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Participation in the Women, Infants, and Children (WIC) Program as Reported by Documented and Undocumented Farm Worker Adults in the Households

J. Paul Leigh[1] and Alvaro Medel-Herrero[2]

[1]Center for Healthcare Policy and Research and Department of Public Health Sciences, University of California Davis School of Medicine, Davis, California, USA

[2]Communication and Culture Program, Center for International Education, University of California, Davis, Davis, California, USA

ABSTRACT. Debate surrounds the provision of Women, Infants, and Children (WIC) benefits to undocumented immigrants. Few studies are available to estimate use of WIC services by documented and undocumented households using nationally representative data. The authors analyzed data from the National Agricultural Workers Survey (NAWS) annual cross-sections from 1993 through 2009 ($N = 40{,}896$ person-years). Household documentation status is defined by the status of the adults in the household, not children. Simple mean differences, logistic regressions, and time charts described household participation in WIC over 2-year intervals. Without adjustments for covariates, 10.7% of undocumented farm workers' households and 12.4% of documented households received WIC benefits, yielding an odds ratio of 0.84 (95% confidence interval [CI]: 0.76–0.94). Logistic regressions revealed that for the same number of children in the household, participation by undocumented persons was higher than participation by documented persons. Time charts and logistic regressions with interaction terms showed a stronger correspondence between participation in WIC and number of children <6 years old in undocumented households than documented households. Undocumented farm workers' households were only a little less likely to participate in WIC than documented farm workers' households, and undocumented households' participation was especially responsive to the presence of children. These results are consistent with the legal requirements for WIC participation, which do not distinguish between documented and undocumented households. These results may be helpful in the debate surrounding the effects of undocumented workers on WIC participation and costs.

KEYWORDS. Health services, immigrants, low-income

INTRODUCTION

The Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) provides federal grants from the United States Department of Agriculture to states for supplemental foods, health care referrals, and nutrition education. WIC is targeted at low-income, pregnant, breastfeeding, and postpartum women, and their children less than 5 years old. Low-income is defined as below 185% of the US poverty line or as any household that participates in Supplemental Nutrition Assistance Program (SNAP; food stamps), Medicaid, or Temporary

Address correspondence to: J. Paul Leigh, Department of Public Health Sciences, UC Davis Medical School, MS1C room 100, Davis, CA 95616-8638, USA (E-mail: pleigh@ucdavis.edu).

Assistance for Needy Families.[1] In fiscal year (FY) 2013, $6.5 billion was spent for approximately 8.6 million people (77% of whom were children and 23% women) to receive WIC benefits each month.[1] Nationwide participation in WIC has shown steady increases virtually every year since its inception in 1974, in part due to increasing numbers of births.[2] In 1992, Hispanics accounted for 23% of all WIC participants; by 2006 that number had climbed to 41%.[2] Participation by non-Hispanic whites and African Americans (combined) correspondingly dropped from 72% in 1992 to 52% in 2006.[2] The total dollar amounts of WIC spending are large, but WIC is a relatively small program. In terms of total spending, WIC was approximately 1.5% the size of Medicaid and 7.9% the size of SNAP in 2013.[3,4]

A unique feature of WIC is that undocumented immigrants are currently eligible and have been throughout the 1990s and 2000s (our study years).[2,5] SNAP and Medicaid, on the other hand, are more restrictive. SNAP forbids participation by undocumented immigrants. Medicaid will only provide benefits for undocumented immigrants for emergencies, pregnancies, and delivery care. All three, of course, provide benefits to infants and children born in the United States, regardless of the residency status of parents. This last provision is especially important for WIC, because such a high percentage of participants are children, and 4.5 million citizen-children in 2010 were estimated to reside in households with at least one undocumented parent.[6] The Affordable Care Act does not change WIC eligibility for undocumented persons.

