PPIC | PUBLIC POLICY INSTITUTE OF CALIFORNIA

Health Coverage and Care for Undocumented Immigrants

Technical Appendices

CONTENTS

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Appendix A: Current Sources of Coverage and Care for Undocumented Immigrants

Some undocumented immigrants do have health coverage. National estimates suggest about three in ten undocumented adults have private insurance either through an employer or the individual insurance market. Coverage rates among the undocumented vary considerably across employment sectors and income levels. Undocumented workers employed in manufacturing have the highest rates of private coverage (50%), while undocumented workers in agriculture and construction have the lowest (10%). Among undocumented immigrants in families with relatively high incomes (above 400 percent FPL), only about one-quarter are uninsured. But at lower income levels, rates of uninsurance are much higher; among those with income below 200 percent FPL more than three-quarters lack insurance coverage (Capps et al 2013).The vast majority of the state's undocumented immigrants, however, are uninsured. Although estimates vary, about 60–70 percent of California's nearly 2.7 million undocumented immigrants likely do not have health insurance.[1] As a result, they must rely on the health care safety net to access needed medical care.

California's health care safety net is a patchwork of programs and providers that serve people with low incomes, no private insurance coverage, or other special needs. The state's large network of health care clinics is a key component of the safety net and a major source of primary care for the undocumented. Hospital emergency departments (EDs) also serve as a critical access point to health care for uninsured, undocumented residents due to federal regulations requiring EDs to provide medically necessary care to all patients. Most safety net providers offer care on a sliding-scale based on patient income levels and serve patients regardless of immigration status.

In addition to safety net providers, a few limited programs provide access to free or low-cost medical care to California's undocumented immigrant population. The state operates limited-benefit programs, sometimes referred to as "state-only" programs which provide certain health services to California residents with particular medical conditions regardless of immigration status (Belshe and McConville 2012).[2] Two other safety net programs provide some financial resources for care provided to undocumented immigrants—county indigent programs and emergency-only Medi-Cal, both of which are described in more detail below. Despite serving as essential access points to health care for low-income uninsured residents, none of these resources is equivalent to having comprehensive health insurance.

County indigent programs

In California, counties are tasked with providing medical care to indigent residents. Counties meet this requirement by running county indigent care programs. Some large counties operate public hospital systems to provide health care to their indigent residents, while others contract with health plans and select providers to meet their indigent care responsibilities. Counties do receive some state funds to support their health programs, but state financing of county indigent care has changed in recent years.[3]

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[1] Estimates of uninsurance among undocumented adults vary based on the data source and estimation method. National studies indicate about 60–70% of undocumented immigrants are uninsured (Passel & Cohn 2009; Zuckerman et al. 2011; Capps et al. 2013). For California, uninsurance rates for undocumented adults range from a low of 52% (Wallace 2012) to a high of 70–74% (Capps et al. 2013).

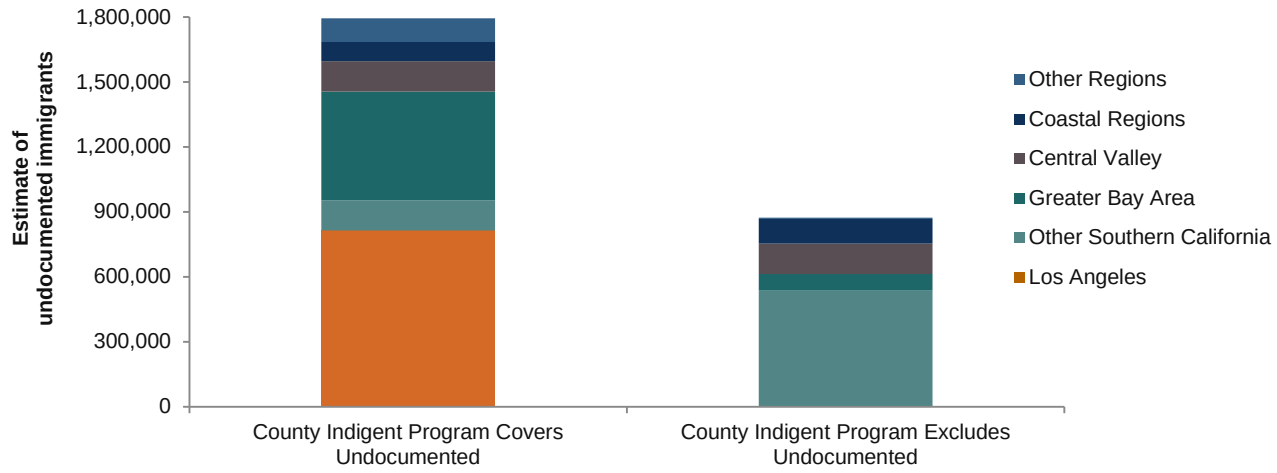
[2] State limited benefit programs, also known as "state-only" programs, target specific populations (e.g., pregnant women are covered through the Access for Infants and Mothers program), services (e.g., the Family PACT program provides family planning services), and diseases (e.g., breast cancer screening is provided through the Every Woman Counts program). In most instances, these programs provide services regardless of immigration status.

