

## “Estimating the impact of California’s \$20 fast-food minimum wage on Medi-Cal eligibility”

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We use the American Community Survey (ACS) 2019-2023 (pooled one-year samples) microdata obtained from IPUMS (Ruggles et al. 2024) to estimate the number of front-line fast-food workers enrolled in Medi-Cal who might no longer be eligible due to an increase in the minimum wage to \$20 an hour. This methodological appendix describes the detailed steps we took to arrive at our estimates in our brief [“Estimating the impact of California’s \\$20 fast-food minimum wage on Medi-Cal eligibility.”](#)

### Identifying the front-line fast-food workforce

We identify front-line fast-food workers as those employed in the Restaurants and Other Eating Places Industry (NAICS Industry Code 7225) and working as Fast Food and Counter Workers (OCC Code 4055) or Cashiers (OCC Code 4720). The Restaurants and Other Eating Places Industry includes both limited- and full-service restaurants. Data on limited-service restaurants (NAICS Code 722513) is not available in the ACS. For this reason we do not include cooks in our analysis as we cannot determine if workers were employed in limited- or full-service restaurants. We also restrict our analysis to fast-food workers between the ages of 18 to 64, who were employed or had a job, worked for wages (were not self-employed or an unpaid family member), had non-zero earnings, did not live in institutional group quarters, and were employed at least half the year (27 weeks) and usually worked at least 10 hours per week. These restrictions help to ensure the sample reflects workers who were enrolled in Medi-Cal due to low wages and not marginally attached to the labor force (Allegretto et al. 2013).

The ACS underestimates the front-line fast-food workforce compared to estimates from the Occupational Employment and Wage Statistics (BLS OEWS 2023). To address this undercount we adjust the ACS data by benchmarking to 2023 OEWS data for “Cooks, Fast Food” (SOC Code 35-2011) and “Fast Food and Counter Workers” (SOC Code 35-3023) in the “Restaurants and Other Eating Places” industry. Our benchmarking methodology adjusts the OEWS count to more closely resemble the universe in the ACS by adjusting for differences in reference points (i.e., the OEWS is a semi-annual survey while the ACS surveys respondents through the year) and our sample restrictions (e.g., OEWS reflects all full-time and part-time workers while our sample is restricted to those employed at least half the year and at least 10 hours per week). Before benchmarking the weighted ACS sample size for front-line fast-food workers was 296,342; after benchmarking the weighted sample size is 569,367. Finally, our sample restrictions (see above) give us a final weighted count of 338,803 fast-food workers.

## Estimations are based on the health insurance unit

Our analysis adjusts front-line fast-food workers' wages to the equivalent of \$20 an hour in each year of the ACS (2019-2023). Adjusting workers' wages to \$20 increases their overall individual earnings, and resultantly, their total family income. In order to estimate the number of workers who would no longer be eligible for Medi-Cal, we need to first calculate where workers would fall on the Federal Poverty Level after their family income increased. The way nationally representative surveys define "family" differs from how it is defined for health insurance eligibility purposes, which can lead to very different estimates of family sizes, Federal Poverty Level, and eligibility (Alarcon et al. 2021). Families in the ACS are defined as all those who are related to the household head by blood, marriage, or adoption and are residing in the same household (called "own family members"). A health insurance unit (HIU) "family" is a stricter definition; it includes family members related to the household head but excludes non-dependent relatives (such as aunts/uncles, grandparents, and adult siblings) whose income is unlikely to be included in consideration for eligibility for Medi-Cal or other public programs (Alarcon et al. 2021). This distinction matters for evaluating fast-food workers' eligibility for Medi-Cal. For example, using the ACS definition of family, the data show that 71.7% of fast-food workers live in extended families of three or more relatives. However, for health insurance eligibility purposes, 72.5% of fast-food workers are in a health insurance unit family size of one and only their own income should be considered for Medi-Cal eligibility. For this reason, we calculate workers' new Federal Poverty Level (based on the \$20 minimum wage simulation) referencing SHADAC's health insurance unit information, which is available for the ACS in IPUMS. At the time of our analysis health insurance unit information was only available for the 2019-2022 ACS. For 2023 ACS data, we manually created health insurance unit variables using SHADAC's publicly available code (SHADAC 2021).

