences in outcomes before and after PRWORA. Although most outcomes were dichotomous, we assumed differences followed a normal distribution given the large number of observations in our samples.

In multivariate analyses we used logistic regression for dichotomous dependent variables. We adjusted for several sources of confounding. First, we included controls for demographic and obstetrical factors that may have varied over time. Second, we eliminated confounding from permanent differences between U.S.- and foreign-born women by comparing changes in perinatal outcomes before and after welfare reform. Acculturation, for example, appears to be a risk factor for adverse birth outcomes in comparisons of U.S.- and foreign-born Latinos of similar ethnicity (57). By analyzing changes in outcomes over time, we largely eliminated acculturation as a source of confounding. Finally, we adjusted for time-varying confounding from factors that affected outcomes of both groups similarly. Specifically, we tested for differential *changes* in outcomes between foreign- as compared to U.S.-born Latinos by including interactions between year of birth, ethnicity and nativity. As long as changes in outcomes among U.S.-born Latinos were a good approximation of what we would have observed among foreign-born Latinos had PRWORA not been implemented, then we minimized confounding from time-varying factors.

Results: Using a time series methodology, we examined the annual percentage of births to all Latino women who were uninsured in California and New York City between 1989 and 1998. Separate time-series were constructed for U.S.- and foreign-born Latinos. Two observations are noteworthy. First, there was a rapid decline in the proportion of births that were uninsured among foreign-born Latinos in both California and New York City between 1989 and 1991. U.S.-born Latinos experienced notable but lesser declines. The fall is mostly likely related to the expansion in the income eligibility thresholds in Medicaid (58,59). Second, there was little evidence of an increase in births to women that were uninsured between 1995 and 1998. Thus, welfare reform appears to have left intact the gains in insurance coverage for pregnant Latinos associated with the Medicaid expansions in 1989-1990.

We also examined the percent of births to Latino women who initiated prenatal care in the first four months of pregnancy in California, New York City and Texas using, as before, separate time-series for U.S.- and foreign-born Latinos. There was a steady rise in early initiation of prenatal care among all 6 groups without obvious indication that these upward movements were interrupted after 1995. Finally, we examined the percentage of low birth weight births among U.S.- and foreign-born Latinos from our three states and again found no evidence of any increase in adverse birth outcomes after 1995.

Bivariate analyses: A more detailed breakdown of the changes in perinatal outcomes between 1995 and 1998 in California, New York City and Texas is presented in Tables 10 through 12, respectively. Among foreign-born Mexicans in California, the percent of births in which prenatal care was financed by Medicaid fell 7.3 percentage points and the percent of births to uninsured women increased by 0.6 percentage points between 1995 and 1998 (Table 10). U.S.- born Mexicans experienced similar changes: the percent of births financed by Medicaid fell 7.1 percentage points and the percent self pay rose by 0.1 percentage points.

There was no decline in prenatal care utilization associated with PRWORA. The percent of Mexicans who initiated prenatal care early rose 3.3 percentage points among foreign-born and 1.8 percentage points among U.S.-born. The average number of prenatal care visits per live birth increased commensurately: by 0.7 visits among foreign-born Mexicans and 0.3 visits among U.S.-born. With respect to birth outcomes the experience of U.S.- and foreign-born Mexicans was again similar: no change in the percent of low or very low birth weight and a modest increase in preterm birth. Changes among other Latinos in California (Table 10, lower panel) between 1995 and 1998 followed the pattern of Mexicans: a steep drop in the percent of births covered by Medicaid, almost no change in the percent uninsured, an increase in prenatal care utilization and essentially no variation in birth outcomes.

Changes in perinatal outcomes among Dominicans and other Latinos in New York City are presented in Table 11. Changes among Dominicans paralleled those for Mexicans in California. Importantly, we found an increase of 6.3 percentage points in early initiation of prenatal care among foreign-born Dominicans that exceeded the 4.2 percentage point rise among U.S.-Dominicans. Among other foreign-born Latinos in New York City, however, we show a rise of 2.6 percentage points in the percent of births financed by Medicaid and a fall of 2.8 percentage points in the uninsured. Prenatal care utilization improved among both U.S.- and foreign-born Latinos. The only anomaly is the significant rise in preterm births among foreign-born Dominicans and other Latinos between 1995 and 1998. However, the largest increase occurred among births to other Latinos born in the U.S. Moreover, the rise in preterm birth was unaccompanied by any significant change in the percent of low or very low birth weight births.

Table 10: Changes in Financing of Prenatal Care, Prenatal Care Utilization, and Birth Outcomes Among Mexicans and Central and South Americans in California by Nativity, 1995 and 1998

	Mexicans							
	U.S.- Born				*Foreign Born*			
	1995	**1998**	**Δ**	**95% CI**	**1995**	**1998**	**Δ**	**95% CI**
Insurance								
% Medicaid	53.9	46.8	-7.1	-7.7, -6.6	72.3	65.1	-7.2	-7.5, -6.8
% Uninsured	1.9	2.0	0.1	-0.3, 0.02	3.9	4.5	0.6	0.5, 0.8
Prenatal care								
% Early care	86.6	88.4	1.8	1.4, 2.1	83.9	87.2	3.3	3.0, 3.5
# Visits	11.3	11.6	0.3	0.3, 0.4	10.5	11.2	0.7	0.6, 0.7
Birth outcomes								
% LBW	5.3	5.1	0.2	0.0 0.4	4.1	4.2	0.1	-0.02, 0.1
% VLBW	0.9	0.9	0.0	-0.1, 0.1	0.7	0.8	0.1	-0.1, 0.01
% Preterm	8.7	8.4	0.3	0.0, 0.6	7.5	7.8	0.3	0.0, 0.5
N (maximum)	70,929	77,233			143,148	133,955		
	Other Latinos							
	U.S.- Born				*Foreign Born*			
	1995	**1998**	**Δ**	**95% CI**	**1995**	**1998**	**Δ**	**95% CI**
Insurance								
% Medicaid	34.4	31.0	-3.4	-5.0, -1.8	65.9	57.6	-8.3	-9.2, -7.5
% Uninsured	2.0	1.5	-0.5	0.0, 0.9	3.7	2.8	-1.0	-1.3, -0.6
Prenatal care								
% Early care	90.9	92.2	1.3	0.4, 2.3	87.9	91.1	3.2	2.6. 3.7
# Visits	11.9	12.3	0.4	0.3, 0.5	10.8	11.6	0.8	0.7, 0.9
Birth outcomes								
% LBW	4.8	4.9	0.2	-0.6, 0.9	5.2	5.1	0.1	-0.4, 0.4
% VLBW	0.8	1.0	0.2	-0.2, 0.5	0.9	0.9	0.0	-0.1, 0.2
% Preterm	7.0	8.0	0.9	0.0, 1.9	8.9	8.8	-0.1	-0.4, 0.6
N (maximum)	6,406	7,066			26,645	22,510		

Notes: The category, Other Latinos, excludes Puerto Ricans. The California birth certificate has separate indicators for financing of prenatal care and financing of delivery. We use the former. Early prenatal care is one if the woman initiated care in the first four months of pregnancy. LBW and VLBW refer to low and very low birth weight, respectively.

Table 11: Changes in Financing of Prenatal Care and Delivery, Prenatal Care Utilization, and Birth Outcomes Among Dominicans and Other Latinos in New York City by Nativity, 1995 and 1998

	Dominicans							
	U.S.- Born				*Foreign Born*			
	1995	**1998**	**Δ**	**95% CI**	**1995**	**1998**	**Δ**	**95% CI**
Insurance								
% Medicaid	73.8	66.5	-7.3	-11.1, -3.6	83.9	81.5	-2.4	-3.5, -1.3
% Uninsured	1.9	2.6	0.7	-0.5, 1.9	3.6	3.4	-0.2	-0.7, 0.3
Prenatal care								
% Early care	79.5	83.7	4.2	0.7, 7.7	77.3	83.6	6.3	5.0, 7.5
# Visits	9.6	10.0	0.4	0.0, 0.6	9.3	9.8	0.4	0.3, 0.5

Birth outcomes								
% LBW	8.4	6.7	-1.7	-3.9, 0.5	5.7	5.9	0.2	-0.4, 0.9
% VLBW	1.8	1.7	-0.1	-1.0, 1.2	1.3	1.1	-0.2	-0.5, 0.1
% Preterm	10.9	10.9	0.0	-2.4, 2.4	8.7	10.8	2.1	1.2, 3.0
N (maximum)	1,000	1,280			10,881	7,825		
	Other Latinos							
	U.S.- Born				***Foreign Born***			
	1995	**1998**	**Δ**	**95% CI**	**1995**	**1998**	**Δ**	**95% CI**
Insurance								
% Medicaid	59.0	62.8	3.8	1.3, 6.3	76.0	78.7	2.6	1.6, 3.6
% Uninsured	4.8	3.2	-1.6	-2.6, -0.6	7.2	4.4	-2.8	-3.4, -2.2
Prenatal care								
% Early care	78.6	84.2	5.6	3.3, 7.8	77.0	81.3	4.3	3.3, 5.4
# Visits	9.1	9.8	0.7	0.5, 0.9	9.1	9.8	0.6	0.6, 0.7
Birth outcomes								
% LBW	8.1	6.5	-1.6	-2.9, -0.2	5.2	5.5	0.2	-0.3, 0.8
% VLBW	1.0	0.9	-0.1	-0.6, 0.4	0.9	0.9	-0.1	-0.3, 0.1
% Preterm	9.3	11.9	2.6	0.9, 4.3	8.9	10.0	1.0	0.1, 2.0
N (maximum)	3,374	2,492			13,078	14,141		

Notes: The category, Other Latinos, excludes Puerto Ricans. The New York City birth certificate has a single indicator for financing that refers to the birth. Early prenatal care is one if the woman initiated care in the first four months of pregnancy. LBW and VLBW refer to low and very low birth weight, respectively.