[3] When state officials decided to expand the Medi-Cal program under the ACA, funding for county indigent care programs was reduced (under AB 85) because many of the people served by these programs would become eligible for Medi-Cal.

Despite their obligation to serve as health care providers of last resort, counties have considerable flexibility in the design of their indigent care programs in terms of eligibility requirements, covered medical services, and costs to participants. And counties are not required to cover medical services for undocumented indigent residents. Prior to recent policy changes, only ten California counties provided services to residents regardless of immigration status under their indigent care programs, although other eligibility requirements such as qualifying income levels may make some undocumented ineligible.[4] Our estimates suggest about 875,000 undocumented immigrants reside in counties where they are not eligible to receive services through the county indigent care program (Figure A1.)

FIGURE A1

Many county indigent programs do not cover undocumented residents



SOURCE: Authors' calculations using IRS tax data from the Brookings Institution, population data from the American Community Survey, and statewide undocumented population estimates from the Center for Migration Studies. Data from 2013.

NOTE: Reflects recent changes by Sacramento County and the County Medical Services Program to offer services to undocumented in their indigent care programs. Counties that cover undocumented immigrants may also have income qualifications that make some undocumented residents ineligible based on their income. Other Southern California includes Orange, San Diego, Riverside, San Bernardino, and Imperial counties. Greater Bay Area includes Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, Solano, and Sonoma counties. Central Valley includes Fresno, Kern, Kings, Madera, Merced, San Joaquin, Stanislaus, and Tulare. Coastal regions include Monterey, San Benito, San Luis Obispo, Santa Barbara, Santa Cruz, and Ventura. All other counties are included in the Other Regions category.

Limited-scope or emergency-only Medi-Cal

California's Medicaid program, Medi-Cal, provides comprehensive health benefits to low-income Californians with program costs shared by the state and federal government. Undocumented immigrants are not currently eligible for the comprehensive set of benefits provided by Medi-Cal (often referred to as 'full-scope' Medi-Cal), but they can receive limited, emergency services. Federal Medicaid rules prohibit federal funds from being used to cover undocumented residents, but the state does receive their standard federal match for emergency services provided to qualified undocumented immigrants. Prior to expansions under health reform, in order for undocumented immigrants to qualify for emergency Medi-Cal they had to be low-income and have a qualifying disability or dependent children. With the expansion of the Medi-Cal program under the ACA, more undocumented immigrants will qualify for emergency-only Medi-Cal.

[4] The ten counties include Alameda, Fresno, Kern, Los Angeles, Riverside, San Francisco, San Mateo, Santa Clara, Santa Cruz, and Ventura. Sacramento County and 35 smaller counties that participate in the County Medical Services Program recently changed their indigent care eligibility requirements to cover some services for undocumented residents in those counties. These recent changes are reflected in Figure A1.

Appendix B: Estimating Poverty Levels of Undocumented Immigrants

We rely on IRS tax data in order to estimate the number of undocumented immigrants residing in California counties. The data, provided by the Brookings Institution, gives ZIP code level counts of tax filers using Individual Taxpayer Identification Numbers, or ITINs, nearly all of whom are undocumented immigrants, broken out by various categories like filing status. PPIC has previously used ITIN data to estimate the 2008 and 2009 distribution of undocumented immigrants within the state (see Hill and Johnson 2011). Using the same ITIN data, we develop rough estimates of the share of undocumented immigrants that could be eligible for expanded health care and insurance programs. Eligibility is determined by poverty status, which is based on income and family size. We utilize additional dimensions from the ITIN data to examine both of these factors. We arrive at the share of program-eligible undocumented immigrants through three steps. First, we estimate family size at the ZIP code level using information on marital status and use of the child tax credit. Then we use a regression to estimate family size at various income levels. And finally, we use these two estimates, combined with our updated estimates of the undocumented population, to calculate the shares of the undocumented population that are program-eligible at various income thresholds in the Covered California insurance regions.

Counting undocumented immigrants

Because almost no nationally representative or statewide surveys ask respondents their immigration status, researchers employ estimation techniques to approximate the number, location, and characteristics of undocumented immigrants.[5] In this report, we update our estimates of undocumented immigrants at the sub-state level using IRS tax return data. We use counts of tax filers using Individual Tax Identification Numbers or ITINs, nearly all of whom are undocumented immigrants to create our estimates.

