

## **The Cost of Living in Iowa 2022**

### **Appendix: Data Sources and Methodology**

The eighth edition of The Cost of Living in Iowa focuses on basic family budgets for 10 family types, and the living wage for each family type: the hourly wage that would provide after-tax income sufficient to meet basic needs for a full-time worker. The basic family budgets are based on the state average costs for food, housing, transportation, child care, health care and household expenses. The share of Iowa families with incomes too low to cover a basic budget is also estimated, and the role of tax credits and work support programs in bridging the gap between wages and basic budgets is illustrated. Detailed family budgets for the 10 families in each of Iowa's 99 counties, based on county-level cost data, are available on the Common Good Iowa website.

The only change from the previous edition, released in 2019, is that child care costs now are based on the state or county average cost of care in a licensed child care center, instead of a registered home. That reflects the fact that a large majority of Iowa children in care attend in centers.

Here we provide a description of the data and sources for the basic family budgets, explain how we arrived at the family supporting wage, describe the operation of the tax credits and work supports, and explain how we estimated the proportion of families with income below self-sufficiency.

#### **Basic Needs Budgets**

The basic-needs budgets constructed for this report represent a very frugal living standard. Using costs as of 2021 (with the exception of health insurance, which is based on 2022 premiums), the budgets are based on what is needed to "survive" rather than "thrive." This includes allowances for rent, utilities, food prepared at home, child care, health care, transportation, clothing and other household necessities. The basic budget does not include savings, loan payments, education expenses, any entertainment or vacation, social or recreational travel, or meals outside the home.

Each basic family budget applies to a particular family type — given the number of family members, the ages of the children, and the employment status and ages of the adults. This report focuses on non-senior Iowa households with at least one adult working full time. Basic needs budgets are created for all 99 counties, as well as an average budget for the state.

#### **▶ Food**

The U.S. Department of Agriculture (USDA) provides monthly estimates of the average cost of four different food plans: Thrifty, Low-Cost, Moderate-cost and Liberal. Because studies have shown it is

almost impossible for low-income families to follow the Thrifty Food Plan, we have chosen to use the Low-Cost monthly estimates in calculating a budget that reflects basic family needs.<sup>1</sup>

USDA bases its budget assessments on specific family types with children of specified ages, so we have followed USDA guidelines in adjusting for age and family size differentials. Although restaurant meals have become increasingly common in family budgets, we do not include this additional cost, as it would violate our no-frills criteria. In choosing the Low-Cost Food Plan over the Thrifty one, we exercised some consideration of the modern family lifestyle and the occasional consumption of prepared foods.

We used the June 2021 estimate, following the USDA practice by which the June costs of each year are used to represent the annual average.<sup>2</sup>

### ► **Housing and Utilities**

The U.S. Department of Housing and Urban Development (HUD) Fair Market Rent (FMR) survey is the most widely accepted standard for the cost of basic needs housing.<sup>3</sup> According to HUD guidelines, the FMR is the amount needed to rent privately owned, decent, safe and sanitary rental housing of a modest (non-luxury) nature with suitable amenities. FMRs are figured at the 40th percentile of rent. That is, 40 percent of units rent for less than this amount, 60 percent for more. This cost includes utilities paid by the tenant, including electricity, natural gas, home heating oil, water and sewer, and trash removal, but not telephone service. We calculated telephone expenses from the Consumer Expenditure Survey and include them in a separate budget line item, Clothing and Household Expenses.

Budget estimates are adjusted for differences in family size. We assume an efficiency for a single person, a one-bedroom apartment for married couples without children, two bedrooms for a family with one or two children, and three bedrooms for a family with three children.

The survey provides fair market rents for each county. We used the data that is in effect for federal housing programs for fiscal year 2021-22. The statewide average is an average of the rents across 99 counties, with each county weighted by 2020 population.

### ► **Health Care**

Health care costs in the basic family budgets include both health insurance premiums and out-of-pocket expenses: co-pays, co-insurance, deductibles, and non-covered costs. We do not construct a budget for a family that is uninsured; health insurance is a basic need that should be part of every budget. Furthermore, families should have ACA-compliant insurance. Medicaid, a policy purchased on the exchange, and employer-sponsored insurance are all generally ACA compliant.

Health costs in our basic needs budgets represent a weighted average of costs under two scenarios: (1) The family is covered by health insurance from an employer, and so pays the employee share of premiums plus out-of-pocket expenses, or (2) the family purchases a bronze plan on the ACA exchange and pays a share of premiums (depending on the premium assistance they receive) plus out-of-pocket expenses. The two scenarios are weighted according to the shares of lower-income insured lowans who receive health insurance from an employer (61.5 percent) and those who must rely on public health insurance (38.5 percent).<sup>4</sup> For most households, costs under the two scenarios are not very different.

