

The Real Cost Measure in California 2023

Methodology

The Real Cost Measure is a self-sufficiency measure designed by United Ways of California. Unlike the official poverty measure which does not account for local costs of living, the Real Cost Measure factors in the costs of housing, food, health care, child care, transportation and other basic needs for a more accurate measure of financial security.

In doing so, the Real Cost Measure calculates the minimum amount of income that a household needs to meet only its basic needs in a given community. These needs are only the barest “essentials”—food, housing, health care, transportation—and does not include long-term concerns such as making major purchases, saving for college, or preparing for retirement. Many items that many people consider necessities, such as Internet access, are not used to calculate these standards (beyond a small allowance made for miscellaneous expenses). This basic needs budget approach is intuitive and easy for most people to understand, as it is grounded in a household budget composed of things all families must address such as food, housing, transportation, child care, out-of-pocket health expenses, and taxes. A basic needs budget approach also takes into account different costs of living in different communities and conveys a better sense of the hardship for families because it invokes the notion of tradeoffs between competing needs—if you have an inadequate level of income, do you sacrifice on food, gas, or child care?

An assessment of whether households can reach the Real Cost Measure is based on their self-reported income, which includes earned income as well as public assistance programs families may be eligible for, such as CalWorks (California’s brand for the federal Temporary Assistance for Need Families program). The Earned Income Tax Credit (EITC) is not included, nor is any income from private assistance (such as a gift from a relative).

The Real Cost Measure in California 2023 is a successor to four previous Real Cost Measure studies: *Struggling to Get By: The Real Cost Measure in California 2015*, *Struggling to Stay Afloat: The Real Cost Measure in California 2018* and *Struggling to Stay Afloat: The Real Cost Measure in California 2019*. The findings from this study includes all the features from previous Real Cost Measure releases—including an Executive Summary, an interactive dashboard (the Real Cost Measure Dashboard), an interactive household budgets calculator, interactive maps, one-page region profiles, one-page county profiles, and a public data set.

Prior to the Real Cost Measure, United Ways of California supported *Overlooked and Undercounted 2009*, which was produced in partnership with United Way of the Bay Area and several California United Ways. Overall, it is our goal to create a robust tool which:

- Speaks to the financial challenges of low-income children and families throughout California;
- Is consistent with United Way’s community impact work on health, education and financial stability;
- Addresses considerations by our advisory committee regarding specific costs of living and taxation;
- Can be updated regularly with minimal effort and readily replicated by partner United Ways across the

country and;

- Provides dynamic, engaging online content

The Real Cost Measure has evolved since our 2018 release and addresses the reality that the lowest cost food budget (The Thrifty Food Plan) was insufficient for California households. Since that time, the Real Cost Measure now incorporates the Low-Cost Food Plan by the U.S. Department of Agriculture and has incorporated payroll taxes to better reflect realities of working households. United Ways of California partners with Benefit Kitchen to produce our household budgets, and leverages some technical efficiencies to produce a more comprehensive view of budgets. *Overlooked and Undercounted 2009* applied the Self-Sufficiency Standard, with data analysis by Dr. Diana Pearce from the Center for Women’s Welfare at the University of Washington, who founded that standard. Both models apply a basic needs budget approach, share many similarities and yield comparable results. The Real Cost Measure focuses on a similarly constrained set of budget choices than the Self-Sufficiency Standard. We chose to build on the Real Cost model in this report for several reasons, including a focus on a streamlined set of households and greater ease in producing re-producing the report regularly over the next several years.

Study	Date Released	Primary Data Source
<i>Overlooked and Undercounted: Struggling to Make Ends Meet in California 2009</i>	December 2009	2007 American Community Survey Population Estimates (does not include seniors)
<i>Struggling to Get By: The Real Cost Measure in California 2015</i>	July 2015	2011-2013 American Community Survey Public Use Micro data
<i>Struggling to Stay Afloat: The Real Cost Measure in California 2018</i>	June 2018	2014, 2015 and 2016-American Community Survey Public Use Microdata files
<i>Struggling to Stay Afloat: The Real Cost Measure in California 2019</i>	June 2019	2017 American Community Survey Public Use Microdata files (with updated single-year estimates from 2014-2016)
<i>Struggling to Move Up: The Real Cost Measure in California 2021</i>	July 2021	2019 American Community Survey Public Use Microdata files (with updated single-year estimates from 2014-2018)
<i>The Real Cost Measure in California 2023</i>	June 2023	2021 American Community Survey Public Use Microdata files (with updated single-year estimates from 2014-2019). Please note that 2020 single-year estimates are not included due to COVID-19 pandemic interruptions.