We employ regression analysis to model the relationship between the tax data and existing state-level estimates of the undocumented population. Because the counts of ITIN filers are available at the zip code level, we can use the observed relationship between the tax data and state estimates of undocumented immigrants to estimate the number of undocumented immigrants for counties and zip codes based on other observed characteristics. Estimates for all zip codes in California can be found here. We use the identical methodology as in an earlier report (see Hill and Johnson, 2011) , which combines ITIN data, American Community Survey (ACS) data, and residual estimates from the Center for Migration Studies (CMS) (2015) which rely on methodology developed by and documented in Warren (2014), to update our counts of undocumented to 2013, the most recent data available.

Our earlier analysis illustrated that counts of ITIN filers at the state level are highly correlated with state estimates of undocumented immigrants.[6] However, if ITIN filers who are not undocumented are not evenly distributed across California counties, it may skew our estimates of where undocumented immigrants live. We know of one

[5] The Survey of Income and Program Participation (SIPP) does not ask if immigrants are undocumented, but does ask questions that result in undocumented immigrants falling into an "other" category. The National Agricultural Workers Survey asks documentation status, but only of agricultural workers.

[6] All ITIN filers are counted whether they are the primary filer or dependent filers. We do not observe family units, just counts of ITIN filers by zip code. Families with more than one ITIN filer are counted more than once. However, because our estimation technique scales ITIN filers to existing state estimates using regression analyses (see Hill and Johnson 2011) this should not impact our results appreciably.

type of ITIN filer, spouses of H1-B visa holders, who may not be evenly distributed across the state's counties. The likely impact is to skew our results somewhat towards counties with more high-tech employment.[7]

The updated 2013 estimates of the undocumented population for counties and county groups are provided in Table B1.

TABLE B1

County estimates for undocumented population, 2013

County or county groups	Undocumented immigrants
Alameda	129,500
Alpine, Amador, Calaveras, Inyo, Mariposa, Mono, Tuolumne	3,000
Butte	4,000
Colusa, Glenn, Tehama, Trinity	9,000
Contra Costa	77,500
Del Norte, Lassen, Modoc, Plumas, Siskiyou	1,500
El Dorado	3,000
Fresno	58,000
Humboldt	1,500
Imperial	15,000
Kern	58,500
Kings	10,500
Lake, Mendocino	7,000
Los Angeles	814,000
Madera	12,500
Marin	17,500
Merced	23,000
Monterey, San Benito	62,000
Napa	15,500
Nevada, Sierra	1,500
Orange	247,500
Placer	7,000
Riverside	124,000
Sacramento	56,500
San Bernardino	118,000
San Diego	170,500
San Francisco	35,000
San Joaquin	49,000
San Luis Obispo	9,000
San Mateo	59,500

[7] We do not know of other types of ITIN filers who are legal residents who are likely to have a unique distribution throughout the state, such as spouses of H1-B visa holders. Incomes for these ITIN filers are likely to be on the higher end of the spectrum, and thus unlikely to put them in our counts of low-income undocumented immigrants.

County or county groups	Undocumented immigrants
Santa Barbara	41,500
Santa Clara	183,500
Santa Cruz	19,500
Shasta	1,500
Solano	24,000
Sonoma	38,500
Stanislaus	32,500
Sutter, Yuba	9,000
Tulare	36,500
Ventura	69,000
Yolo	11,500
CALIFORNIA	2,667,000

SOURCE: Authors' calculations using IRS tax data from the Brookings Institution, population data from the American Community Survey, and statewide undocumented population estimates from the Center for Migration Studies. Data from 2013.

NOTE: County groups are based on PUMA-level estimates provided in the ACS PUMS files.

Estimating family size for ZIP codes

The first step is to estimate family size. Our data contains information on the sum of benefits received for the child tax credit (CTC) and the additional child tax credit (ACTC) for ITIN filers in each ZIP code. The CTC provides a uniform $1,000 per child credit for each of a filer's children. In the case where the money from the CTC reduces a filer's tax liability below zero, the remainder of the amount of the credit is provided in the ACTC. Thus, summing the dollar value of the CTC and the ACTC for ITIN filers in a zip code and dividing that sum by $1,000 approximates the number of children among ITIN filers. Dividing this number by the higher of the counts of ITIN filers using the CTC or ACTC gives us the approximate number of children per filer using a child tax credit.