## \$20 wage simulation and determining Medi-Cal eligibility

The ACS provides information about workers' annual earnings but not hourly wages. We construct an hourly wage measure by dividing workers' annual earnings by the product of their usual hours worked per week and weeks worked last year. The ACS annual earnings variable includes wages, salary, commissions, and cash bonuses or tips from all jobs, before tax deductions. We trimmed hourly wage outliers by dropping wages less than \$0.50 or greater than \$100 in 1989 dollars (EPI 2019). We then smoothed the hourly wages with a function that randomly adds or subtracts between \$0.00 and \$0.25 to each hourly wage.

We simulated a minimum wage increase to \$20 an hour using ACS data from 2019-2023. We deflated \$20 to its equivalent value using the CPI-W US (to mirror AB 1228 legislation). Anyone making an hourly wage less than the equivalent of \$20 an hour was bumped up to the new wage. We also estimated spillover effects by assigning anyone who made less than \$3 above the new minimum wage a quarter of the difference between their original wage and the new wage (Cengiz et al. 2019). We assume that workers' wages increased but did not change workers' usual number of hours worked per week or the total number of weeks worked in a year. We calculated the amount of workers' individual earnings and total family income would increase as a result of the higher wage (using health insurance family units).

We then calculated where workers' health insurance unit total family income would fall relative to Federal Poverty Levels. Workers earning less than 138% FPL were assigned as eligible for Medi-Cal. We only estimate individual fast-food workers' eligibility for Medi-Cal and not that of their families. Children are eligible for Medi-Cal at 266% FPL (Covered California 2025) and 14.2% of fast-food workers in our sample have children under the age of 18.

## Estimating the count of workers enrolled in Medi-Cal losing eligibility

Our analysis focuses on how eligibility might change for workers enrolled in Medi-Cal. For several reasons, the total number of fast-food workers enrolled in Medi-Cal is uncertain. First, nationally representative surveys consistently underestimate the number of people enrolled in Medicaid relative to administrative program data, and the undercount appears to have increased during the pandemic (Hest 2021; McIntyre, Smith and Sommers 2024). Second, there are some workers who state they are enrolled in Medi-Cal yet have family income higher than 138% FPL. One reason this can occur is because the individual was eligible at the time they enrolled in Medi-Cal but later saw an increase in their income that was captured during the time they were surveyed. Additionally, during the time period of our study, redeterminations from Medi-Cal were paused due to the Covid-19 pandemic until April 2023, leading to an increase in enrollment in Medi-Cal (McConville and Mustala 2024). It's possible that workers in our sample were still enrolled in Medi-Cal even if their income was above 138% FPL due to the continuous coverage requirement.<sup>1</sup> However, research during this period suggests that the Medi-Cal undercount in the ACS is still large (Hest 2021; McIntyre, Smith and Sommers 2024).

We address the Medicaid undercount in the ACS by increasing our enrollment estimates by 18%. We arrived at 18% by dividing the number of individuals with full scope Medicaid coverage in California according to administrative data (11.69 million) by the number of people reporting Medicaid enrollment in the ACS (9.93 million) as of December 2019. We selected this month as a reference point because it was before the Covid-19 pandemic and Medi-Cal continuous coverage period and may represent a more typical, if not conservative, undercount.

To address the potential uncertainty in the total count of fast-food workers enrolled in Medi-Cal, the share losing eligibility due to higher earnings with a \$20 minimum wage, and the associated reduction in state spending, we provide both low-end and high-end estimates. We first provide estimates based on the number of workers who said they were *enrolled* in Medi-Cal and who would lose eligibility (whether or not their FPL was below 138% at time they were surveyed). This is our *enrolled group*. We then provide estimates based on the number of workers who would lose eligibility and who were both enrolled and had family health insurance unit (HIU) income below 138% FPL. This is our *restrictive group*.

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<sup>1</sup> The share of fast-food workers enrolled varied between a low of 29.6% in 2020 to a high of 33.9% in 2022. And the share of workers whose income was above 138% FPL and stated they were enrolled in Medi-Cal varied from a low of 25.2% in 2020 to a high of 31.3% in 2023.