The Real Cost Measure Focuses on Households

The Real Cost Measure focuses on households, not individuals, with personal data based on the “head of household” according to the tax returns filed with the Internal Revenue Service. This means that our primary finding that 34% of California households fall below the Real Cost Measure does not mean that 34% of all Californians fall below the Real Cost Measure. Similarly, our finding that 51% of Latino households fall below the measure does not refer to all Latinos, but rather the heads of households themselves. One implication of this is that if a household consists of two adults of different ethnicities,

educational levels, or ages (for example), only the characteristic of the head of household would be measured. One should therefore not use these numbers as a perfect proxy for all California residents.

By focusing on working households, the Real Cost Measure excludes households led by seniors and persons led by households with disabilities in its calculations. This means that our calculations, such as the official poverty measure and median household earnings reflect that reality.

The Real Cost Approach

Be Simple and Be Comprehensive

One primary goal of this methodology is to create a simple approach that would encompass the most variations in family household, allowing for sensitivity to the high costs of the youngest children which decrease as they become school age and experience less care.

Geography

The Real Cost Measure utilizes various levels of geography, including the calculation of county-level data for household budgets regarding expenses—food, housing, etc.—which is then used to build budgets based on household type for residents in those counties. Using this county-specific data enables substantially more accuracy than statewide averages, especially given California’s diversity of local economies. When county-specific information is unavailable, information from larger geographical areas (a grouping of counties corresponding to census delineations) is used and then adjusted using cost-of-living information for the county in question. This grouping of counties can also be referred to as “county clusters.”

The Real Cost Measure also utilizes public use microdata areas (PUMAs) for demographic analyses. PUMAs are contiguous neighborhood clusters consisting of 100,000 – 200,000 people and are defined at the conclusion of every decennial census. There are currently 265 neighborhood clusters in California as calculated at the conclusion of the 2010 Census. The adoption of public use microdata areas offers us the ability to examine what the Real Cost Measure looks like across and within counties and are generally more statistically reliable than counties and census tracts. (The U.S. Census Bureau has yet to publicly release household demographic data that aligns with newly released PUMAs from the 2020 decennial census as of this writing).

Of California’s 58 counties, 31 have one or many neighborhood clusters within their county boundaries and can be treated as geographically distinct. Twenty-four counties are aggregated within 7 different PUMAs, and weighted average budgets are used to analyze those populations. Budgets are weighted based on population size.

Family Composition

The Real Cost Measure household compositions reflect a wide variety by utilizing the total number of persons in a household, the total adults and total children. The following represents the household compositions used, and represents all household types in California:

Number in Household	1 Person	2 Persons	3 Persons	4 Persons... and so on
Composition	1 Adult	2 Adults	3 Adults	4 Adults
		1 Adult, 1 Child	2 Adults, 1 Child	3 Adults, 1 Child
			1 Adult, 2 Children	2 Adults, 2 Children
				1 Adult, 3 Children

The budgets are based on the numbers of adults and children in each household, and in the following section, we explain how adjustments made for the age of the children present. The Real Cost Measure uses individual budgets for households of all configurations (combinations of adults and children); including senior-led households as defined by the Elder Index, this reflects approximately 1,200 household configurations.

Leverage the Best Data Available

We focus on standardized data from scholarly or credible sources, which are updated regularly, are geographic and age-specific as appropriate, and have the potential to be leveraged by additional states.

Elder Index

Because seniors have different budgetary needs and income patterns (for example, they are more likely to have savings but less likely to have earned income than working-age adults), the Real Cost Measure adopts the Elder Economic Security Standard Index (Elder Index) to measure the economic well-being of senior-led households. Researchers at the UCLA Center for Health Policy Research and the Insight Center for Community Economic Development have refined Elder Index for use in California, including county-level data.