In order to preserve anonymity, the IRS suppresses any variable with a value of 10 or less and reports it as a zero. For example, if there were 8 returns filed that claimed the CTC in a given ZIP code, we would only see a zero for that variable. However, the dollar amount of the CTC and ACTC claimed is not suppressed, so we know that there are 218 ZIP codes where the number of filers claiming the child tax credit is suppressed. In these ZIP codes, we use the estimated number of children per family for the county.

Our data also contains the counts of each ZIP code's population under the various filing statuses (e.g. single, married filing jointly, etc.). Using this along with what we know about children per family, we can estimate family size. However, since any variables with fewer than 11 observations are suppressed, there are several ZIP codes where the number of filers reported in each of the filing status categories does not add up to the total number of filers. This leads to underestimated family sizes that could affect the rest of the analysis. In order to fix this, we inflate the filing status counts where they are suppressed using the filing status distribution at the regional level. The distribution at the region is not a perfect match for each ZIP code individually so there are still some ZIP codes where the filing status counts are understated as well as ones where the counts are overstated. However, these miscounts are less severe than in the unadjusted case. Prior to inflating, there are 338 ZIP codes where the sum of the shares of filers reported in each filing status does not reach 80 percent of the total number of filers. Conversely, after inflating, we only have 66 ZIP codes where the filing status count is above 120 percent of the

total number of filers. Another way of comparing the two methods is to look at the average of the sum of filing status shares. Before inflating, the average is 83.7 percent and after inflating it is 101.0 percent.

With our adjusted filing status counts in hand we make some assumptions about the family sizes of filers by each filing status. Because unmarried filers with children get a larger standard deduction if they file as a head of household than if they file as single, we assume that any person filing as single would not have any children. Thus the family size for a single filer would be 1. For someone filing married-joint the family size would be 2 plus the children per family estimate, for someone filing head of household or married-separate it would be 1 plus the children per family estimate. The assumed family sizes are then weighted by the share of each marital status in order to get an estimated average family size for the ZIP code. See below.

$$F = (S/N)*(1) + (M/N)*(2 + K) + (H/N)*(1 + K) + (MS/N)*(1 + K)$$

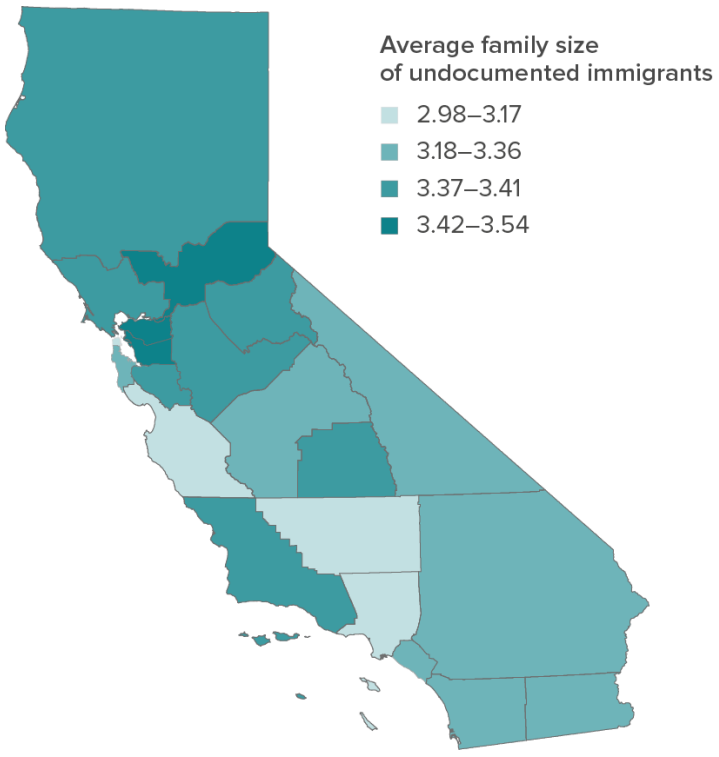
F = Average Family Size, N = Number of Filers, K = Number of Children

S = Single, M = Married Joint, H = Head of Household, MS = Married Separate

Inflating the filing status counts increases the estimated family size. For the ZIP codes where the filing status counts added up to less than 90 percent of the ZIP code's total returns, the average estimated family size increased from 2.4 to 3.6 after inflating. The average family size by region is shown below (Figure B1). We are not able to account for dependents who would not qualify for the ACTC or CTC. Not including them may lead to an underestimate of family poverty.

FIGURE B1

Estimated family size for undocumented immigrants varies across regions



SOURCE: Authors' calculations using IRS tax data from the Brookings Institution, population data from the American Community Survey, and statewide undocumented population estimates from the Center for Migration Studies. Data from 2013.

NOTE: Family size estimate is based on number of children and filing status, thus it does not account for adult dependents.