In 2010, there were an estimated 11.2 million undocumented immigrants, accounting for 3.2% of the US population.[6,7] Undocumented immigrants are 2 times more likely than native-born persons to have incomes below the Federal Poverty Line (FPL).[6] There are political issues surrounding WIC for undocumented immigrants. Some Americans believe that undocumented immigrants "wind up on welfare" and that government benefits, including WIC, exceed any taxes they pay.[8,9] Some lawmakers have suggested that government benefits and the promise of citizenship attract undocumented pregnant immigrants to give birth to "anchor babies."[10] Polls indicate that some Americans believe that the 14th amendment should be altered to deny citizenship to newborns of undocumented parents.[6] But in these same polls, other Americans believe that the taxes paid by undocumented immigrants exceed any benefits, that evidence for "anchor babies" does not exist, and that the 14th amendment should not be changed.[6,7,11]

Research on participation in WIC or other government programs by undocumented immigrants has been limited, in part, because it is difficult to obtain data on undocumented immigrants. Berk et al.[5] analyzed 1996–1997 data on undocumented immigrants in four major cities. They found that in three—Houston, Fresno, and Los Angeles—participation in WIC (approximately 26%) was more than double participation in SNAP (approximately 12%). In the fourth, El Paso, participation was nearly identical (47% to 48%) between WIC and SNAP. They also found that WIC participation far exceeded Medicaid participation of 2% to 9% in three cities and was tied in the fourth. Rosenberg et al.[12] analyzed documented and undocumented WIC participants in New York City and found that immigration concerns were not predictors of participation.

We analyzed data from the National Agricultural Workers Survey (NAWS). The NAWS has the great advantage that it contains information on the legal status of farm workers; we did not have to estimate that status with simulation models.[6,13] Legal status of the household was defined as the status of the adult in the household, not status of the children. However, the NAWS is underutilized. For example, whereas government reports provide some descriptive statistics on WIC use in the NAWS, we are not aware of any study with multivariable analysis of WIC.[14] Moreover, not even the government reports present data on WIC use for documented and undocumented households separately; the latest report (with 2001–2002 data) simply lists WIC use by both documented and undocumented households combined as 11% of the sample.[14]

By comparison, Medicaid participation was 15% and SNAP was 8% in the NAWS.

Nongovernment researchers have successfully used the NAWS to address multiple issues. Pena[15] found that state-by-state variation in the generosity of government benefits, including WIC, did not influence migration patterns of undocumented immigrants. Kandilov and Kandilov[16] found that legal status increased wages and the chances of receiving employer-provided medical insurance. Kandel and Donato[17] estimated the differential in exposure to pesticides between documented and undocumented workers.

In this study, we addressed three questions. Were undocumented or documented households more or less likely to participate in WIC? How large were the differences? What accounted for those differences? There are two competing hypotheses. On the one hand, it may be that undocumented immigrants are reluctant to participate, given that participation requires an interview with a government official. On the other hand, low-income undocumented and documented persons who are mothers, infants, or children have similar demands for food. Documented persons may qualify for either WIC or SNAP, but undocumented persons qualify only for WIC. Low-income undocumented persons may, therefore, exhibit greater *relative* effort and success in acquiring WIC compared with documented persons.

METHODS

The NAWS is a nationally representative sample of crop workers derived from repeated annual cross-sectional surveys with interviews conducted three times per year.[18] Detailed information is collected on individual and household demographics, employment, health history, and income. From 1989 through 2009, 52,479 in-person interviews were completed across 467 counties within 40 states.[18] All interviews are confidential and the Department of Labor has had great success recruiting undocumented immigrants into the survey. Each interview lasts from 48 to 65 minutes, and participants are currently paid $20 cash for their participation.[18] Our sample was composed of subjects from 1993 to 2009. WIC data were not available for the first 4 years, 1989–1992. Variables included WIC receipt, current legal status, ethnicity, race, age, marital status, number of children, income, and education. We eliminated the relatively small percentage of persons (2.2%) with missing data on any of these variables except income. For income, we allowed some missing values (explained below). Our sample was composed of 40,896 farm workers, aged 14–90, and contained 20,942 documented and 19,953 (48.8%) undocumented subjects. Sample weights within NAWS were used in all analyses to obtain population estimates.

The NAWS data are available to the public.[18] Specific individuals within the NAWS cannot be identified and are, therefore, waived from Human Subjects Committees review.

Our dependent variable, *WIC*, was binary and equaled 1 if the subject or anyone in the household received WIC benefits in the preceding 2 years. The key independent variable, *undocumented*, was also binary and equaled 1 if the farm worker was undocumented, i.e., a noncitizen, who was neither a legal permanent resident nor a holder of work authorization.