Results for Texas are displayed in Table 12. We present outcomes for prenatal care and birth outcomes because the birth certificate in Texas does not include method of finance. The pattern of change in Texas was similar to that of California and New York City. Early initiation of prenatal care increased by 2.9 percent points among foreign-born Mexicans as compared to 1.8 percentage points among U.S.-born Mexicans. There was no change in low or very low birth weight. Changes in outcomes among other Latinos in Texas were similar. As in New York City, we found a rise in the percent of preterm births that was greatest among U.S.-born, non-Mexican Latinos.

Table 12: Changes in Prenatal Care Utilization, and Birth Outcomes Among Mexicans and Other Latinos in Texas by Nativity, 1995 and 1998

	Mexicans							
	U.S.- Born				***Foreign Born***			
	1995	**1998**	**Δ**	**95% CI**	**1995**	**1998**	**Δ**	**95% CI**
Prenatal care								
% Early care	83.3	85.1	1.8	1.4, 2.2	75.4	78.3	2.9	2.4, 3.3
# Visits	10.9	11.1	0.2	0.1, 0.2	9.3	9.6	0.3	0.2, 0.3
Birth outcomes								
% LBW	6.0	6.1	0.0	-0.2, 0.3	4.7	4.8	0.1	-0.1, 0.4
% VLBW	0.9	0.9	0.0	-0.1, 0.1	0.7	0.6	-0.1	-0.2, 0.0
% Preterm	9.7	10.1	0.4	0.0, 0.7	7.9	8.7	0.8	0.5, 1.1
N (maximum)	61,759	69,845			57,220	61,920		
	Other Latinos							

	U.S.- Born				*Foreign Born*			
	1995	**1998**	**Δ**	**95% CI**	**1995**	**1998**	**Δ**	**95% CI**
Prenatal care								
% Early care	84.6	85.2	0.5	-0.6, 1.7	84.4	86.5	2.1	0.9, 3,3
# Visits	10.9	10.7	-0.2	-0.4, -0.1	10.2	10.5	0.3	0.2, 0.5
Birth outcomes								
% LBW	7.2	8.0	0.8	-0.1, 1.7	5.4	5.8	0.4	-0.3, 1.2
% VLBW	1.3	1.9	0.6	0.2, 1.0	1.0	0.9	-0.1	-0.5, 0.2
% Preterm	11.6	13.0	1.4	0.3, 2.5	9.6	10.2	0.5	-0.4, 1.5
N (maximum)	7,050	7,076			6,692	7,689		

Notes: The category, Other Latinos, excludes Puerto Ricans and Cubans. Early prenatal care is one if the woman initiated care in the first four months of pregnancy. LBW and VLBW refer to low and very low birth weight, respectively.

Multivariate analyses: In Table 13 we present adjusted odds ratios and mean differences for *changes* in perinatal outcomes among foreign-born as compared to U.S.-born Latinos in our three states. We limit the outcomes to a lack of insurance, early prenatal care and low birth weight. Among Mexicans in California we find that the odds that a pregnant woman became uninsured between 1995 and 1998 increased 9 percent more among foreign- as compared to U.S.-born women (95% CI, 1.01, 1.19). There was not a similar increase among other Latinos. Despite the relative up tick in a lack of insurance, the odds that a Mexican woman initiated prenatal care in the first four months of pregnancy increased more among foreign- as compared to U.S.-born Mexicans between 1995 and 1998 (OR = 1.11: 95% CI, 1.07, 1.15). Finally, there was no differential increase in percent of low or very low birth weight births among foreign- as compared to U.S.-born Latinos in California.

Table 13: Adjusted Odds Ratios for Changes in Perinatal Outcomes among Foreign- vs U.S.- Born Latinos, by State and Ethnicity, 1995 and 1998

	Dependent Variable					
	Uninsured		**Early initiation of prenatal care**		**Low birth weight**	
	OR	95% CI	OR	95% CI	OR	95% CI
California						
Mexicans	1.09	1.01, 1.19	1.11	1.07, 1.15	1.06	.99, 1.12
Other Latinos	.98	.74, 1.29	1.15	1.00, 1.32	.97	.81, 1.16
New York City						
Dominicans	.70	.39, 1.28	1.16	.90, 1.50	1.33	.94, 1.87
Other Latinos	.84	.62, 1.13	.93	.78, 1.10	1.28	1.02, 1.62
Texas						
Mexicans	na	na	1.03	.99, 1.08	1.02	.95, 1.09
Other Latinos			1.10	.96, 1.26	1.00	.82, 1.21

Notes: Odds ratios are from the coefficients on the interaction of year, nativity and ethnicity as estimated by logistic regression. Uninsured is one if the woman lacked insurance for prenatal care (California) or for the birth (New York City). Early initiation of prenatal care is one if the woman began care in the first four months of pregnancy. Regressions include dummy variables for age (2), marital status, mother's completed schooling (4), parity (3), sex of the infant, year, ethnicity, nativity, interactions of year and ethnicity, year and nativity, nativity and ethnicity, and year, ethnicity and nativity. In Texas we also included an indicator for smoking and in New York City indicators of smoking and illicit drugs (4).

Changes in perinatal outcomes among foreign- relative to U.S.-born Latinos in New York City and Texas are broadly consistent with those in California. There was no relative increase in the percent uninsured in New York City; nor was there an increase in the percent of births to women who initiated prenatal care after the fourth month of pregnancy in either New York City or Texas. Among other Latinos in New York City, the odds of a low birth weight birth increased more among foreign- relative to U.S. born women (OR= 1.28: 95% CI 1.02, 1.62), but there was no evidence of a relative increase in low birth weight among foreign-born Latinos in Texas.

Discussion: We found little evidence that welfare reform altered the financing of prenatal care among foreign-born Latinos in California and New York City nor access to prenatal care in either California, New York City or Texas. There was, for instance, little or no change in the percentage of births to uninsured women among foreign- versus U.S.-born Latinos in California and New York City and, except for Mexicans in California, no increase in the relative likelihood that a foreign-, relative to U.S.- born Latino was uninsured. We also found no decline in the percentage of births to women who initiated care in the first four months of pregnancy in either California, New York City or Texas. On the contrary, we reported gains in the early initiation of prenatal care and the number of prenatal visits among foreign- relative to U.S.-born Latinos. The latter finding was unexpected. Many argued that PRWORA would diminish access to primary care among foreign-born women directly - by the cutoff of funding - and indirectly by engendering fear and confusion (60-62,63,64). Even in Texas where state officials moved swiftly to end financial support for prenatal care among immigrants unqualified for Medicaid under PRWORA, we found gains in prenatal care among foreign-born Latinos. Finally, with one exception, we uncovered no increase in the incidence of low birth weight among foreign- relative to U.S.-born Latinos, an unsurprising result given the lack of change in the uninsured and prenatal care utilization.

There were some anomalies. The percent of preterm births rose among subgroups of Latinos in each of the three states for which we had data. The increase, however, was often observed for U.S. as well as foreign-born Latinos. Moreover, the increase was not corroborated by an increase in low and very birth weight, or a fall in early initiation of prenatal care. We doubt, therefore, that the rise was attributable to welfare reform. We also found a statistically significant increase in the odds of a low birth weight birth among foreign- relative to U.S.-born non-Dominican Latinos in New York City. Again, we are skeptical that the increase was attributable to PRWORA because the increased odds ratio resulted from a large fall in the incidence of low birth weight among other Latinos born in the U.S. as opposed to a statistically significant increase in the percent of low birth weight births among foreign-born women.

The third anomaly pertained to the fall in the percent of births financed by Medicaid in California. We speculate that because of the growth in Medicaid managed care, women described their insurance provider as an HMO instead of Medi-Cal. Consistent with this explanation is the result that the decline in Medicaid financed births occurred among both U.S. and foreign-born Latinos. The more relevant finding regarding the financing of prenatal care and delivery is the lack of any substantive change in the percent of births to uninsured pregnant women associated with welfare reform in either California or New York City.