## High-end estimate

1. The number of fast-food workers *enrolled* in Medi-Cal
2. Multiplied by the share of workers enrolled in Medi-Cal who had HIU income below 138% FPL (i.e., the share of the *restrictive group*) that would lose eligibility after the simulated wage adjustments.

## Low-end estimate

1. The number of fast-food workers in the *restrictive group* (i.e., those who were both enrolled and had HIU income below 138% FPL at the time of the survey)
2. Multiplied by the share of workers enrolled in Medi-Cal who had HIU income below 138% FPL (i.e., the share of the *restrictive group*) that would lose eligibility after the simulated wage adjustments.

## Estimating reductions in federal and state spending

To account for the uncertainty in how the wage increase might affect reductions in Medi-Cal spending, we also calculated both high-end and low-end estimates. We rely on two cost rates that represent the average annual cost per enrollee for two aid groups (DHCS 2024). The state of California's share of the total Medi-Cal cost varies depending on the aid group. The Newly Eligible aid group includes childless adults with income at or below 138% FPL and parents with income between 107%-138% FPL. This group's cost rate is \$7,709 per enrollee and the state's portion of the total cost is 10%. The AFDC-MN (Aid to Families with Dependent Children – Medically Needy) aid group includes parents that are not in the Newly Eligible aid group. The aid groups' cost rate is \$4,560 per enrollee and the state's cost is 50%. We assume that 89% of affected fast-food workers are in the Newly Eligible group based on the percentage of fast-food workers who do not have minor children living at home or parents with income between 107-138% FPL, as indicated by the ACS data.

## High-end estimate

1. We calculated the share of fast-food workers from the *restrictive group* who were parents with incomes below 107% of FPL and who would lose eligibility after the simulated wage increase (the share was 11.05%).
2. This share was multiplied by the high-end estimate of workers losing eligibility and the AFDC-MN cost rate.
3. We then calculated the share of all other fast-food workers who were not parents or were parents who did not have HIU income below 107% FPL and who would lose eligibility as a result of the simulated wage increase (the share was 88.95%).
4. This share was multiplied by the high-end estimate and the Newly Eligible group cost rate.
5. These two figures were summed to produce the total estimated reduction in spending from federal and state funds.
6. We calculate the state's share in spending—50% for the AFDC-MN aid group and 10% for the Newly Eligible aid group.

## Low-end estimate

The low-end estimate follows the same methodology but uses the low-end estimated count of enrolled fast-food workers losing eligibility.

## Limitations

This methodology assumes that employment patterns and hours worked remain constant after the simulated wage increase. It does not account for potential changes in employment levels or hours that might result from higher labor costs, although early research suggests that employment levels and hours have not changed much since the implementation of AB 1228 (Reich and Sosinskiy 2024; Schneider, Harknett, and Bruey 2024). Additionally, the spillover effects model is a simplification and may not capture the full complexity of wage adjustments in the labor market. Our method to address the undercount in Medi-Cal enrollment is a simplification and more research is needed to understand how underreporting might vary by demographic characteristics. Furthermore, the use of OEWS weights to adjust ACS data introduces an additional layer of estimation uncertainty, which should be considered when interpreting these results.

In addition to the limitations mentioned earlier, it's important to note several caveats for the Medi-Cal spending reduction analysis. The cost rates used are averages and may not completely reflect the actual costs for specific individuals or subgroups within the fast-food worker population. Individuals losing Medi-Cal eligibility may incur additional financial costs from switching to employer-sponsored insurance (ESI) plans or Covered California. We provide two scenarios to estimate these new expenses, but these costs will vary depending on the availability of affordable health insurance plans including out-of-pocket costs. Our analysis does not consider the potential health impacts or changes in healthcare utilization patterns that might result from changes in insurance status. Some workers losing Medi-Cal eligibility may experience a gap in coverage or forgo obtaining health insurance altogether because of the cost. Finally, our estimates and analysis do not include consideration of increases in other public expenditures (i.e., ACA subsidies) that might offset some of the reduction in federal Medi-Cal spending.

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