Covariates included indicator (dummy) variables for year (1993–2009), gender, race and ethnicity, region, education categories, marital status, number of children, household income intervals, and a continuous variable, age. Approximately 81.2% identified as Hispanic, 14.4% as white, 2.4% as African American, and 2% as "other," which included American Indian/Alaskan Native/Indigenous, Asian, or Pacific Islander. We classified the sample into four groups: white non-Hispanic, African American non-Hispanic, Hispanic, and "any other," including missing.

The NAWS contained six geographic regions. California constituted one third of the sample and was a separate region. The five additional regions (and percent of the sample) included East (16%), Southeast (13%), Midwest (19%), Southwest (7%), and Northwest (12%). Marital status equaled 1 for "currently married or cohabiting" and 0 otherwise. More than half (56.2%) of undocumented married workers did not live with their spouse in the United States.

Children must be less than 5 years old to qualify for WIC.[1] The closest NAWS data available pertained to children under 6 years old, i.e., 0–5 years. We defined five children variables: "no children," "1 child 0–5 years old," "2 children 0–5 years," "3+ children 0–5 years," and "1 or more children 6+ years." The number of children referred to those residing in the United States; undocumented workers often leave families behind. Education of the subject interviewed was divided into four categories: primary school graduate or less (7 years of schooling), some high school (8–11 years), high school graduate (exactly 12 years), and some college or more (13+ years).

We used the NAWS-created family poverty measure. This variable equaled 1 if the NAWS administrators estimated that the family's income was less than the FPL, adjusting for number of persons in the household. The NAWS administrators used separate data on family income and household size to make these estimates. Roughly 21.4% of the sample had missing income and, therefore, missing data on the poverty variable. Rather than discarding such a large percentage of the sample, we created an indicator variable for the 21.4% with missing income.

We examined WIC receipt and undocumented work status with differences in means, time charts, and logistic regressions using Stata 13.1 (StataCorp, College Station, TX). Following Pena,[15] we used the NAWS sample population weights but did not adjust error terms for geographic clusters.

RESULTS

Table 1 reports descriptive statistics on variables within documented and undocumented households separately. The WIC receipt for undocumented households was 1.7 percentage points below that of documented households ($P < .001$). The groups differed in most characteristics: undocumented farm workers were younger, less educated, poorer, more likely to be male, nonwhite, and Hispanic but less likely to be married or have children. All of the above differences were statistically significant.

We first ran 12 logistic regressions with *WIC* as the dependent variable, *undocumented* as the key independent variable, and various combinations of covariates. We present results for four regressions that were the most revealing in Table 2. The first regression (first column of numbers) included only *undocumented*; the odds ratio was 0.84 (95% confidence interval [CI]: 0.76–0.94). This "raw" odds ratio, without any adjustments for covariates, indicated that undocumented workers were 16% less likely than documented workers to report WIC benefits. In column 2—which included demographic, regional, and annual covariates but not covariates for children—the odds dropped to 0.54 (95% CI: 0.47–0.62). In regression 3, which included only children and no other covariates, the odds ratio climbed to 1.51 (95% CI: 1.29–1.76). These regression 3 results suggest that undocumented households are more than 50% as likely to receive WIC benefits for the same number of children as the documented households. Regression 4 included all covariates and resulted in an estimated odds ratio of 0.97 (95% CI: 0.78–1.19). The lack of statistical significance suggested no differences in WIC participation by documented and undocumented households. The odds ratios measuring the number of young children were exceptionally large (99.15, 129.72, and 212.12), highly statistically significant in both regressions 3 and 4 and in every other regression that included them (results available from the authors). In regressions available from the authors, we also included annual indicator variables for the years 1994–2009; results on the key variables were essentially the same as those in Table 2.