There are several possible explanations for why we found no adverse consequences associated with PRWORA on the perinatal outcomes of foreign-born Latinos in California, New York City and Texas. The first may be related to the limitations of vital data. Not all foreign-born Latinos were "exposed" to the restrictions in PRWORA as implemented by each state. Only women who arrived after August, 1996 lost Medicaid coverage of prenatal care in Texas or were vulnerable to a cutoff in California and New York. It may be argued, therefore, that the effect of PRWORA on specific sub-populations was not detectable with vital data. However, confusion was widespread in immigrant communities about welfare reform's implications for legal as well as undocumented immigrants. Given the large number of observations and the size of the undocumented population, any significant response to welfare reform among the undocumented alone would have been detectable. In 1995, for instance, there were 74,006 births to undocumented Latino immigrants paid for by Medi-Cal (www.dhs.ca.gov/mcss). This represents 57 percent of 130,862 foreign-born Latinos in 1995 whose births were financed by Medi-Cal, other publicly funded programs, or self pay. Similarly, in Texas there were 27,980 inpatient stays to undocumented immigrants under emergency medical assistance or emergency spend down programs. Since ninety percent of all inpatient stays financed by Medicaid were obstetrical, there were approximately 25,000 deliveries to undocumented immigrants in 1995 (65). These births represent 38 percent of the 65,219 deliveries to foreign-born Latinos in the state and we estimate approximately 60 percent of all deliveries to foreign-born women financed by Medicaid. Thus, in both California and Texas, conservatively fifty percent of all foreign-born Latinos who gave birth in 1998 may have been - or have perceived themselves - ineligible for Medicaid coverage of prenatal care because of PRWORA. Our calculations indicate that the probability of a Type II error given a one-percentage point difference in early prenatal or low birth weight among foreign-born Mexicans between 1995 and 1995 in either California or Texas was less than 5 percent. Thus, even if only fifty percent of the foreign-born Mexicans in these states responded to the passage of PRWORA by delaying prenatal care, we had sufficient statistical power to detect changes of two percentage points (and often less) among the affected subgroups.

Another explanation for the lack of an effect of PRWORA on perinatal outcomes in California and New York City is that eligibility for publicly funded prenatal care among immigrants was essentially unchanged. This is true for New York City under the Lewis decision, where federal matching funds continue to be available for Medicaid coverage of prenatal care for undocumented immigrants. Both New York State and New York City officials have opposed the federal government's attempt to vacate the protective order in

Lewis. Under Executive Order 124, city employees have been prohibited from reporting aliens to the Immigration and Naturalization Service since 1984. Thus, despite evidence that immigrants in New York City were fearful of using public benefits after welfare reform, strong public and official support for immigrants in New York may account for the lack of change in perinatal outcomes in the City(66,67).

In California, however, there was much greater uncertainty regarding the financing of prenatal care, although coverage was not withdrawn. The openly anti-immigrant atmosphere characterized by Proposition 187 supported the observation by advocates for immigrants that even with the state's replacement of lost federal benefits, many foreign-born women - especially those who were undocumented - remained confused as to their eligibility for Medicaid and fearful of the scrutiny that may have resulted from the legislation. Upon enactment of PRWORA, former Governor Wilson of California quickly moved to end the state's prenatal care benefits for the undocumented, and opposed the State Legislature's proposal to use state funds to replace federal funds withdrawn by PRWORA for new legal immigrants (68). Moreover, even legal immigrants who arrived before August 1996 felt vulnerable. Shortly after the passage of Proposition 187, for instance, the California Department of Health Services began a joint program with the federal Immigration and Naturalization Service to screen legal non-residents returning to the country about past use of public benefits, including Medi-Cal, particularly for childbirth (63).

In Texas, however, the loss of Medicaid financing of prenatal care for unqualified immigrants under PRWORA was almost immediate. Thus, unlike California and New York City, confusion as to eligibility for Medicaid benefits in Texas was accompanied by an actual withdrawal of benefits for unqualified immigrants. Moreover, 80 percent of the births to foreign-born women were to Latinos, approximately 38 percent of whom were undocumented. Our finding of no change in early initiation of prenatal care and low birth weight among foreign- as compared with U.S.-born Latinos in Texas is compelling evidence that PRWORA has had no detectable impact on the perinatal outcomes of foreign-born women.

In addition to the reasons above, any impact of welfare reform on perinatal outcomes was likely diminished in all three states by the following: 1) the effectiveness of presumptive eligibility and other mechanisms for simplifying access to prenatal care; 2) the powerful incentives that hospitals have to facilitate Medicaid applications in obstetrical cases; 3) and the availability of prenatal care providers that remain accessible to all immigrants such as those funded through Title V block grants or the willingness of prenatal care providers to accept women without regard to ability to pay.

The impact of PRWORA on access to obstetrical care and obstetrical outcomes is likely to differ from its impact on pediatric outcomes. First, hospitals have strong incentives to facilitate enrollment of poor and near-poor pregnant women into Medicaid. Delivery entails a hospital stay and adverse birth outcomes can be extremely expensive to treat (69). Changes in the enrollment procedures that accompanied the Medicaid eligibility expansions of the late 1980's such as presumptive eligibility and the outstationing of

intake workers greatly facilitated Medicaid participation for pregnant women and infants. The Medicaid eligibility expansions for children have been less successful (24). One reason may be that providers have less financial exposure when providing routine pediatric care to the uninsured and thus less incentive to aggressively enroll children. The responsibility for enrollment, therefore, falls more to the parent in the case of pediatric as compared to obstetrical care. Reports that women who leave welfare are not enrolling their children in Medicaid suggests that confusion regarding PRWORA might have more negative consequences for children than infants (70).

We used changes in perinatal outcomes among U.S.- born Latinos of the same ethnicity as a comparison group to foreign-born women. A large literature exists that demonstrates that foreign-born women have better birth outcomes than U.S.- born women of similar ancestry (57,71). A preferable comparison group, therefore, might have been foreign-born Latinos who were naturalized citizens or foreign-born women who arrived before August, 1996. Although we could not separately identify foreign-born women unaffected by PRWORA given vital data, we do not consider this a major limitation. If we had relied on cross-sectional comparisons between U.S.- and foreign-born women within each state, then hard to measure difference in outcomes between U.S.- and foreign-born Latinos, often referred to as the epidemiological paradox, would have been a major source of confounding. However, we employed a before and after design that compared *changes* in perinatal outcomes between U.S.-and foreign-born women. By comparing changes in outcomes, we eliminated unmeasured differences between U.S.- and foreign-born women that did not vary over time, acculturation being a primary example.

We also compared changes among foreign-born to changes among U.S.- born Latinos in an effort to minimize confounding from time-varying factors that impacted all women. The unemployment rate, for example, fell in California, New York City and Texas between 1995 and 1998 (www.bls.gov). If we had only examined changes among foreign-born Latinos then robust economic growth may have confounded effects of PRWORA. In the multivariate analyses we controlled not only for differences in maternal characteristics between the two birth cohorts, but we adjusted for trends in perinatal outcomes common to both U.S.- and foreign-born Latinos. More technically, we used a quasi-experimental pre-post design with a within-site comparison group.

In states with large immigrant populations, vital data are an invaluable means of monitoring broad trends in perinatal outcomes among foreign-born women (72). The advantage of vital data from California and New York is that they also contain information of how prenatal care and deliveries are financed. An upturn in the percent of births that are uninsured among foreign as compared to U.S.- born women coupled with a decline in the early initiation of prenatal care would be an important indicator that access to primary care during pregnancy had worsened. What vital data from California and New York also demonstrate is that well over half the births to foreign-born Latinos were financed by Medicaid. Thus, the number of immigrants vulnerable to a cutoff in Medicaid funding of prenatal care in states like California, New York and Texas likely will grow as the proportion of immigrants that enter the country after August 1996 rises.

IVB2. Race and Hospital of Delivery

As a corollary hypothesis to the that of whether welfare reform has had an impact on the perinatal health of Latinas, we also used the vital data to assess one community in more depth to determine if differences existed in the care received based on the distribution of births among hospitals. If African-Americans and whites use different hospitals for obstetrical care such differences could contribute to disparities in perinatal health. We sought to determine if African-American women and white women on Medicaid in New York City use different hospitals for obstetrical care, whether those hospitals had different characteristics and whether outcomes of African-American women varied depending on the percentage of African-American births in a hospital.

Materials and Methods: We utilized data from linked birth (367,517) and death certificates (1,490) for New York City between 1995 and 1997 from forty-six hospitals. We focused on women on Medicaid (n=170,354). Hospitals were grouped by percentage of births to African-Americans (Group I=0-25%, Group II=26-50%, Group III=51-75%, Group IV=76-100%). Outcome measures were distribution of African-American births and the delivery volume and percentage of Medicaid births in hospitals used by different racial groups. We also performed a preliminary assessment of neonatal deaths, neonatal morbidity, cesarean sections and fetal scalp sampling in the different groups of hospitals.

Results: In the hospital group with the most African-American births, 20% of all African-American births, but less than 3% of white births occurred. In the group with the least African-American births, 28% of African-American births and 85% of white births occurred. Hospitals used primarily by whites had larger delivery volumes and a smaller percentage of births funded by Medicaid. Neonatal mortality rates for African-American infants $\leq$1,000 grams increased monotonically from 279 to 370, 389 and 456 going from hospitals with the lowest to the highest percentage of African-American births ($p = <$ .01). Hospital grouping was strongly associated with neonatal morbidity unadjusted for race. African-American women in hospitals with higher percentages of African-American births were less likely to undergo a cesarean section ($p <.01$) or fetal scalp sampling ($p<.01$).

Conclusions: Among women on Medicaid, hospitals in New York City vary greatly in the frequency of births of African-American infants and there are differences in the characteristics of hospitals used primarily by whites and African-Americans. The perinatal outcomes and interventions we observed are compatible with the thesis that African-American and white women may be exposed to different patterns of care and suggest that hospital factors, along with biologic and social factors should be considered in studies of racial disparities.