### ► Families with Employer Sponsored Insurance (ESI)

The employee share of premiums for ESI was based on data from the 2019 Medical Expenditure Panel Survey (MEPS).<sup>5</sup> The published survey results include data for Iowa showing the average employee contribution for single employee coverage, for employee-plus-one coverage (employee and spouse or child), and for family coverage, as well as the total premium for such coverage. We also relied on the Kaiser Family Foundation data on employee contributions for the Midwest region for 2021, using the increase from 2019 to 2021 to inflate the MEPS 2019 Iowa data.<sup>6</sup>

The total out-of-pocket cost for the family with ESI includes the portion of health costs not covered by the typical employer health plan, which we assume has an actuarial value of about 85 percent.<sup>7</sup> That means that 15 percent of health costs are the employee's responsibility (co-pays, deductibles and co-insurance).

For the family with ESI, that is the end of the story, as far as health costs are concerned. They are not eligible for Medicaid or Hawki. We also assume that the employer policy meets the standards of the Affordable Care Act (ACA) so that the family is not eligible for premium subsidies or cost-sharing under that act for insurance purchased on the market.

### ► Families with Public Health Insurance

The cost of living model includes eligibility standards and benefit formulas for all public health insurance programs: Medicaid for adults (including premium assistance available under the Iowa Health and Wellness Plan for those with incomes between 100 percent and 138 percent of poverty), Medicaid for children, Hawki (Iowa's version of the Children's Health Insurance Program), and the Affordable Care Act's premium subsidies (available by claiming the Premium Tax Credit on the federal income tax return). We do not, however, include cost-sharing, which is available only to those who purchase a silver plan or higher.<sup>8</sup>

For those eligible for Medicaid or Hawki, we assume nearly all of their health costs are covered by those insurance programs – that is, that Medicaid has an actuarial value of 97 percent, Hawki 100 percent.

For adults ineligible for Medicaid or children ineligible for Medicaid or Hawki, we assume they purchase insurance on the Iowa exchange. We obtained the premiums for the least-expensive bronze plan for coverage beginning January 1, 2022, according to the Kaiser Family Foundation's "Health Insurance Marketplace Calculator." The bronze plan is the lowest level plan that qualifies for premium subsidies under the Affordable Care Act. We obtained rates for all of the family types in our study, for each of the seven insurance rating areas in Iowa. Insurance costs by county were then assigned based on the rating area the county fell into. We assumed adults with children were 25 to 40 years of age (depending on the ages of the children) and non-smokers; for single persons, the rates for males and females were averaged; for single-parent families, the parent was female.

Estimates of the out-of-pocket costs were based on actuarial assumptions. A bronze plan is designed to cover, actuarially on average, 60 percent of health care costs. The remaining 40 percent are paid by the patient through co-pays, co-insurance, deductibles and non-covered services. We also know the ACA requires insurance companies to pay out in benefits at least 80 percent of the premiums they receive. We assume insurance companies will hit this target. Therefore, if plan benefits are 80 percent

of premiums, and plan benefits are also 60 percent of total health costs, then total health costs are 1.33 times premiums (again, actuarially on average).<sup>9</sup> We then use this estimate of total health costs based on the bronze plan premium paid for that family type in each county, to estimate total out-of-pocket costs. That is simply the net premium paid (after the Premium Tax Credit) plus the 40 percent of total health costs not covered.

## ► **Transportation**

As public transportation is available only in Iowa's metropolitan areas, and even there it is used by a minority of commuters, our transportation figures are derived from the basic costs of owning and operating a car. We assumed two cars for a household with two adults who work, one car otherwise.

Our estimates began with data from the 2017 National Household Transportation Survey (NHTS), the latest version available. The basic data is the national average annual vehicle miles traveled (VMT) per driver for full-time workers. These figures are reported separately by household "lifecycle." Our 10 household types were matched with seven of these lifecycle categories: (1) one adult with no children, (2) two adults, both working, with no children, (3) two adults, one working, with the youngest child under 6, (4) two adults, both working, with the youngest child under 6, (5) two adults, both working, youngest child age 6 to 15, (6) one adult, youngest child under 6, and (7) one adult, youngest child age 6 to 15. Those figures per driver were then doubled for households with two adults, and multiplied by 85 percent to remove travel for social and recreational purposes, based on national NHTS data on travel by trip purpose.

The final adjustment was for region and urban-rural status. These adjustments were based on NHTS survey data indicating that those living in a metropolitan area of under 1 million population in the midwest drove 7 percent more miles than the national average, while those living outside a metropolitan area in the midwest drove 18 percent more miles. The first estimate was used for those living in an Iowa counties designated as part of a metropolitan area, the second for all other counties.