These findings—large odds ratios and strong statistical significance on the children covariates, as well as findings that by merely adding or deleting covariates for children had such striking effects on the odds ratio for the undocumented—were noteworthy. We, therefore, conducted additional analyses with the children covariates. In the first, we created time charts for two variables: WIC participation and average number of children under age 6 in the household. One time chart was created for undocumented households and another for documented households. Results appear in

TABLE 1. Sample Characteristics of Undocumented and Documented Farm Workers and Households

Characteristic	Undocumented Mean (SE)	Documented Mean (SE)	Difference = undocumented – documented.
Received WIC in last 2 years	0.107 (0.002)	0.124 (0.002)	−0.017**
Female	0.157 (0.002)	0.270 (0.003)	−0.113**
Race			
White non-Hispanic	0.002 (0.0003)	0.279 (0.003)	−0.277**
African American non-Hispanic	0.002 (0.0003)	0.046 (0.001)	−0.044**
Hispanic	0.989 (0.001)	0.642 (0.003)	0.347**
Any other (including missing)	0.007 (0.001)	0.032 (0.001)	−0.025**
Age in years	28.3 (0.068)	37 (0.090)	−8.7**
Education			
Years of schooling	6.33 (0.023)	8.42 (0.028)	−2.09**
≤Primary school (0–7)	0.661 (0.003)	0.407 (0.003)	0.254**
<High school (8–11)	0.258 (0.003)	0.271 (0.003)	−0.013**
High school graduate (12)	0.060 (0.002)	0.217 (0.003)	−0.157**
College or more (13+)	0.017 (0.001)	0.106 (0.002)	−0.089**
Marital Status			
Married (not separated) or living together	0.488 (0.003)	0.608 (0.003)	−0.120**
Children			
0 children	0.804 (0.003)	0.578 (0.003)	0.226**
1 child 0–5 years old	0.094 (0.002)	0.132 (0.002)	−0.038**
2 children 0–5 years old	0.037 (0.001)	0.049 (0.001)	−0.012**
3 or more children 0–5 years old	0.008 (0.001)	0.011 (0.001)	−0.003**
1 or more children 6+ years old	0.057 (0.002)	0.239 (0.003)	−0.182**
Family income below the federal poverty line	0.312 (0.003)	0.296 (0.003)	0.016**
Missing family income	0.355 (0.003)	0.080 (0.002)	0.275**
Region			
East	0.186 (0.003)	0.138 (0.002)	0.048**
Southeast	0.144 (0.002)	0.121 (0.002)	0.023**
Midwest	0.117 (0.002)	0.257 (0.003)	−0.140**
Southwest	0.046 (0.001)	0.101 (0.002)	−0.055**
Northwest	0.130 (0.002)	0.111 (0.002)	0.019**
California	0.375 (0.003)	0.270 (0.003)	0.105**
Sample size	19,953	20,942	

Note. Sample included farm workers in the National Agricultural Workers Study (NAWS) between 1993 and 2009 (N = 40,896 once missing cases were excluded). All the means were calculated using the NAWS-provided weights. All monetary variables were in 2009 dollars.

*Statistical significance at the .05 level, two-tailed test.

**Statistical significance at the .01 level, two-tailed test.

Figures 1 (undocumented) and 2 (documented). In both figures, WIC participation and number of children under age 6 move together. But what is visually striking is the stronger correspondence between these two variables in the chart for the undocumented (Figure 1) versus the documented (Figure 2).

We then developed interaction terms, multiplying the children variables with the undocumented variable: *undocumented* × 0 children, *undocumented* × 1 child 0–5 years old, *undocumented* × 2 children 0–5 years old, *undocumented* × 3 or more children 0–5 years old, and *undocumented* × 1 or more children 6+ years old. In a regression, these interaction terms estimate if there are disproportionate changes in odds ratios when comparing additional children in undocumented households versus documented households. Table 3 presents results from a regression that included the undocumented variable, the children covariates, and the children and undocumented interaction terms, as