IVC. Legislative and Administrative Evaluation:

In 2000, we developed a report based on our survey of key informants and a review of relevant documents in four states: California, Florida, New York and Texas. The objective of the case study is to catalog each state's methods for implementing the

components of welfare reform that directly relate to prenatal care for immigrants. In addition to state action, the full first year case study documents implementation at selected municipal and hospital levels.

Note on changes between 1999 and 2000: This field was undergoing continuous change, with reforms contemplated and underway at the federal, state and local levels in all three branches of government: executive, legislative and judicial. **Prior to dissemination but following completion** of the first year report, several noteworthy changes occurred and are summarized below.

- In February 2000, the District Court denied the federal government=s motion to vacate the existing order of Lewis v. Grinker. Consequently, all non-citizen pregnant women in New York continue to be eligible for Medicaid without regard to documentation status.

- May 25, 1999, new federal guidance was issued to define "public charge" for the first time. The guidance "states which benefits a non-citizen may receive without concern for negative immigration consequences." Benefits that may NOT be considered in a determination of whether an immigrant is, or is likely to become, a public charge include Medicaid, SCHIP, Food Stamps, WIC and other non-cash benefits.

- On May 20, 1999, a New York State judge ruled that restrictions on immigrants= access to state-funded Medicaid violates the equal protection clauses of the United States and State Constitutions. In addition, the restrictions were found to violate the "care of the needy" provision of the State's Constitution. The court's ruling restores state-funded medical assistance to individual immigrants who were denied medical assistance because they are PRUCOL, or are lawful permanent residents who entered the country after August 22, 1996.

- The Second Circuit recently affirmed the District Court's decision, which denied New York City's challenge to the legality of the new federal reporting requirements. Mayor Giuliani plans to file for review by the Supreme Court of the United States. Pending a decision by the Supreme Court, the City maintains that Executive Order 124 is still in effect and will be enforced. Since 1984, Executive Order 124 of the City of New York has prohibited city employees from reporting any alien to INS unless required by law or if the alien is suspected of criminal activity. The purpose of the Executive Order is to ensure that immigrants, both legal and illegal, are not discouraged from utilizing city services, including health care. The Order, however, only applies to city agencies and has no bearing on actions by state or federal officials.

- California's Governor Davis has discontinued a Medi-Cal anti-fraud program begun under former Governor Wilson that pressed immigrants for repayment of state health insurance benefits under the threat of deportation. Among 13,000 travelers per month, many poor Latinas were questioned about past receipt of

Medi-Cal benefits, particularly for childbirth. The state will return about $4 million it collected from legal immigrants.

The strength of the case study approach is its ability to take into account a broad range of evidence, including documents, interviews and observations. It is valuable in illuminating a set of decisions surrounding pregnant immigrants= access to Medicaid as a result of welfare reform: why they were taken, how they were implemented and with what result.

IVC1. National Context - A Moving Target

PRWORA Provisions

Enactment of the Personal Responsibility and Work Opportunity Reconciliation Act of 1996 (PRWORA) in August 1996 ended the guarantee of cash welfare assistance to all eligible families and replaced it with a block grant to states to provide time-limited support for low-income families who comply with work requirements. One of the most contentious elements of the welfare debate concerned the future of the Medicaid program. While the law did not repeal the Federal entitlement to health insurance under the Medicaid program for citizens, it severely curtails immigrants' eligibility. The law divides all immigrants into two new categories: qualified and nonqualified aliens. Although not technically accurate, the terms "qualified alien" and "legal immigrant", and "nonqualified alien" and "undocumented immigrant," are used interchangeably throughout this paper for the sake of simplicity.

With the exception of certain groups of refugees and asylees, the law creates a 5-year bar on benefits for immigrants entering the county after the date of enactment, provides benefits for these immigrants after the 5-year bar at state option, requires sponsor-to-alien deeming of income after the 5-year bar for those states that opt to restore federal benefits, and provides benefits to those in this country before enactment at state option. Access to emergency medical services only was not changed by PRWORA and continues to be available without regard to immigration status.

Prior to enactment of PRWORA, legal immigrants were eligible for public benefits on essentially the same terms as US-born citizens. The law draws new distinctions between citizens and legal immigrants, denying benefits to undocumented and recent legal immigrants alike.

Other Laws

Since enactment of PRWORA, there have been a number of other federal health, welfare and immigration policy decisions that either reverse or complement the immigration restrictions in PRWORA. For example, The Illegal Immigration Reform and Immigrant Responsibility Act of 1996, which intersects with PRWORA in relation to the designation of immigration status, included provisions that resulted in harsher treatment of immigrants with fewer opportunities for review of decisions by individual INS officials. The Balanced Budget Agreement of 1997 reversed several major provisions of the PRWORA, restoring eligibility for Supplemental Security Income (SSI) and derivative Medicaid to legal immigrants residing in the United States prior to August 22,

1996, and to those who become disabled in the future. In addition, under PRWORA, refugees and certain other immigrants were given time-limited exceptions to the eligibility restrictions on Medicaid and other benefits; the Balanced Budget Act extended the time period from 5 to 7 years for Medicaid, and to three additional immigrant groups - Cubans, Haitians and Amerasian immigrants. The Agricultural Research Act of 1998 restored Food Stamps for legal immigrant children, senior citizens and people with disabilities who entered the United States before August 22, 1996.

On August 4, 1998, the Department of Health and Human Services issued proposed regulations interpreting "Federal public benefit" as used in PRWORA. The interpretation states that included benefits are those that must be provided to an individual household or family, rather than those that are targeted to broad populations. The interpretation specifically excludes those benefits that are targeted to certain populations based on their characteristics, such as a benefit provided under the Title V Maternal and Child Health Services Block Grant, which provides health services to women and children. Thus, Title V benefits are not subject to PRWORA's restrictions on provision of federal public benefits to immigrants.

On February 1, President Clinton released his FY2000 Budget, which included $1.3 billion over five years to restore additional benefits to legal immigrants, including restoration of SSI and Medicaid to legal immigrants who entered the country after the PRWORA was enacted if they have been in the country for five years and became disabled after entering, restoration of Food Stamp eligibility to legal immigrants in the country on August 22, 1996 who later reached age 65 to be eligible for Food Stamps. In addition, the budget proposal would provide states the option to provide Medicaid coverage for prenatal care to qualified immigrant women who entered the country after August 22, 1996, and the option to provide Medicaid and/or CHIP coverage to qualified immigrant children who entered the country after August 22, 1996.

In April, New York's Senator Moynihan introduced legislation that would represent the largest restoration to date of immigrant health benefits lost under PRWORA. It would extend Food Stamp eligibility to legal immigrant adults, and Medicaid and SCHIP benefits at state option to certain legal immigrants who entered the country after 1996.

Finally, on May 25, the federal government issued new guidance to define Apublic charge@ for the first time. The guidance "states which benefits a non-citizen may receive without concern for negative immigration consequence." Benefits that may NOT be considered in a determination of whether an immigrant is, or is likely to become, a public charge include Medicaid (except for long-term care), SCHIP, Food Stamps, WIC and other non-cash benefits. The proposed rule establishes "clear standards governing whether an alien is inadmissible to the United States, ineligible to adjust immigration status, or has become deportable on the grounds that he or she is likely to be or is a public charge." Subject to effective implementation and dissemination of this clarification, concerns about public charge should become less of a barrier to use of public benefits by immigrants.

While most of these changes do not reverse those provisions of PRWORA that restricted Medicaid eligibility for immigrants, with the notable exception of proposals currently pending before Congress, they are likely to contribute to a sense of confusion about Medicaid eligibility. As noted in a recent briefing on welfare reform, a District Court opinion from 18 years ago described Medicaid eligibility rules as "an aggravated assault on the English language, resistant to attempts to understand it." This opinion was written before introduction of the recent complexities. Thus, ascertaining the impact of welfare reform on perinatal health is made more complicated by the ongoing changes that continue to evolve at the federal level.

The following state specific summary outlines each state's political environment and decisions regarding PRWORA with regard to Medicaid eligibility. Since PRWORA requires states to make a host of legislative and policy decisions with respect to the various federal, state and public benefits that immigrants receive, the full case study summarizes those decisions made by each study state that directly affect pregnant immigrants. In addition, the full case study describes each state's local response to PRWORA and the anticipated and actual impact on pregnant immigrants.

IVC2. California

State Political Environment: Welfare reform arrived in California in the wake of previous initiatives designed to restrict services for immigrants. California=s Proposition 187, a ballot initiative passed by voters in 1994 by a 59 to 41 percent margin, attempted to restrict undocumented immigrants access to a wide array of state-funded health and social services, including prenatal care. Although most of its provisions were immediately stalled in litigation, passage of the initiative led to confusion about eligibility and fear among immigrants about using services. In March 1998, the Federal District Court in Los Angeles struck down virtually all remaining provisions of Proposition 187, finding that the measure unconstitutionally usurped Federal authority over immigration policy. Judge Pfaelzer wrote that when President Clinton signed PRWORA into law, Ahe effectively ended any further debate about what states could do in this field.@ Only provisions for criminal penalties for the manufacture, sale and use of false documents to conceal a person=s immigrant status remain in force. While a full discussion is beyond the scope of this paper, passage of Proposition 187 intensified public debate about state and local governments= responsibility to fund health care for undocumented immigrants. The fear and confusion in immigrant communities that was triggered by the initiative marked the onset of new and major barriers to immigrants' access to health services.