As with Real Cost Measure, the Elder Index calculates budgets for heads of households (in this case, a single or couple, renter or homeowner) to determine the amount of annual income needed to meet a standard for economic security. The Elder Index is also calculated for each of California’s counties, and is [available online](#).

Real Cost Budgets: Methodology, Assumptions and Sources

A primary objective of the Real Cost Measure is to be consistent, accurate and precise. One corollary of this is to avoid “false precision.” The construction of the household budgets require scores of methodological choices. While attempting to be as accurate as possible, the authors recognize that there are places where the data does not support precise estimates of costs. The authors have striven in this report not to make unwarranted assumptions in the name of divining perfect budgetary estimates.

General Notes

United Ways of California calculated household budgets to reflect annual basic needs for households at the county level. Using a variety of institutional and validated data sources, such as Fair Market Rents by the U.S. Department of Urban Development and Consumer Expenditure Survey data by the Bureau of Labor Statistics, the Real Cost Budget calculations include the most basic budget components on which a household could meet living expenses. As the base year for the demographic analysis is 2021 (the most recent available as of the release of *The Real Cost Measure in California 2023*, all costs are based on 2021

values or adjusted accordingly.

The Real Cost Measure calculates approximately 1,200 household budgets, which are determined by the number of adults and the number of children (17 and under) in the household. All adults in one- and two-adult households are assumed to work full-time, which affects calculation of transportation and health costs. If more than two adults are in the household, the additional adults are assumed not to be working and not incur worker-related expenses, but incur other expenses like food.

Assumptions about Households

The unit of analysis for Real Cost Measure and Elder Index is a household. A household is not presumed to be a family, but are presumed to be expense sharing. Familial relationships are not considered in applying a budget, only the age of the individual in the house for considering if that individual should be considered as an adult (18+) or a child (17 and under).

The number of working adults has effects in many portions of the budget, beyond the amount of income household members are earning and the taxes (and credit) to which that household is subject. The level of several expenses (such as transportation and child care) are affected by whether (and how many) adults need to commute to work and whether the household has adults available to provide child care.

Cost Component of Real Cost Measure Budgets

The housing budget is based on Housing and Urban Development's Fair Market Rent for each calendar year, which is provided at a county level. The Fair Mark Rent is the 40th percentile of gross rents. The rent includes the sum of the rent paid to the owner plus any utility costs incurred by the tenant. Utilities include electricity, gas, water/ sewer, and trash removal services, but not telephone service. If the owner pays for all utilities, then the gross rent equals the rent paid to the owner.

The assignment of number of bedrooms is based on the following assumptions:

- a single adult will live in an efficiency unit (adults and children),
- a bedroom may have one or two adults, and
- a bedroom may have one or two children.

Child Care

The child care budget is based on the average annual cost of care for a child in Registered Family Child Care Homes (the least expensive child care option). Data was compiled from the Reimbursement Ceiling for Subsidized Child Care provided by the California Department of Education and is [available online](#). For The Real Cost Measure in California, a hybrid approach was adopted from 2022 and 2018 reimbursement rates to calculate 2021 child care cost estimates. More specifically, seventy-five percent of the 2022 reimbursement rates were applied in our estimates, and twenty-five percent of 2018 reimbursement rates were applied. So if child care cost \$1,000 in 2022, and \$800 in 2018, the "chronologically weighted" 2021 number would be \$950 ($\$750 + \200).

Child care reimbursement rates effective January 1, 2022 are available online and were the effective rates for 2018. For prior years, we use rates that were in effect during that census year.

The cost basis for care is determined as follows:

- Full-time, year-round rates are used for infants and toddlers
- Nine months of part-time care (during the school year) and three months of full-time care (summer vacation and other holidays) are assumed for school-age children
- No child care costs are assumed for teenagers

Ages of children are considered as follows:

- Infant: up to 1 year
- Toddler: ages from 1 up to 4 years old
- School Age: from 5 up to and including 12
- Teenager: from 13 up to and including 17

Food

Since 2018, our household budgets adopted the low-cost food plan from among the four plans designed by the United States Department of Agriculture (USDA) to ensure that people can acquire a sufficiently nutritious diet. The Low-Cost food plan, as compared to the less-sustainable Thrifty food plan used in the 2015 study, represents the second quartile of food expenditures according to a survey of consumption patterns and eating habit conducted by the USDA. In other words, the spending of people in the lowest 25%-50% in the survey.