TABLE 2. Logistic Regressions for WIC Receipt

Characteristic	Model 1 Odds ratio (95% CI)	Model 2 Odds ratio (95% CI)	Model 3 Odds ratio (95% CI)	Model 4 Odds ratio (95% CI)
Undocumented	0.84 (0.76−0.94)**	0.54 (0.47−0.62)**	1.51 (1.29−1.76)**	0.97 (0.78−1.19)
Children				
0 children			Omitted	Omitted
1 child 0–5 years old			99.15 (76.48−128.55)**	83.34 (62.47−111.18)**
2 children 0–5 years old			129.72 (97.13−173.23)**	102.26 (73.89−141.54)**
3 or more children 0–5 years old			212.12 (136.32−330.07)**	170.01 (106.23−272.06)**
1 or more children 6+ years old			5.81 (4.09−8.24)**	6.31 (4.40−9.06)**
Female		2.77 (2.42−3.16)**		1.38 (1.13−1.68)**
Age in years		0.94 (0.93−0.94)**		0.97 (0.96−0.98)**
Race				
White non-Hispanic		Omitted		Omitted
African American non-Hispanic		3.46 (2.15−5.57)**		3.01 (1.66−5.47)**
Hispanic		5.31 (3.99−7.05)**		4.66 (3.25−6.68)**
Any other (including missing)		2.78 (1.77−4.33)**		2.92 (1.73−5.90)**
Education				
≤Primary school (0–7)				Omitted
<High school (8–11)				1.23 (1.03−1.47)*
High school graduate (12)				1.12 (0.84−1.51)
College or more (13+)				0.77 (0.49−1.19)
Married (not separated) or living together		7.27 (6.12−8.63)**		1.24 (1.01−1.53)*
Family poverty				1.29 (1.09−1.51)**
Missing family income				0.96 (0.73−1.27)
Region				
East		0.65 (0.49−0.86)**		1.00 (0.73−1.37)
Southeast		1.26 (0.97−1.64)		1.85 (1.23−2.81)**
Midwest		Omitted		Omitted
Southwest		0.97 (0.73−1.28)		0.95 (0.66−1.37)
Northwest		1.58 (1.29−1.93)**		1.43 (1.11−1.84)**
California		1.28 (1.06−1.51)*		1.44 (1.17−1.75)**
Sample size	40,896	40,896	40,896	40,896

Note. The sample consisted of all hired farm workers between 1993 and 2009. All regressions were weighted using the NAWS-provided weights. No regressions included indicator variables for years. Results, available from the authors, included annual indicator variables and revealed similar results on the key variables above.

*Statistical significance at the .05 level, two-tailed test.

**Statistical significance at the .01 level, two-tailed test.

FIGURE 1. WIC receipt and average number of children 0–5 years old in undocumented farm workers.

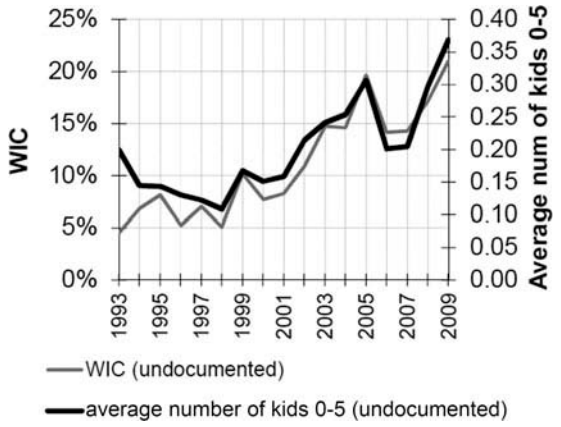
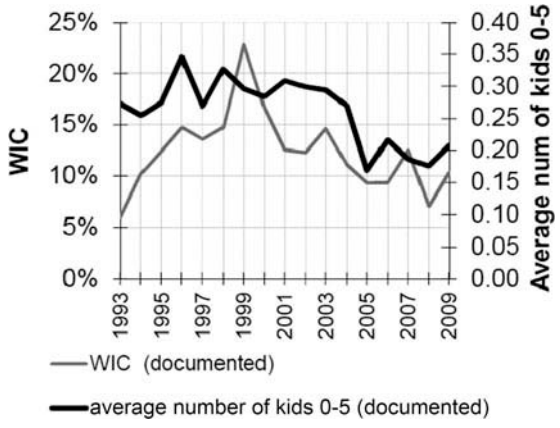


FIGURE 2. WIC receipt and average number of children 0–5 years old in documented farm workers.



well as all of the covariates in regression 4 in Table 2 (results on the latter set of covariates are not shown in the interest of brevity). Results on the interaction terms were revealing. The odds ratio for an undocumented household with one young child was 4.48 higher than the odds for a documented household with one young child. For households with two young children, undocumented households' odds ratios were 3.83 higher than for documented households. All of these results on the interaction terms were strongly statistically significant.