Shortly after passage of Proposition 187, the California Department of Health Services began a joint project with the federal Immigration and Naturalization Service (INS) to screen non-residents returning to the country for use of public benefits, including Medi-Cal, as part of an anti-fraud initiative. Some immigrants currently enrolled in public benefits were denied re-entry, others were required to repay the costs of benefits they legally received, and others were forced to disenroll from programs to which they were legally entitled. Officials justified these practices on the basis of public charge provisions, discussed in further detail above, but in fact these practices were unlawful.

INS and HHS directives subsequently clarified that repayment policies were generally unlawful. Legal challenges led to elimination of these public charge lookout programs in March 1998, but these policies raised widespread concerns among immigrants about the wisdom of using Medi-Cal.

Welfare reform thus arrived in a context of heightened concern and confusion in California about immigrants' eligibility for public benefits, and the potentially adverse consequences of using such benefits. While the policies discussed above were declared invalid and discontinued, they have contributed to a sense in immigrant communities that it may be wise to stay away from Medi-Cal.

State Decisions Regarding PRWORA: PRWORA requires states to make a host of legislative and policy decisions with respect to the various federal, state and public benefits that immigrants receive. This section summarizes the applicable federal laws, regulations or policies and outlines the decisions made by California that directly effect health care for pregnant immigrants.

Medi-Cal Eligibility: PRWORA gave states the option of providing Medicaid to qualified immigrants who entered the United States by August 22, 1996. It barred qualified immigrants who enter the country after that date from receiving any federally-funded Medicaid for their first five years in the country. California opted to provide Medi-Cal to immigrants in the United States regardless of date of entry. California is using state funds to pay for Medi-Cal to newly entering immigrants during the five year bar. California has not implemented new Medi-Cal eligibility restrictions on certain immigrants who were formerly considered permanently residing under color of law, or PRUCOL. Most significantly, undocumented pregnant immigrants were and continue to be eligible for state-funded prenatal care under Medicaid. Finally, all immigrants continue to be eligible for emergency medical services including labor and delivery. Medi-Cal eligibility for pregnant women and infants up to one year remains at 200 percent of poverty.

Thus, California has not enacted a state law changing Medi-Cal eligibility after PRWORA. Instead, existing programs were changed to conform to federal requirements by replacing federally matched Medi-Cal with state-only funded Medi-Cal where required.

IVC3. Florida

State Political Environment: The election of Governor Jeb Bush in November 1998 to succeed Democratic Governor Chiles is a dramatic shift to a Republican controlled government after more than 120 years of Democratic control. As Governor from 1990 to 1998, Lawton Chiles was widely recognized as a champion of pregnant women and children. He created the Lawton and Rhea Chiles Center for Healthy Mothers and Babies and established the state-funded Healthy Start program in an effort to reduce infant mortality rates. Prior to his death in December 1998, former Governor Chiles was working closely with the White House to seek restoration of Medicaid to immigrants. Despite the sympathies of the Chiles administration, and primarily due to fiscal concerns,

Florida did not opt to use state funds to replace withdrawn federal funds for newly ineligible immigrants.

Governor Bush is perceived to be supportive of health and immigrant issues, and is seeking restoration of Medicaid for immigrants at the federal level. At this time, Florida is also considering allocating state funds to provide coverage for all immigrant children in KidCare, an umbrella of four insurance programs including Medicaid and Healthy Kids, who are not eligible for federal funds. At the leadership level, most state agencies are considered sympathetic to the needs of immigrants, seeking to interpret the new federal restrictions as liberally as possible, or to delay their implementation as much as possible. Local implementation of new policies, however, is considered inconsistent, with wide variations among individual offices and workers. Notwithstanding the sympathetic agency leadership, there is a perception that politicians and voters alike don't want to make it "too easy" for Floridians to receive Medicaid or cash assistance, in part due to fear of attracting more foreigners to their state. Statewide, there is generally stronger support for the large Cuban immigrant population than for the far smaller Haitian immigrant community. The Cuban community has used its voting power to influence government policies.

Only selected members of the Dade County/Miami delegation to Tallahassee and the Congressional delegation in Washington have been vocal on immigrant issues. As summarized by one state official, "Florida waxes and wanes in its feelings towards immigrants. It has some milk of human kindness, but ...."

Florida enacted an aggressive state welfare reform program called WAGES in the spring of 1996 just before enactment of PRWORA. WAGES was implemented in October 1996. The state law included no new restrictions for immigrants and provided that immigrants are eligible for benefits to the extent permitted by federal law. Florida officials consider WAGES a success; the welfare rolls have fallen more than 50 percent statewide since implementation, with lower declines in Dade County due to higher poverty and unemployment rates. Dade County officials observe that there is little data collected on what happens to people once they leave cash assistance, and have concerns that privatization of the WAGES program may compromise the needs of welfare clients. State officials report that evaluations of people leaving cash assistance have found that most are employed and that some, but not many, are facing hardships. Use of child care and Medicaid among people leaving the welfare rolls is low.

State Decisions Regarding PRWORA: (Note: Where not provided below, the applicable federal law, regulation or policy is summarized above in the California case study.)

Medicaid Eligibility: Florida opted to provide Medicaid where federal matching funds are available. Thus, Florida opted to provide Medicaid to qualified immigrants in the United States by August 22, 1996, and to restore Medicaid to post-enactment immigrants after the 5-year bar. Florida has not created a state-funded Medicaid program to provide coverage where federal funds are not available. Undocumented pregnant immigrants

have received no special treatment in Medicaid in Florida: all undocumented immigrants were and continue to be ineligible for Medicaid, with the exception of emergency medical services. Medicaid eligibility for pregnant women and infants up to one year remains at 185 percent of poverty. PRWORA=s immigration restrictions were implemented in Florida effective July 1, 1997.

IVC4. New York

State Political Environment: Welfare reform arrived in New York State as an unprecedented restriction on immigrants' eligibility for Medicaid and other benefits. Since the beginning of the decade, New York State has provided reimbursement for health care to undocumented pregnant women and children through Medicaid and Child Health Plus, albeit with little advertising due to fears that upstate Republican Senators would seek repeal if they fully grasped the programs' scope.

Despite this persistent concern, support for immigrants often transcends partisan politics and geography. Mayor Giuliani and, to a lesser degree, Governor Pataki are both protective of immigrants= access to public benefits in general and strongly support Medicaid coverage to provide prenatal care for all immigrants. In fact, earlier this year, the State and City joined the plaintiffs' brief opposing the Federal government=s motion to vacate the holding of Lewis v. Grinker, which provides Medicaid coverage for prenatal care without regard to immigration status, discussed further below. In addition, both the former Democratic Governor and the current Republican Governor have championed the availability of Child Health Plus coverage for all children without regard to immigration status. New York City=s strong immigrant sympathies are reflected in Executive Order 124, discussed further below, which prohibits reporting of aliens to INS by city employees.

Bottom-line considerations evidently factor into City and State support of immigrants, as do political considerations. Governor Pataki's welfare reform proposals provided benefits for immigrants only where federal financial participation was available, and specifically noted that withdrawn coverage would be extended if federal matching funds became available in the future. Interestingly, while California overall is more hostile to immigrants, California's welfare reform bill is more generous to immigrants and, unlike New York's law, maintains pre-welfare reform Medi-Cal coverage by using state-only funds to replace withdrawn federal funds. Although Republican Governor Pete Wilson proposed restricting eligibility based on the rules for federal matching, the legislature rejected his proposals and enacted more progressive coverage.

New York State legislative sympathies divide along partisan lines and also reflect an upstate-downstate political gap on immigrant issues. In the 1998 Legislative Session, the New York State Assembly restored Medicaid to PRUCOL and future legal immigrants who had lost eligibility in the State=s welfare reform act, but the Senate failed to act on the bill and it died. In the current session, the Assembly once again restored Medicaid in their Budget Resolution and allocated $12 million to fund the restoration. While this is likely to be an inadequate allocation, the Senate has shown no indication of support so the issue may be moot.

Several lawsuits have been filed challenging the new restrictions on immigrants' eligibility for benefits. On May 20, 1999, a New York State judge ruled that restrictions on immigrants' access to state-funded Medicaid violates the equal protection clauses of the United States and State Constitutions. In addition, the restrictions were found to violate the "care of the needy" provision of the State's Constitution. The state law, passed in 1997, incorporated the federally-required 5-year bar on Medicaid for post-enactment legal immigrants. The law granted exemptions for immigrants living in nursing homes or suffering from AIDS as of September 1997. It was this difference in treatment that the court found illegal. The court's ruling restores state-funded medical assistance to individual immigrants who were denied medical assistance because they are PRUCOL, or are lawful permanent residents who entered the country after August 22, 1996.

New York politicians in Washington have been outspoken advocates of restoring Federal benefits to all immigrants. Senator D=Amato and Representative King (R) introduced a bill to extend the Food Stamps and SSI cutoff date in 1997. Most recently, outgoing Senator Moynihan introduced legislation that would represent the largest restoration to date of immigrant health benefits lost under PRWORA. It would give states the option to restore Medicaid benefits to legal immigrants who entered the country after 1996 and Food Stamp eligibility to legal immigrant adults. Governor Pataki, Mayor Guiliani and State and Federal Congressmen have all actively lobbied Congress to repeal the anti-immigrant provisions of the welfare law.