Estimating family size by income level

The second step is to estimate family size at various income levels. Our data gives the number of filers with adjusted gross incomes in buckets from 0–$5,000 up to $100,000+. Because we are primarily interested in program eligibility for Medi-Cal, the top-coding of income at $100,000+ is not a concern for our findings. Because our estimates derive from tax data, rather than survey self-reports of income, our estimates of poverty should not suffer from underreporting of income in the way that estimates based on surveys often do. Due to the structure of our data (again, ZIP code totals of ITIN filers) we cannot look at income buckets individually in order to estimate family sizes. Instead, we run a regression of the shares of the population in each income bucket on family size in each ZIP code. We combine some of the income categories in order to reduce the number of variables in the regression and run the regressions at the region level (Covered California regions)—with ZIP codes as observations—in order to have more observations in each model. The model specification is given below. For detailed regression results, contact the authors.

$$F_{region} = b_0 + b_i*(X_i), \text{ where } X_i = \text{share of population in income bucket } i \ (i = 0\text{-}25, 25\text{-}50, 50\text{-}75, 75+)$$

We run our regression of income on family size separately for each region because we allow for the possibility that the relationship between income and family size could vary by region. In order to test this assumption we run a regression of income on family size in the full sample with dummies for each region added as fixed effects. When we control for income, we find that family size does not vary much by region; however, when we run another regression with the interaction between our income and region variables we find that several of the coefficients are significant. This indicates that the relationship between income and family size does indeed vary by region, supporting our intuition to run the regressions separately for each one. The results of these regressions are shown below.

TABLE B2

Estimated family sizes for undocumented immigrants by income brackets and insurance regions, 2013

Insurance region	Regression observations	Regression R-squared	Estimated average family size ($0–$25,000)	Estimated average family size ($25,000–$50,000)	Estimated average family size ($50,000–$75,000)	Estimated average family size ($75,000+)
Region 1: Northern counties	100	0.08	2.8	3.5	3.5	3.5
Region 2: North Bay counties	80	0.14	2.7	3.6	6.0	4.5
Region 3: Greater Sacramento	91	0.43	2.6	4.2	4.9	5.0
Region 4: San Francisco County	30	0.37	1.2	3.7	3.7	3.7
Region 5: Contra Costa County	40	0.07	2.5	4.5	3.6	3.6
Region 6: Alameda County	48	0.25	1.9	3.5	3.5	3.5
Region 7: Santa Clara County	75	0.32	3.5	3.5	3.5	4.1
Region 8: San Mateo County	29	0.17	3.5	3.5	3.5	3.5
Region 9: Central Coast–Northern	46	0.35	2.3	4.1	3.3	5.0
Region 10: Central Valley–San Joaquin area	116	0.61	2.3	4.3	5.9	3.5
Region 11: Central Valley–Fresno area	62	0.75	2.5	4.0	3.5	6.6
Region 12: Central Coast–Southern	97	0.12	2.8	3.6	3.6	3.6
Region 13: Eastern Region	20	0.32	2.2	3.6	10.0	-0.2
Region 14: Kern County	35	0.61	2.3	4.4	3.2	5.5

Insurance region	Regression observations	Regression R-squared	Estimated average family size ($0–$25,000)	Estimated average family size ($25,000–$50,000)	Estimated average family size ($50,000–$75,000)	Estimated average family size ($75,000+)
Region 15: Los Angeles County	307	0.43	1.9	4.4	3.2	4.3
Region 17: Inland Empire	152	0.31	2.3	4.2	4.8	5.0
Region 18: Orange County	108	0.21	2.2	3.4	3.4	3.4
Region 19: San Diego County	112	0.18	2.8	3.6	3.6	3.6

SOURCE: Authors' calculations using IRS tax data from the Brookings Institution, population data from the American Community Survey, and statewide undocumented population estimates from the Center for Migration Studies. Data from 2013.

NOTE: Insurance regions are based on the pricing regions used by Covered California.

Calculating poverty levels by region

The final step is to use the estimates of family size at both the regional level and within the various income brackets to calculate the share of the population that falls within certain poverty thresholds. Each region is composed of several ZIP codes, and each one has its own estimate of average family size. Thus each region has a distribution of family sizes spread around its own mean. If we assume that the distribution of family size at the overall regional level is identical to the distribution of family size at the various income levels, then we can arrive at the estimates of program eligibility. There are a number of steps in the process so it is explained in an example below.

An illustrative example: Los Angeles

We start with a region, an income bucket and an eligibility threshold Los Angeles, the $25,000–$50,000 income bucket and 138 percent of the Federal Poverty Level. In this income bucket, the estimated average family size taken from our regression in the previous step is 4.4. We need to determine which family size would be the smallest that falls below the 138 percent threshold. The limits by family size are shown here.