As a final analysis, we restricted our sample to those that would most likely qualify for WIC (and those who we could identify with NAWS data): households that were below 100% of the poverty line and had one or more child under 6 years old. Again, because of the NAWS

TABLE 3. Logistic Regression for WIC Receipt With Interaction Terms Between Documented Status and Number of Children

Variable	WIC receipt Odds ratio (95% CI)
Undocumented	0.30 (0.19−0.49)**
Number of children	
0 children	Omitted
1 child 0–5 years old	38.67 (26.86−55.65)**
2 children 0–5 years old	50.28 (32.95−76.74)**
3 or more children 0–5 years old	93.65 (51.37−170.71)**
1 or more children 6+ years old	3.57 (2.30−5.52)**
Undocumented	
Undocumented × 0 children	Omitted
Undocumented × 1 child 0–5 years old	4.48 (2.77−7.25)**
Undocumented × 2 children 0–5 years old	3.83 (2.20−6.65)**
Undocumented × 3 or more children 0–5 years old	2.81 (1.17−6.73)*
Undocumented × 1 or more children 6+ years old	2.77 (1.51−5.11)**
Sample size	40,896

Note. The sample consisted of hired farm workers between 1993 and 2009. All regressions were weighted using the NAWS-provided weights. Additional covariates included all those identified in Table 2, last column. Results, available from the authors, included annual indicator variables and revealed similar results on the key variables above.

*Statistical significance at the .05 level, two-tailed test.

**Statistical significance at the .01 level, two-tailed test.

design, we were not able to identify households below 185% of the poverty line or households with one or more child under 5 years old. The sample size dropped by 86%, from 40,896 to 3,527. In this more limited sample, we found that 66.3% of the undocumented and 58.5% of the documented reported receiving WIC benefits and that this difference was statistically significant ($P = .002$).

We now consider control variables. Returning to our main sample ($N = 40{,}896$), women were more likely to receive WIC than men ($P < .01$), independent of the presence of children. Being married was positively associated with WIC receipt. Poverty was associated with higher odds of WIC receipt. WIC receipt also varied by region: California, Southeast, and Northwest had the highest odds ratios.

DISCUSSION

Whereas considerable debate surrounds the receipt of government benefits by undocumented immigrants, relatively few studies have been conducted that use nationally representative data on undocumented immigrants. We used the NAWS to test for differences in WIC participation between documented and undocumented farm workers and their families. WIC is unique among government programs in that undocumented immigrants are eligible to receive benefits. Without adjustments for covariates, approximately 10.7% of documented households and 12.4% of undocumented households received WIC benefits over 2-year intervals from 1993 to 2009. The difference between these two "raw" percentages was 1.7 percentage points and corresponded to an odds ratio of 0.84 for undocumented households ($P < .001$). In regressions that alternately excluded and included variables measuring the number of children in the family, the odds for *undocumented* ranged from 0.54 (excluded) to 1.51 (included). In our preferred regression that included all control variables, the odds ratio was 0.97 (not statistically significant) on *undocumented*. Additional analyses were conducted with time charts and with regressions that included interaction terms between the children variables and *undocumented*. The presence of children—a key factor in determining eligibility—had a disproportionately larger effect for undocumented than documented worker households. We identified the variables measuring children as those most responsible for changes in estimates of differences in WIC receipt by documented and undocumented worker households. Our additional analysis of a much smaller sample of households that were below the poverty line and had one or more young children confirmed the importance eligibility: undocumented households were more likely than documented ones to receive benefits.

Our findings that undocumented households had high participation in WIC were broadly similar to those in Berk et al.,[5] who found that in three of four cities analyzed, WIC participation was more than double SNAP participation among the undocumented. Our findings were also consistent with those from Rosenberg et al.,[12] who found that immigrants in general were not deterred from collecting WIC payments due to any fears regarding legal immigration status. This high participation by undocumented households may be explained in part by the role of social workers and other professionals at hospitals, clinics, and service facilities who actively advise undocumented immigrants of their eligibility WIC.[19] Finally, our findings were consistent with the law, because the WIC program was not designed to exclude anyone on the basis of legal immigration status.