The food budget uses June data from each year, and varies by the age of the child, or if the household member is an adult. All household members are assumed to be male, in order to allow for the maximum potential cost. Additionally, we allow for economies of scale as specified by USDA guidelines – costs are increased by a percentage when there are fewer than four members of the household, and increased when there are more.

As the USDA Food Plans are national figures, the Real Cost Measure utilizes the Grocery Index from the Cost of Living Index published by the Council for Community and Economic Research to adjust figures to a county level. After receiving counsel from our advisory committee, the Real Cost Measure differentiates food cost estimates for young children from those of older children. We believe this refinement better captures the variation in costs as children grow up in the household.

Transportation

The transportation budget is calculated using average annual expenditures for transportation by car and by public transportation from the Bureau of Labor Statistics' annual Consumer Expenditure Survey (CES) National estimates. Private transportation expenses include gas and other vehicle maintenance expenses, but not lease/car loan payments, or major repairs.

The total annual costs of transportation, less outlays and public transportation is divided by the average earners in the household to give an average per-earner transportation cost. The Real Cost Measure uses this national transportation estimate and adjusts it using the Transportation Index from the Cost of Living Index published by the Council for Community and Economic Research to adjust figures to a county level.

The Real Cost Measure model does not assume that areas with high public transportation use (more than 8% of the population) translates to a budget that reflects low- and moderate-income workers to commute

by public transit. Based on two key points, the Real Cost Measure uses private transportation costs for all Californians.

- The difference based on presumed transit patterns shows a negligible difference between the CES private transportation cost estimate and the probable commute cost from a given county. In using public transit estimates, the Real Cost Measure (as well as Self Sufficiency Standard) presume a one-county or one-transit system fare. Based on analysis of census data done by the Association of Bay Area Governments, approximately half of Bay Area workers commute across county lines. Utilizing the 511.org Trip Planner, and adjusting for monthly pass purchases, we concluded that the public transportation costs are higher than other studies assume—and approach the costs of private transportation.

County	2017 Public Transportation (CES Expenditures adjusted by COLI)	2017 Public Transit (within county)*	2017 Public transit (local + inter-county BART + parking, and adding 2 nd local transit)*
Alameda	\$445	\$81	\$401 up to \$476
Contra Costa	\$438	\$60	\$412 up to 493
San Francisco	\$439	\$75	\$353 up to \$434

* Fares calculated using web.archive.org from May 2017 for AC Transit, actransit.org, Contra Costs County Connection <https://countyconnection.com>, and SF Muni sfmta.gov looking at 31-day adult local only passes. Cross county commutes were calculated using 2017 BART fare tables from bart.gov; Alameda: Hayward to Powell/SF; Contra Costa: Concord to Powell/SF; SF: Glen Park to 12th St. Oakland. Monthly fare costs is assumed two rides per day, 5 days per week, 4 weeks per month = 40 rides per month. Parking in 2017 at Hayward and Concord was \$3/day.

- The Brookings Institute released a study in 2014 that demonstrated that low income individuals are most likely to commute in private car.³ While the report does not indicate that the individual necessarily owns the car, it specifically addresses the Bay Area and the high likelihood that a low-income Bay Area individual with income inadequacy will take private transportation to work.

Health Care

Health care costs were derived using national Consumer Expenditure Survey. We divided the household cost established by the CES by average household size and used that to approximate a per-person cost for health care. We then adjusted this per-person cost by the Health Index of the Cost of Living Index published by the Council for Community and Economic Research and tailored them to the county level. All individuals in a county, regardless of age under 65, were assigned the same cost of health care.

The following expenditures were used to derive overall health care costs:

- **Health insurance**—includes traditional fee-for-service health plans, preferred-provider health plans, health maintenance organizations (HMO’s), commercial Medicare supplements, and other healthinsurance

- **Medical services**—includes hospital room and services, physicians’ services, service by a professional other than a physician, eye and dental care, lab tests and X-rays, medical care in a retirement community, care in convalescent or nursing home, and other medical care services
- **Drugs**—includes vitamins, nonprescription drugs, and prescription drugs
- **Medical supplies**—includes topicals and dressings, antiseptics, bandages, cotton, first aid kits, contraceptives, syringes, ice bags, thermometers, sun lamps, vaporizers, heating pads, medical appliances (such as braces, canes, crutches, walkers, eyeglasses, and hearing aids), and rental and repair of medical equipment

In 2018, we considered using the Medical Expenditure Panel Survey (MEPS) and reviewed the comparative cost points to determine if it would be more appropriate for RCM. However, for the reasons cited below, we decided to continue with using the Consumer Expenditure Survey approach.