TABLE B3

Federal poverty level thresholds by family size, 2013

Family size	138% FPL ($)
1	15,856
2	21,404
3	26,951
4	32,499
5	38,047
6	43,594
7	49,142
8	54,689

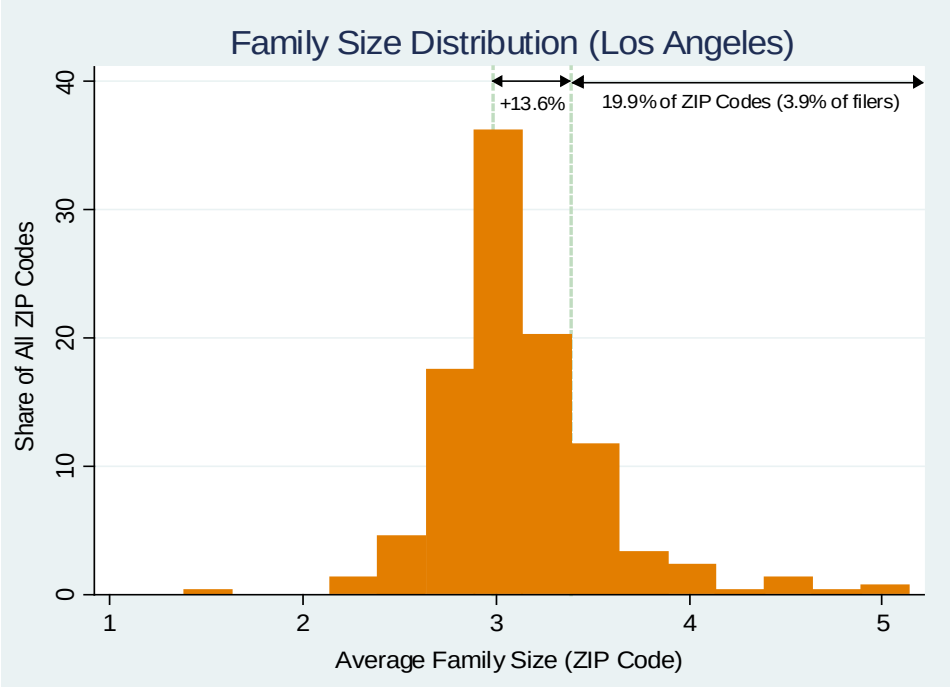
SOURCE: *Federal Register*, Vol. 78, No. 16, January 24, 2013, pp. 5182-5183

With outer bounds of $25,000 and $50,000, we can say that any family of size 1 or 2 would definitely not be below the 138 percent threshold. Similarly, we know that any family of 8 or more would definitely be above that threshold. Between sizes 3–7, we could have a family in this income bucket that could be above or below the threshold and we would not know for sure. However, we need to settle on a single family size that, on average, indicates that a family in the bucket is large enough to fall below the threshold. A family of size three could be in the bucket and below the threshold, though it is not very likely. On the other hand, a family of size 7 would almost surely be below the threshold, though if we define 7 and above as the bar for family size, we could leave out many families that could be in the bucket and below the threshold. We settle on a size of 5, just above the mid-point of this bucket, assuming that a family of 5 or more in this income bucket will typically fall below the 138 percent threshold.

Next, we bring in the assumption about the identical distributions of family size in order to finish our estimation. The cutoff family size of 5 is 13.6 percent higher than average family size of 4.4 in this bucket. We can look to the distribution (shown below) of family sizes in Los Angeles overall and we see that 61 of the region's 307 ZIP codes (19.9%) have average family sizes of at least 3.4, 13.6 percent higher than the regional mean of 3.0. We weight those 61 ZIP codes by the number of filers in each one and then divide that sum by the total number of filers in the region and get that about 3.9 percent of people in the $25,000–$50,000 bucket in Los Angeles have family incomes below 138 percent of the Federal Poverty Level and would thus be eligible for expanded benefits targeted to that threshold.

FIGURE B4

Estimating family size in Los Angeles County



SOURCE: Authors' calculations using IRS tax data from the Brookings Institution, population data from the American Community Survey, and statewide undocumented population estimates from the Center for Migration Studies. Data from 2013.