Overall, except for pockets of largely upstate and Republican legislators, New York State is far more supportive of immigrants than California in many ways. There is little chance that anti-immigrant initiatives like California's Proposition 187 would ever muster in New York the centrist support found in California. This is particularly true in New York City.

State Decisions Regarding PRWORA

Medicaid: New York opted to provide Medicaid to qualified immigrants in the United States before August 22, 1996, which is available with federal financial participation. Qualified immigrants who enter the United States after the date of enactment are subject to the federally imposed 5-year bar on Medicaid. During the federal 5-year bar, new immigrants are eligible only for emergency medical services, unless federal financial participation becomes available. Nonqualified immigrants, including those who were formerly considered permanently residing under color of law, or PRUCOL, are eligible only for emergency medical services. Refugees, asylees and other protected categories are exempt from the 5-year bar on new arrivals and are eligible for Medicaid in accordance with federal law, which requires coverage for seven years.

Due to the long-standing federal court decision of Lewis v. Grinker, Medicaid eligibility for all pregnant women remains intact, with income levels set at 185 percent of poverty

(or 222 percent gross). The state welfare reform law, in fact, references the holding in Lewis v. Grinker. By its terms, PRWORA does not repeal the federal entitlement to health insurance under the Medicaid program for low-income citizens. All non-citizen pregnant women in New York continue to be eligible for Medicaid without regard to documentation status under the holding of the U.S. Second Circuit Court of Appeals in Lewis v. Grinker, 965 F.2d 1206 (2d Cir. 1992). On February 26,1997, the Federal government filed a motion to vacate the existing order. After procedural delays, oral argument was heard on the motion in March, 1999. No decision has been released to date.

The Second Circuit=s decision in 1992 was based on its reading of the Congressional intent behind the Medicaid statute. It never reached the constitutional Aequal protection@ argument, that it would be irrational to distinguish between infants, in utero, who are all US citizens, based upon the alienage of their mothers. The Federal government's motion in 1997 contends that the original order in Lewis must be vacated because the welfare act makes it clear that Congress now intends to deny Medicaid coverage for non-emergency prenatal care to undocumented aliens. The plaintiff's opposing motion asserts first that the Government's reading of Congressional intent is unfounded, that Congress did not intend to overrule the Second Circuit or "to inflict needless lifelong disability and suffering on US citizen children by denying prenatal care to their immigrant mothers." Part of this line of argument is based on the legal premise that Congress -- well aware of Lewis -- would have needed to express its intention to overturn Lewis in order to accomplish that result. The motion's second argument is that Athe denial of prenatal care to nonqualified immigrant women who will bear US citizen children violates equal protection."

If the order in Lewis is vacated, New York is likely to continue providing Medicaid coverage for all pregnant immigrants with state funds. During the 1997 state budget negotiations, the New York State Assembly requested a written commitment from the Governor=s office stating their support for continued coverage with state funds. While reaffirming the Executive=s support for maintaining current eligibility standards for prenatal care, no written assurances have been provided. In the unlikely event that state funds are not made available, newly arrived qualified immigrants will be subject to the 5-year bar on Medicaid, plus sponsor-deeming, and all undocumented immigrants will lose Medicaid eligibility. Coverage for emergency medical services, which includes labor and delivery but not prenatal care, remains available for all immigrants.

IVC5. Texas

State Political Environment: The social service safety net in Texas is one of the weakest nationwide, with stronger political support for health care than welfare. In recent years, Texas has experienced little of the heated and divisive debate that surrounded enactment of Proposition 187 in California. Then Governor Bush is considered a moderate on immigrant issues, and most statements by the state's political leadership have favored legal immigrants. Political support for immigrants is generally perceived to be stronger where budget impacts are minimal. Texas, like most other states, opted to continue federal benefits for immigrants in the country before 1996, and the

Governor, State Senators and others lobbied Congress to restore federal benefits for legal immigrants who lost eligibility in PRWORA. At the same time, however, it remains unclear whether Texas will provide Medicaid benefits to post-enactment immigrants after the 5-year bar, despite the availability of federal matching funds. Public expressions of support, thus, are tempered by quiet adoption of anti-immigrant policies in some cases.

California's Proposition 187 had a big impact on immigrants' perceptions of their eligibility for services in Texas, but little impact on government policy. Despite lobbying by California Medi-Cal officials, Texas declined to undertake collaborative public charge lookout policies with INS. The Mexican-American legislative caucus is increasingly "flexing its political muscle",according to one policy analyst; in San Antonio, for example, they helped defeat an initiative to eliminate subsidies for health care for the undocumented. It is considered politically risky to oppose low cost pro-immigrant initiatives since state and local political power is increasingly held by Mexican-Americans.

An Austin-based observer of the political process states that "you cannot underestimate the political significance of having a Governor who is running for President, and his desire to take on certain symbolic positions. At the same time, you cannot underestimate the Governor's desire to keep his fingerprints off of everything except tax breaks." As a result, there is little overt leadership from the Governor's Office today on health or other issues. This may help explain, in part, why Texas did not take a higher profile in the area of public charge - as a matter of state policy, Texas contrasts with California because it did not formally adopt a public charge lookout program, nor did it aggressively seek clarification of federal policy to halt abuses. The limited evidence available suggests that the chilling effects associated loosely with welfare reform were less significant in Texas than in California or Florida. At the same time that immigrants enjoy moderate political support in Texas today, the treatment of immigrants in Texas has become significantly harsher by the Illegal Immigration Reform and Immigrant Responsibility Act (IIRIRA) of 1996, as explained further below.

Finally, prenatal care is described by advocates as having little political visibility in Texas today. Few individuals or organizations are available to champion the needs of low-income pregnant women, especially immigrants. In contrast, support for prenatal care was strong enough to establish Medicaid eligibility at the surprisingly high level of 185 percent in 1990-1991, under the leadership of the last Lieutenant Governor, Bill Hobby, who was viewed as having a commitment to health and human services. The expansion was not enacted with legislation at that time, but funds were simply inserted in the appropriations bill. Providers are the strongest base of support for prenatal care, and the cost-effectiveness of prenatal care is an accepted rationale. The proposed SCHIP legislation in the 1999 session excluded reproductive health care including prenatal care. According to advocates, prenatal care may have been too quickly sacrificed on the altar of building support for CHIP among powerful pro-life conservatives opposed to inclusion of any reproductive health services. The bill was amended in the final hours "to exclude reproductive services other than prenatal care and care related to diseases or

abnormalities of the reproductive system." Coverage of delivery services remains unclear, but family planning benefits and abortion are excluded in all cases.

State Decisions Regarding PRWORA: Texas expeditiously implemented PRWORA=s restrictions on Medicaid eligibility for immigrants in the month following enactment, September 1996. The three other study states implemented these provisions between one and two years later.

Medicaid: Like all states except Wyoming, Texas opted to provide Medicaid to pre-enactment immigrants. Texas is one of only six states that, to date, has opted to extend the ban on Medicaid for post-enactment qualified immigrants until citizenship, rather than limiting it to the five years after entry into the United States. This decision is contained in the State's TANF Plan submitted to HCFA, was not approved by the Legislature, and may be revisited by Health and Human Services Commissioner Don Gilbert, who was appointed by Governor Bush after the Plan was filed. Proponents of a permanent ban suggest that new immigrants came to Texas knowing they would not be eligible for any benefits and so none are owed to them. It is unclear whether Commissioner Gilbert will succeed in convincing the Administration to join the majority of states and restore benefits after the 5-year bar.

Texas has not created a state-funded Medicaid or other health program to replace Medicaid for post-enactment immigrants and pre-enactment PRUCOLs, who lost eligibility in PRWORA. Undocumented immigrants were and continue to be ineligible for Medicaid, except for emergency medical services including labor and delivery. Medicaid eligibility for pregnant women and infants up to one year of age is at 185 percent of poverty without any resource test, in contrast to the low eligibility level of 25 percent of poverty for other adults.

Title V: Texas continues to provide prenatal care to all women below 185 percent of poverty without regard to immigration status through Title V, the Maternal and Child Health Services Block Grant. As noted in Section I(B) above, Title V benefits are not subject to PRWORA's immigration restrictions. Although Title V is used by many states for infrastructure support, in Texas it supports direct services including prenatal care. Applicants simply are required to be residents of Texas, and the Title V Policy Manual for Texas states that self-attestation of all requirements is satisfactory proof. Delivery services are not covered by Title V. In Austin, however, application requirements for Title V programs are stricter than required by Title V due to an integrated eligibility system, as explained in section C below.

In 1990, Title V prenatal clinics began preparing emergency Medicaid applications for their clients 30 days before the expected date of delivery to assist hospitals obtain Medicaid reimbursement for deliveries.

<u>IVC6. Conclusions</u>

Key Findings: With the introduction of multiple new variables into the Medicaid eligibility equation as a result of welfare reform, a chilling effect was predicted. The indirect consequences of welfare reform, it is argued, were likely to create new and unintended barriers to prenatal care. Both the terms of the new laws and people's beliefs about what they provide could affect the way that pregnant women obtain health care and other needed services. Results from the first year of case studies both affirm these predictions and add new dimension. Key findings, as described below, are that eligibility alone does not define access; that other programs have at least partially replaced Medicaid coverage where it was withdrawn; that the mentality of welfare reform created barriers to care beyond statutory changes in eligibility; and that the complexity of welfare reform's restrictions on immigrant eligibility may in fact exceed the doable.