- The Consumer Expenditure Survey is neutral to source of health insurance. MEPS would have focused only on employer-provided insurance costs, whereas our census analysis indicated that households below RCM are likely to have blended forms of care.
- Also comparing with unsubsidized Covered California Premium costs, which were the highest of costs we compared, the Consumer Expenditure survey, on the face of it, was the middle ground of healthcare costs.

Miscellaneous

To allow for additional expenses not defined in the narrow categories above, the budget includes 10% of the subtotal of all other budget items. In the Real Cost Measure, this amount is added before tax burden is calculated.

Taxes

Taxes are calculated per Internal Revenue Service and California State tax regulations. Single adults are calculated according to individual filers, and all multiple-adult households (regardless of family status) are calculated as joint filers. Although the inclusion of non-married households results in some non-family/non-dependent filers being treated as joint filers, we anticipate the impact to the overall prevalence of households struggling is minimal.

For this public data release, we include payroll taxes as appropriate for state/federal calculations.

Included in the tax calculation are, as appropriate, Child Care and Child Tax Credits. However, Earned Income Tax Credit (EITC) is not included. As the aim of the Real Cost Measure is to present a budget measure at which a household would not qualify for public aid, very few Real Cost Measure household budgets would “qualify” for EITC. Rather than ignore the impact of EITC, we attempted to estimate the monetary impact EITC is likely to have (assuming that EITC is not included in income reported to the ACS).

The income of a household is presumed to exclude EITC, an assumption that is consistent with IRS and PPIC analysis of data. For analysis of impact of EITC, it is done using the adjusted household income figures and calculated according to IRS rules.

Cost of Living Adjustments

The Real Cost Measure utilizes three national-level figures, and adjusts those to a county level by using the 2021 Cost of Living Index (COLI) from the Community Council for Economic Research (C2ER). The county level file was produced for United Ways of California in 2022.

The COLI has specific and different indexes for several areas, and this report specifically uses the Grocery, Transportation and Healthcare Index values.

Demographic Analysis

Single Year Estimates

The Real Cost Measure uses single year Public Use Micro Area files from the American Community Survey for demographic analysis. Files are released in the fall of each year for the prior year (e.g. 2021 data was released in the fall of 2022).

Design Factors and Confidence Intervals

The recommended approach to determining confidence intervals is a design factor approach. Based on analysis comparing many of the cross-tabulations using this method, cell sizes greater than 5,000 produced a confidence interval within +/- 1% of the value. Confidence intervals greater than this will be noted in the text, and/or cell sizes suppressed.

Excluded Household Types

This report excludes all group quarters, as well as households led by an individual with a disability. The research team made the following assumptions in conducting the analysis in 2015 and has not updated this analysis.

- The data analysis assumes that all members of household (ACS sample unit) share expenses.
- A “family” budget is actually a household budget, and any adults living in the household are assumed to contribute to shared household expenses; all children are assumed dependent on the adults.
- All income in the household is considered when determining if a household is above or below the Measure, including income from children under 18.
- For the purposes of tax calculations, households are treated as a single tax entity. In previous analysis, we calculated that 4.5% of households have sub-families, though that rate is slightly higher for households below the Real Cost Measure at 7% (and 12-13% for households led by a single man or woman).
- Based on the building budgets and matching households to budgets, the demographic analysis captures 93% of non-group quarters and non-disabled households.

Households	Total Households	% of CA Households
Majority of Households* head of household is a non- senior, not disabled	9,143,134	68%
Senior Head of Household is Person without a Disability*	2,321,512	17%
Non-Senior Head of Household is Person with a Disability	903,265	7%
Senior Head of Household is Person with a Disability	1,061,160	8%
Head of Household is Under 18	2,858	0%
Total	13,431,729	100%

* Household types analyzed in this report, see Elder Index section for households included.