We can then multiply this share of filers in each income bucket that are eligible by the share of overall filers in each income bucket, and then again by the estimate of that region's total undocumented population to get the number of people that would be eligible for these expanded benefits. See below.

$$C_{ir} = E_{ir} \times P_{ir} \times U_r$$

C = Program-eligible count at income i in region r

E = Program-eligible share at income i in region r

P = Share of filers at income i in region r

U = Undocumented population estimate

Prior to this last step, we make one last adjustment. Due to suppression at the ZIP code level, the regional population shares in each of the income buckets does not add up to 100 percent, instead ranging from 80–98 percent. These counts are inflated by dividing each income bucket share by the sum of all four income bucket shares in order to make the counts add up to 100 percent. For example, if the income bucket shares in a ZIP code added up to 50 percent, we would double all the shares within income buckets—if one income bucket share was 10 percent, then that share would be inflated to 20 percent. This allows us to avoid some undercounting of the total number of people that are program eligible by being able to consider a region's entire population. However, the inflation implicitly assumes that the income bucket counts are suppressed evenly, meaning that a ZIP code is as likely to have a suppressed value in the $0–$25,000 income bucket as the $75,000+ bucket. This is not the case. There are more suppressions at the higher income buckets so while this adjustment does prevent some undercounting, the shares of the population in the lower income buckets is likely to be slightly overstated.

This process allows us to calculate a family's income level in terms of the federal poverty standards. Table B4 below provides our estimates of the share of undocumented families that fall into the different income threshold categories for all insurance regions.

TABLE B4

Undocumented immigrant estimates by insurance region and poverty thresholds

Insurance Region	Undocumented Immigrants	Under 138% FPL	138%–250% FPL	250%–400% FPL	Over 400% FPL
Region 1: Northern counties	35,000	48%	44%	7%	1%
Region 2: North Bay counties	95,500	43%	53%	4%	0%
Region 3: Greater Sacramento	78,500	49%	40%	11%	0%
Region 4: San Francisco County	35,000	47%	39%	8%	5%
Region 5: Contra Costa County	77,500	44%	34%	12%	9%
Region 6: Alameda County	129,500	38%	37%	12%	14%
Region 7: Santa Clara County	183,500	36%	34%	20%	9%
Region 8: San Mateo County	59,500	43%	36%	10%	11%
Region 9: Central Coast–Northern	81,500	56%	36%	9%	0%
Region 10: Central Valley–San Joaquin area	140,500	53%	45%	0%	2%
Region 11: Central Valley–Fresno area	81,000	59%	36%	4%	0%
Region 12: Central Coast–Southern	119,500	51%	40%	6%	3%
Region 13: Eastern Region	17,500	64%	36%	0%	0%
Region 14: Kern County	58,500	59%	33%	8%	0%
Region 15/16: Los Angeles County	814,000	58%	31%	10%	1%
Region 17: Inland Empire	242,000	52%	37%	10%	0%
Region 18: Orange County	247,500	52%	35%	8%	5%
Region 19: San Diego County	170,500	47%	37%	9%	7%
Statewide	2,667,000	51%	36%	9%	3%

SOURCES: Authors' calculations using IRS tax data from the Brookings Institution, population data from the American Community Survey, and statewide undocumented population estimates from the Center for Migration Studies. Data from 2013.

NOTES: Counts are rounded to the nearest 500 and may not add to the statewide total as a result. Regions correspond to the insurance pricing regions used by Covered California, with one exception. Region 15 in the table includes all of Los Angeles County.

Appendix C: Comparing ITIN Estimates of Undocumented Immigrants to Other Sources

As explained above, our estimates of undocumented immigrants derive from administrative data for federal tax returns (ITINs), relying on CMS (2015) estimates of the total population of undocumented immigrants by state. CMS (2015) and other estimates such as Passel and Cohn (2009), Marcelli and Pastor and (2014) and Migration Policy Institute (2015) estimates share a key features of their methodology: imputing unauthorized status. MPI and Marcelli and Pastor estimates use surveys that ask questions about immigrant status and use the characteristics of respondents who indicate that they are undocumented to impute undocumented status to a large population of possible undocumented immigrants in the American Community Survey (ACS). Passel and Cohn and CMS take a different approach to their imputation, using logical edits to eliminate individuals from a pool of potential undocumented immigrants, eliminating for example, respondents who report receiving public benefits for which undocumented immigrants are not eligible. Our methodology does not rely on imputation, instead we use administrative records of all taxes filed with ITINs and regression modeling to proxy for undocumented immigrants. Because these methodologies are different, we present estimates of counts of undocumented immigrants and estimates of poverty status of undocumented immigrants for the health insurance regions in California.

Because ITIN tax filing records are recorded at the zip code level, it is easy for us to aggregate our estimates to almost any unit of geography. Estimates using the ACS are somewhat limited in the ways in which they can report geography. In some cases, one type of estimate will not publicly report results for a health insurance region, and in others, estimates must be allocated across regions. Further, the poverty measure relevant for this paper is 138 percent of FPL, but other estimates include 100 percent FPL and 150 percent FPL. We present each below.