Eligibility Alone Does Not Equal Access: To date, New York and California have maintained Medicaid coverage for prenatal care for all pregnant immigrants, each for distinct reasons. Federal enactment of welfare reform unquestionably re-inspired California's Governor Wilson to seek immediate repeal of the state's funding for prenatal care for undocumented immigrants. It also triggered the federal government's challenge to the protective order in Lewis v. Grinker in New York State. Notwithstanding these effects, coverage remains unchanged at this time.

Thus, to the extent there have been declines in prenatal care use by immigrants in New York and California, as suggested by limited data and anecdotal evidence, these declines have not stemmed from eligibility changes but from the *mentality* of welfare reform, including attempted withdrawals of eligibility, the aura of lost access and public charge policies. In addition, attempts to curb prenatal care in California – Wilson's attempted repeal of state funding which languishes in the courts -- and New York-- the federal government=s motion to vacate the existing order in Lewis, may by themselves have increased fears among immigrants about seeking prenatal care. In California, the long and tortuous path of attempts to eliminate the state's prenatal care program for undocumented women received significant attention. In New York, the drawn out litigation in Lewis was not covered by the media but communities were nonetheless informed of challenges to the court's decision.

While it is difficult to quantify the impact of attempted withdrawals of eligibility, public charge concerns, and the aura of lost access, it is clear that eligibility alone does not define access. Rather, access to care is the product of multiple factors, none of which exist in isolation. Changes in eligibility at the statutory level, unsuccessful efforts to change eligibility, facilitated enrollment processes like presumptive eligibility, media coverage of INS raids -- are all relevant factors that influence access.

Replacement Benefits Vary in Scope: In contrast to New York and California, Florida and Texas did not opt to use state funds to replace federally withdrawn Medicaid eligibility for post-enactment legal immigrants for 5 years. Moreover, Texas has indicated that Medicaid may not be restored after the 5-year bar.

In both states, notably, other programs exist to at least partially replace the lost Medicaid coverage for pregnant immigrants. In Texas, pregnant women remain eligible for Title V-funded prenatal care services without regard to documentation status. For those women who identify a Title V-funded source of prenatal care, there is no actual decrease in the benefit provided. In fact, the application process for Title V is easier to complete than the Medicaid process. Title V is not, however, an entitlement like Medicaid and Title V funds are reported to be inadequate to meet current demands. If demand increases when immigrants newly ineligible for Medicaid show up on the Title V doorstep, women may have to be turned away.

In Florida, all pregnant immigrants continue to be eligible for Medicaid through the presumptive eligibility process for 45 days of the prenatal period. Presumptive eligibility, in effect, is a loophole which diminishes to some extent the impact of welfare reform's restrictions on immigrants' eligibility for Medicaid. Nonetheless, although some women remain on the Medicaid rolls for longer than 45 days due to system inefficiencies, this time-limited coverage does not come close to fully replacing the lost Medicaid coverage. Other pieces of the safety net available to pregnant immigrants in Florida are equally limited in scope due primarily to funding limitations. Public health department clinics, where they continue to provide prenatal care, and federally qualified health centers, where they exist, have long waiting lists. Likewise, demand for Healthy Start services exceeds funding available. To a greater degree in Texas than in Florida, replacement benefits have the potential to absorb some but not all of the withdrawn benefit.

The Mentality of Welfare Reform: Contrary to what might be expected, based on anecdotes and the limited data available, there is no greater evidence of decreased access to prenatal care in Florida and Texas, where Medicaid eligibility has been withdrawn, than in New York and California, where eligibility remains unchanged. In all four states, the *mentality* of welfare reform and confusion surrounding public charge issues appear to have been the primary factors leading to whatever decrease occurred in access to prenatal care among immigrant women. Shifting sands and patchwork policies have contributed to a climate of uncertainty among immigrants and service providers alike.

Lost in the Web: Implementation Challenges: Some of the lessons that emerge from this case study relate to the process of creating public policy. The withdrawal of Medicaid and other benefits from selected immigrant groups in welfare reform, and the incremental restoration of benefits through multiple acts has created a complex and fluid eligibility web. This web is difficult to understand, limiting the ability of patients, providers and government officials to effectively navigate the system. Dividing patients into qualified, super qualified, nonqualified, post-enactment, etc., may be stretching beyond what is understandable or practical.

A common theme expressed by some informants in each category from all states is that the complexity of welfare reform may exceed the doable. As noted by a high-ranking state official, "Complexity frustrates the intention of the (welfare reform) law. It is too hard to follow." As a result, the eligibility and other provisions are neither well

understood nor applied evenly. On the other hand, a more cynical perspective expressed by one health policy expert suggests that the underlying, albeit rarely stated, intent of many legislators in enacting PRWORA was exactly that C to reduce the number of people receiving public benefits by creating a complex web of eligibility that few could successfully navigate.

Or is welfare reform simply one example among many of the transformations that occur between enactment and implementation of any piece of legislation? In the words of a seasoned state health analyst, "Legislation never has the intended effect, especially where it is targeted at poor people and health. Legislating is an imprecise business, an imperfect science...They know what we know, you can't trust the government."

Other Findings: In addition to the conclusions above, the following observations emerge from the first year case studies.

Cost Shift to States and Counties: Overall, there is consensus that PRWORA's reduction of federal responsibility for immigrants will result in an unprecedented cost shift to the states. The costs of new restrictions on Medicaid eligibility of immigrants will initially be absorbed by states, counties or providers. Some states will transfer liability for the costs to localities, which may shift liability onto public hospitals and other safety net providers. In California, state decisions on Medicaid eligibility suggest that the state is likely to absorb much of the cost shift, given recent indications of Governor Davis' support for prenatal care for the undocumented. However, due to public charge issues and perceptions of ineligibility, some of the costs will in turn be shifted onto counties and providers for those patients unwilling to apply for Medi-Cal. A similar cost shift onto counties and providers is likely to occur in Florida for these same reasons and due to the withdrawal of Medicaid eligibility.

The Federal government's efforts to vacate Lewis, if successful, will result in a cost shift from the federal government to the state or local districts for post-enactment legal and all undocumented pregnant immigrants. Most deliveries, however, will remain eligible for emergency Medicaid coverage, with the exception of scheduled caesarean section deliveries. It is thus primarily the costs of prenatal care that will be shifted onto the state, counties or individual providers.

In Texas, however, if newly ineligible Medicaid patients access Title V services for prenatal care, this will result in a cost shift from the federal government to the state for the following reason. In Texas, Title V draws a lower federal match rate than Medicaid, which has a 62/38 percent federal-state match for direct services. In contrast, the baseline Title V required match is a 58/42 percent federal-state match; in addition, the state is required to maintain 1989 funding levels which results in a higher allocation of state dollars in relation to federal funds.

Confounding Variables - Managed Care, Shifting Sands: Immigrants' reluctance to use Medi-Cal in recent years, documented in recent reports from The Urban Institute, has been described as inspired by the *mentality* of welfare reform but not the *terms* of the

law, which maintained eligibility for most immigrants by using state funds to replace withdrawn federal funds. Beginning with Proposition 187 in 1994 and continuing with border repayment programs, it is difficult to isolate the impact of welfare reform from other factors. Federal laws and state implementation of them are a moving target, with new provisions under consideration at most times. Ongoing and multiple court challenges to state policies contribute to confusion. For example, Wilson's efforts to repeal the state-funded pool for prenatal care for undocumented immigrants created a thick paper trail from the state to the counties, with memorandums alerting counties to the elimination of the program, followed by clarifying letters notifying them of the injunction. In turn, consumers have been informed of the shifting sands by advocates, providers and county health departments in some cases.

In addition, the increasing penetration of managed care is identified as a major force in all four states, with consequences that can amplify or mask the impact of welfare reform. For example, the unexpected increase in unreimbursed deliveries in Miami's public hospital in the year following welfare reform apparently was caused by one or all of the following factors: an increase in immigrants ineligible for Medicaid; an increasing reluctance on the part of immigrants to apply for Medicaid due to public charge; or an increase in out-of-network deliveries denied reimbursement by managed care plans.

In this environment, it may not be possible to distinguish the impact of welfare reform from other related forces. Fewer variables are at play in the other states, but the same challenges exist given the complexities of welfare reform itself and the fluid federal statutory and regulatory framework regarding public benefits for immigrants.

Reaching Communities: Many credit effective outreach by advocates and providers with pregnant immigrants' apparent willingness to seek health care. An ever-changing set of eligibility and program rules has led to heightened confusion and fear during different times over the past five years, after which most sources reported a return to prior levels of utilization. For example, community health workers in Texas report that immigrants stay behind shut doors in the weeks and months following an INS raid. After some time, they again become willing to seek help from community workers, and with time, some seek government support as well. In California, hospital eligibility workers and advocates report that lawyers advised clients to stay away from public services in 1997 due to public charge concerns. After some time, some advocates and providers report that concerns abated and patients were again willing to apply for Medi-Cal. As rules regarding immigrants' eligibility for public benefits become more complex and fluid, there is an ever-growing need for advocates who can translate the rules for the communities affected by them. Invigorated funding for health-based advocacy is critically needed to ensure patients' access to care.