PUMA to County Conversion

All PUMA boundaries utilize the 2010 census and were mapped accordingly.

Additional Variables Created

The researchers created numerous variables that can be provided in a data dictionary to assist with analyzing the data.

Households Led by People with Disabilities

United Ways of California thought deeply about inclusion of persons with a disability in the state whose households number over 850,000, approximately 7% of households in California. The number of working-age Californians with a disability is even higher, roughly 2.8 million according to a recent California Employment Development Department report, nearly 10% of the population. *

Ultimately, we concluded that the Real Cost Measure, the Elder Index or some combination of them could not adequately capture the income needs of a household led by a person with a disability. Two key assumptions behind the Real Cost Budget are that the first two adults in the household (1) are working full-time and (2) have private health care coverage and costs. According to our demographic analysis, approximately 24% of heads of household with a disability participate in the labor force (regardless of actual employment status). Even for those that do participate in the labor force, persons with a disability are far more likely to work part-time than a non-disabled person. For households led by seniors, the key assumptions behind the Elder Index include only addressing household types with one or two adults and without children, and where the primary health insurance is government provided (Medicare).

Empirically, we know that these households led by a person with a disability are difficult to describe with these two tools— they may receive government provided health-insurance, and also have children and fully participate in the labor force. The two available budgets do not provide a reasonable framework for such a household. After a detailed analysis of households led by a person with a disability and attempting to align relevant households, we concluded our budget assumptions would at best describe less than 50% of households led by a person with a disability, and with a low degree of confidence that the assumptions were appropriate for those households. Hence, for this iteration of our methodology, we did not include households led by a person with a disability.

United Way of California does acknowledge the challenges of households led by persons with disabilities and supports the work of organizations that work to promote their economic security. From our analysis we know that among non-senior households led by a person with a disability:

- 38% are married couple households, but over 38% are in non-family household arrangements (versus 52% and 27% for non-disabled/non-senior led households);
- 37% obtain health coverage through government health care versus approximately 9%;
- Approximately one third have difficulty living independently;
- Three-quarters (75%) are over age 45;
- Only 20% have a college degree, versus 42% among non-disabled/non-senior led households;
- People with disabilities report CalFresh (SNAP) assistance at a much higher rate (21% versus 9%); and
- Over 11% currently serve or have served in the military (versus 6%).

The Real Cost Measure does include households that have persons with disabilities, it only excludes those where the head of household is disabled. Those with disabilities living in households captured by our methodology number over one million, and over 457,000 of these persons live in the 392,111 households that include persons with disabilities that struggle with income below the Real Cost Measure. The rate of income inadequacy among these households is 41%, versus 34% for households that do not have a person with a disability (and versus the 34% rate overall). In half of these households, the 2nd person in the household, anticipated be the wage earner, is a person with a disability.

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- 1 To further our analysis of the Self-Sufficiency Standard in Overlooked and Undercounted 2009, the authors of the report ran Self-Sufficiency estimates for 2012 using one-year American Community Survey population estimates. Our analysis concluded 37% of households faced income inadequacy in 2012 using the same methodological method.
 - 2 A study by the University of California's Institute of Urban and Regional Development found that approximately 30% of such workers would use public transportation in areas in which 7% of the overall population used public transportation. The Real Cost Measure uses the same methodology of the Self-Sufficiency Standard, assuming public transpiration costs for those living in counties in which greater than 7% of the population commutes by public transit. According to the American Community Survey, five California Counties—Alameda (11.4%), Contra Costa (8.9%), Marin (8.5%), San Francisco (32.7%), and San Mateo (8.3%)—met that description.
 - 3 Robert Puentes and Roberto, Elizabeth. Commuting to Opportunity: The Working Poor and Commuting in the United States. The Brookings Institution. <http://brook.gs/1As9jP0>. Accessed May 26, 2015.
 - 4 Summary of Changes to the PUMA Criteria and Guidelines from 2000 to 2010. United States Census Bureau. <http://1.usa.gov/1F92tcy>. Accessed May 26, 2015.
 - 5 Disabled Persons in California's Labor Force. Employment Development Department. State of California. <http://bit.ly/1Hxtxnd>. Accessed May 27, 2015.