Our results on income, age, women, and children were consistent with WIC eligibility laws. The variable measuring whether the household lived below the FPL was a positive predictor of WIC receipt. Pregnant women as well as women with children less than 5 years old tend to be young themselves. Not surprisingly, we found advancing age of the subject to be a negative predictor of WIC receipt. Although the NAWS did not identify pregnant women, we found women were 38% to 177% more likely than men to receive WIC. Finally, we found that WIC receipt was especially responsive to the presence of young children in the household.

Our finding that participation in WIC increased in the late 1990s and 2000s is consistent with a study by Vericker et al.,[20] who used several waves of the Current Population Survey matched to a simulation algorithm to

estimate the number of undocumented immigrants participating in WIC and the National School Lunch Program (NSLP). The NSLP, like WIC, does not exclude undocumented immigrants. They found that the number and share (compared with all other recipients) of unauthorized immigrant children (not born in the United States) increased from 1997 to 2006, but that the share always remained low at less than 1% of the total WIC population. They also found that the share of native-born children for unauthorized parents increased from 5.7% to 10.7%. Finally, they found that the share of unauthorized immigrant mothers who were postpartum or breastfeeding increased from 7.2% in 1997 to 11.9% in 2006.

The additional finding that there was a disproportionate effect of young children on undocumented versus documented households may be explained by the *relative* greater benefit WIC offers undocumented immigrants. Apart from having citizen-children in the household, undocumented adults do not qualify for SNAP, housing benefits, Temporary Assistance for Needy Families, Social Security disability benefits, or unemployment benefits. Undocumented immigrants qualify for Medicaid only for emergencies and pregnancies. Documented persons, on the other hand, qualify for all of these. Documented persons who qualify for WIC, therefore, may not have as great a *relative* demand for WIC as undocumented persons.

Our results have implications for policy. Many Americans believe WIC, Medicaid, and other government benefits are magnets and attract "too many" undocumented immigrants. The California Proposition 187 from 1994 banned the provision of virtually all public aid to undocumented immigrants. A federal court in 1995 ruled that Proposition 187 was unconstitutional, because it usurped federal authority to establish immigration policy. According to Pena,[15] in 2011, 109 immigration-related bills were introduced in state legislatures that focused on public benefits. One policy proposal would deny benefits to undocumented adults and children. Passel and Cohn[7] estimate that in 2010 there were 1 million unauthorized children and 4.5 million citizen-children living with one or more unauthorized parent. Our results suggest that numbers of children in the household are, by far, the best predictors of WIC receipt. Assuming the same ratio (1/5.5) applies to eligible WIC pregnant mothers and children, this policy of denying benefits to all undocumented persons would result in approximately 18% fewer persons receiving benefits. Any policy that would reduce WIC participation ought to be weighed against possible subsequent medical costs. The Centers for Disease Control and Prevention has estimated that for every $1 spent on WIC, $3 are saved in medical treatments paid by Medicaid.[21]

The chief advantage of this study is that the NAWS is a nationally representative sample of undocumented and documented households. Another advantage is that NAWS data apply to households rather than just individuals. WIC participation, regardless of immigration status, is much more dependent on members of households than any one adult in the household. A disadvantage is that the NAWS did not provide information on the dollar amount of the WIC benefits. Another disadvantage is that the NAWS applies to farm workers who likely are not a representative collection of all undocumented households in the United States. Agriculture employs less than 4% of the US workforce. Estimates indicate that 20% of undocumented workers are employed in construction, 17% in leisure and hospitality, 14% in manufacturing, and 11% in wholesale and retail trade.[22] Compared with these other industries, agriculture employment involves migration within the United States, and migration is more difficult for families than single adults. It is likely, therefore, that the NAWS sample has a disproportionately high number of single adults, especially men, compared with the majority of undocumented households in the United States. A third limitation involves legal status: our data identify the legal status of adults in the households, but not children.

We found undocumented households in our sample were receiving WIC benefits consistent with what the law allows. WIC participation by undocumented households was only slightly less than participation by documented households overall, and undocumented household participation was more sensitive than documented households to the presence of young children. These results may be useful in informing the debate

about undocumented immigrant participation in government programs.

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