TABLE C1

ITIN and other estimates of undocumented immigrant population

	ITIN Estimates (2013)		*CMS Estimates (2013)		**Marcelli & Pastor Estimates (2008–2012)		MPI Estimates (2009–2013)	
Region Definition	Undocumented immigrants	Share with income below 138% FPL	Undocumented immigrants	Share with income below 100% FPL	Undocumented immigrants	Share of children with income below 150% FPL***	Undocumented immigrants	Share with income below 150% FPL
Region 1: Alpine, Amador, Butte, Calaveras, Colusa, Del Norte, Glenn, Humboldt, Lake, Lassen, Mendocino, Modoc, Nevada, Plumas, Shasta, Sierra, Siskiyou, Sutter, Tehama, Trinity, Tuolumne, Yuba	35,000	48%	27,238	25%				
Region 2: Marin, Napa, Solano, Sonoma	95,500	43%	63,312	22%				
Region 3: Sacramento, Placer, El Dorado, Yolo	78,500	49%	79,921	26%	61,275	68%		
Region 4: San Francisco	35,000	47%	36,475	18%			45,000	22%
Region 5: Contra Costa	77,500	44%	65,048	23%	60,682	53%	66,000	29%
Region 6: Alameda	129,500	38%	101,057	21%	97,706	50%	109,000	23%
Region 7: Santa Clara	183,500	36%	151,016	13%			142,000	21%
Region 8: San Mateo	59,500	43%	50,052	18%			57,000	20%
Region 9: Monterey, San Benito, Santa Cruz	81,500	56%	78,478	25%	54,009	63%	86,000	30%
Region 10: Mariposa, Merced, San Joaquin, Stanislaus, Tulare	140,500	53%	134,358	35%	24,290	72%		
Region 11: Fresno, Kings, Madera	81,000	59%	79,484	34%	76,533	78%	117,000	44%
Region 12: San Luis Obispo, Santa Barbara, Ventura	119,500	51%	107,161	29%				
Region 13: Imperial, Inyo, Mono	17,500	64%	13,966	34%				
Region 14: Kern	58,500	59%	61,510	32%	66,499	69%	75,000	42%
Region 15: Los Angeles	814,000	58%	916,986	30%	908,047	65%	1,062,000	32%
Region 17: Riverside, San Bernardino	242,000	52%	244,925	30%	145,709	59%	296,000	32%
Region 18: Orange	247,500	52%	259,018	30%	243,593	63%	274,000	29%
Region 19: San Diego	170,500	47%	199,201	27%	181,521	58%	205,000	31%
TOTAL	**2,667,000**	**51%**	**2,667,000**	**28%**	**2,709,000**	**62%**	**3,034,000**	**51%**

SOURCES: ITIN estimates are authors' calculations using IRS tax data from the Brookings Institution, population data from the American Community Survey, and statewide undocumented population estimates from the Center for Migration Studies. Data from 2013. Table also uses CMS (2015), Marcelli and Pastor (2014), and MPI (2015).

NOTES: * CMS estimates for regions 1 and 13 required allocating smaller counties across the two regions. **Estimate for Region 3 includes only Sacramento, for region 9 only Monterey, for region 10, only Merced, region 11 only Fresno, and region 17 only Riverside. ***Child poverty for children with at least one undocumented parent.

CMS estimates for 2013 are most similar to our ITIN estimates. Recall that our target for the total undocumented population use CMS 2013 estimates, and the MPI estimates are much higher for the state overall (more than 350,000 immigrants estimated), so we should expect that these estimates would differ. Neither the Marcelli and Pastor nor the MPI estimates cover the same counties as our zip code data or the CMS county groupings. In the case of the Marcelli and Pastor estimates, many areas including Regions 3, 9, 10, 11, and 17 are not comparable because only one county is included.

We find that, in comparison to the CMS estimates, our estimates for undocumented immigrants are higher in the Bay Area counties and lower for some Southern California counties (Los Angeles, Orange, and San Diego). This may be partially because of the dependent spouse of H1-B visa holders who may file with ITINs that we raised above. Or it may reflect a benefit of our methodology. While our poverty measures are different (138 percent FPL versus 100 percent FPL), we find they move in the same direction for each health insurance region. Said another way, where ITIN estimates reveal higher than average poverty levels, so to do the CMS residual estimates. This is also true in comparison to most regions estimated by Marcelli and Pastor and MPI. Despite having very different methodologies and no way to verify the "true" size and characteristics of undocumented immigrants in the state, multiple methodologies come to similar conclusions.

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