Independent Silos: Despite widespread reports that immigrants are staying away from prenatal care and other health care due to concerns about public charge issues or fears of new reporting requirements to INS, there is little quantitative evidence to date regarding maternity care. This not to say that data prove that welfare reform had no impact on maternity care, but that few analyzes have been undertaken. To some extent, the four

categories of informants -- state and local health and social service commissioners, hospital CFO, chairs of obstetrics, and policy analysts/advocates -- exist as independent silos, with different sources of information contributing to different perceptions of the issues. This underscores both the limitations and strengths of qualitative data in capturing the complexities of any reality.

Public Charge: It is safe to say that less change than was expected has occurred as a direct result of welfare reform, and more change has resulted from the invigorated and often illegal application of public charge policies in the years immediately following welfare reform. Although the two are distinct initiatives driven by separate forces, welfare reform is described as having provided a new "platform" for public charge policies. In all four states, public charge concerns are uniformly identified as the single most important deterrent to immigrants' use of benefits and health care.

Application of the public charge policies has varied greatly both within and across states. Individual officials have "quietly denied entry to, deported, detained and requested repayment from thousands of people with few checks and balances to their decisions." Some immigrant communities have gone underground, fearful of accessing services to which they may be legally entitled. California is notable for being the only state to establish formal and widespread public charge payback programs with one hand and, at the same time, to aggressively seek federal clarification with the other hand. Advocates and providers report of a "spill-over" effect from California's policies onto immigrants in the other states, especially Texas. Reports of incidents in California spread quickly to create fears in other states. Neither Texas nor Florida engaged in collaborative ventures with INS, although in both states, there were widespread misinformation campaigns by INS and nearby consular offices. In New York, application of the public charge doctrine appears to have been the least prevalent, although community concerns were reportedly high nonetheless. Collaborations between Medi-Cal and INS raise important concerns about how to ensure the safety of using public benefits in the future.

With the recent and long overdue federal clarification of public charge policies, immigrant communities are expected to enroll in larger numbers in public benefit programs including Medicaid. It remains to be seen whether the new policy will be implemented uniformly and effectively by the various government agencies responsible for its implementation. Other questions, however, remain regarding verification requirements under illegal immigration reform that may compromise the confidentiality of immigrants= use of a wide range of services.

Greater Impact on Immigrants in Mixed Families or Those Seeking Legal Status: Both PRWORA and the climate of welfare reform appear to have had a greater impact on immigrants seeking legal status than on illegal immigrants. Medicaid eligibility has been newly withdrawn from legal immigrants alone in Florida and Texas, the two states where changes were made. In contrast, Medicaid eligibility of undocumented immigrants remained unchanged in those states. In all four states, public charge policies by definition only applied to immigrants seeking legal status. As a result of welfare reform and its climate, these legal immigrants face new barriers to care while the undocumented

continue to access prenatal care through specific clinics or programs that were and are available for the uninsured and/or undocumented immigrants. For example, the Urban Institute=s Los Angeles study found a smaller decline in Medi-Cal enrollment among citizen children of undocumented parents than among citizen children with legal immigrant parents. Similarly, in El Paso, where large numbers of pregnant immigrants were already operating outside the established health care system, welfare reform had little if any impact on their access to and use of lay midwifery services.

Is Pregnancy Different?: One question for further analysis is whether use of health services by immigrants is likely to be different during pregnancy than at other times. Do immigrant women have different motivations to overcome public charge and other barriers during pregnancy than at other times? Does the knowledge that they will deliver in a hospital create a willingness to have earlier contact with the health care system? Do special programs for pregnant women like presumptive eligibility and outreach programs actually work and increase women's willingness to enter care? Answers to such questions may be needed to determine the relevance to pregnant immigrants of lessons learned from broader national studies on immigrants' use of public benefits in the years following welfare reform.

Parallels and Divergences: Nationwide, about 7.5 percent of Medicaid enrollees were noncitizen immigrants in 1994, compared with 12.6 percent in New York, 24.9 percent in California, 6.8 percent in Florida and 5.5 percent in Texas. Nationwide, use of Medicaid among noncitizen households fell more sharply (22 percent) between 1994 and 1997 than among citizen households (7 percent). Between 1995-1996, AFDC/Medicaid participation by nondisabled adults and children declined in all four states: 3.2 percent decline in California, 4.4 percent decline in New York, 7.4 percent decline in Florida and a 7.9 percent decline in Texas. Declines in noncash-related Medicaid groups were much smaller. Welfare caseloads fell much further in 1997, and Medicaid rolls are expected to follow.

California and New York - Given the high percentage of Medicaid enrollees who were noncitizens in 1994, California and New York are likely to be disproportionately affected by PRWORA=s immigration changes. The impact will appear slowly, as immigrants newly entering the US will be ineligible for benefits. If immigration continues at past rates, then a large portion of new entrants will be uninsured and ineligible for Medicaid, which could impose large costs on the states and localities in which they reside as well as on the immigrants themselves.

As noted above, Medicaid eligibility for pregnant immigrants has remained intact in both California and New York, and in both states, eligibility is the subject of ongoing litigation. The social and political context, however, is markedly different in each state. In California, Proposition 187, active public charge payback border programs and an anti-immigrant former Governor have all contributed to a hostile environment, with documented and dramatic drops in immigrant enrollment in Medi-Cal and TANF. In New York, welfare reform was the first and only anti-immigrant initiative; all elected leaders have been outspoken opponents of the new immigrant restrictions.

The question now, then, is whether a state's social and political sentiments towards immigrants affect pregnant immigrant's access to and use of services? Reports from advocates and providers indicate that women were scared away in both states, but more so in California due to public charge issues, and presumably the generally hostile context. In both states, however, outreach efforts appear to have been successful at bringing women back for prenatal care and delivery services, with the most intensive efforts undertaken in California, although additional quantitative and qualitative data are needed to definitively draw this conclusion.

Texas and New York - In both states, benefits are "quietly" being provided to the undocumented through Child Health Plus and PCAP in New York, and through Title V in Texas. In both states, there is little if any broadcasting of undocumented immigrants= eligibility for fear of alerting legislators who might revoke eligibility if they became fully aware of existing provisions. These policies are contributing to public and professional uncertainty regarding immigrant eligibility for the programs involved. Absent a better alternative, immigrants and those who serve them in Texas and New York continue, with varying degrees of success, to rely on informal channels of communication.

California and Texas - The political environment toward immigrants is significantly different in Texas and California, with more support for immigrant health issues at the political level in Texas than in California. This difference is partially explained through the following statistics: Latinos represent a majority in only 1 out of 58 counties in California, but in 32 out of 254 counties in Texas. These counties are concentrated in Southern Texas. This difference can also explained by the political culture of Texas; the Lone Star state identifies with an independent Alive and let live@ spirit. Significant linkages between the economies of Mexico and Texas also make aggressive anti-immigrant positions like those held by former Governor Wilson less likely to prevail in Texas.

V. List of products

Peer reviewed articles

Joyce T, Bauer T, Minkoff H, Kaestner R. Welfare Reform and the Perinatal Health and Health Care Use of Latino Women in California, New York City, and Texas. American Journal of Public Health November 2001, Vol. 91, No. 11, 1857-1864.

Minkoff H, Fuentes-Afflick E, O'Sullivan MJ, Gomez-Lobo V, Bauer T, Joyce T, Holman S, Feldman J. The Relationship of State of Residence to Adequacy of Prenatal Care among Foreign- and US-born Latina women. Manuscript under review at the Journal of Community Health.

Minkoff H, Joyce T, McCalla S, Colman G. Distribution of African-Americans Births in NYC and Characteristics of Delivering Hospitals. Manuscript under review at the Journal of Urban Health.

Kuo WH, Wilson TE, Holman S, Fuentes-Afflick E, O'Sullivan MJ, Minkoff HL. Depression in the postpartum period among Hispanic Women in Three U.S. Cities. Manuscript under review at the American Journal of Psychiatry.

Policy Briefs

Executive Summary of the First Year Case Study Findings and Analysis from California, Florida, New York and Texas. June 2000. Disseminated to over forty national and state legislators, policy experts and others with an interest in this topic.

Policy Alert: New Findings on Pregnant Immigrants: Maintaining Prenatal Coverage after Lewis v. Grinker is Essential for the Health of New York Mothers and Babies. Issued July 2001.

Policy Brief and Comprehensive Report: Challenges Associated with Applying for Health Insurance Among Latina Mothers in California, Florida and New York. December 2002. Disseminated to over 50 national and state legislators, policy experts and other with an interest in this topic.

Conference Presentations

Our preliminary findings were presented at two national venues: the Children's Defense Fund National Conference 2000 on March 27, 2000 and HRSA Maternal and Child Health Bureau Research Roundtable on April 4, 2000. Dr. Minkoff has presented findings related to this data to the March of Dimes, MHRA (attended by N.Y. State health officials), the New Jersey conference on perinatal health and Grand rounds at several hospitals in New York and to officials of ACOG NY..

Kuo WH, Wilson TE, Holman S, Fuentes-Afflick E, O'Sullivan MJ, Minkoff HL. Depression in the postpartum period among Hispanic Women in Three U.S. Cities. Presented at the American Public Health Association Annual Meeting and Exposition in Philadelphia, PA on November 12, 2002.

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