Finally, annual total vehicle miles traveled for each household was multiplied by the IRS business travel allowance for 2021 (56 cents per mile). The travel allowance accounts for the total cost of owning and operating a car. If monthly transportation costs seem high, keep in mind that they include, in effect, car payments, license, insurance, gas, maintenance and repairs.

## ► **Child Care**

The Iowa Child Care Resource and Referral (CCR&R) system consists of five regional offices that maintain extensive, county-by-county data on child care providers drawn from a survey of all child care centers and all in-home child care facilities in the state. Home care by relatives is not included. Each report must specify the rates charged, whether full- or part-time, and the number as well as the ages of all clients served. From these reports, the regional CCRR office then compiles a series of average weekly child care rates for each county in its region. The CCRR data provides separate rates by the child's age.<sup>10</sup>

We defined a one-child family as including a toddler of 2 years. The two-child families had either a 4-year-old and a 6-11 year old, or two 6-11 year olds. In all two-parent families with only one full-time worker, we assumed that the non-working parent provides all child care services.

The data source consisted of the CCRR county reports as of July 2021. We used the average tuition charged by licensed child care centers. Children age 6 to 11 were assumed to require full-time child care during the summer months and to be enrolled in a before-after school program during the school year. We converted the weekly rates to monthly by multiplying by 52 and dividing by 12.

### ► **Clothing and Household Expenses**

This category includes telephone, clothing, home furnishings and appliances, housekeeping supplies, personal care products and services, and “other household expenses,” including repairs. Data are from the Consumer Expenditure Survey (CEX) for 2019-20, tables showing expenses by income class and household size for the U.S. We then adjusted for the Midwest region (because overall spending on these categories was lower in the Midwest than the nation) and for age of the household head (because spending for households in the 25 to 44 age group was slightly higher than the percent for households of all ages). The 2019-20 figures were inflated to 2021 using the increase in the CPI in these five expenditure categories, which was 3.6 percent.

We estimated, for each household type, the amount spent on these categories by the average household of that size with income between \$15,000 and \$50,000. The income level required to achieve the basic family budgets ends up being around twice the poverty level or more for most families, so we based our estimates on spending patterns typical of households between 1.5 and 2.5 times the poverty level to ensure that no unnecessary expenditures are included. For personal care products and services, and for other household expenses, we included only 50 percent of the amount reported on the CEX to make sure that we were including only necessities. Entertainment, alcohol and tobacco, education, reading materials and personal insurance were all left out completely.

### ► **Taxes and Tax Credits**

There are two kinds of taxes: those imposed on things that we buy or own — property and sales taxes — and those that depend on our income — federal payroll taxes (Social Security and Medicare) and federal and state income taxes. Property and sales taxes in this report are treated as part of the basic family budget because the amount of housing required determines the value on which property taxes must be paid, and the amount one needs to spend on taxable items determines the sales tax one will pay. Property taxes are paid out of rental income and therefore are included in the cost of housing in our family budgets; similarly, expenditures for goods and services include any sales tax on those items. The basic family budget thus reflects total needs and is the same for a family of a given composition in a given part of the state regardless of that family’s income.

We then compare the cost of living with after-tax income. We work backwards to determine the before-tax wage and salary income required to leave a family with net income after taxes just sufficient to cover the basic family budget. The taxes included are the employee portion of payroll taxes and federal and state income taxes, including local school district surtaxes (based on weighted average rates for the school districts in each county or region). Taxes were calculated based on 2021 tax law — that is, the rules for 2021 income tax returns filed in 2022.

We assume that the family receives only wage and salary income; this is a reasonable assumption for families with adults under age 65 in the income ranges we are considering, where non-work income (rent, interest, dividends, capital gains) accounts for a very small share of total income. We also assume

that the families take the standard deduction; in the income range we are considering, the vast majority of families would use the standard deduction under the new federal tax code. All married couples file jointly for federal income tax purposes, and jointly (one wage-earner) or separately on a combined return (two wage earners) for Iowa purposes. Single parents file as head of household on federal returns. Where there are two earners, we assume identical earnings.

The tax calculation includes several very important tax credits as they existed for 2021, including significant enhancements through the American Rescue Plan Act. These enhancements expired at the end of 2021. For Federal taxes, these are (1) the child and dependent care credit, for a portion of day care costs (non-refundable), (2) the child tax credit (fully refundable only for 2021), (3) the Earned Income Tax Credit, or EITC (refundable), (4) the Premium Tax Credit (refundable). For state taxes, the credits are the child and dependent care credit and the state EITC, both refundable. The state return includes the personal exemption credits, the deduction for federal taxes, and the deduction for health insurance premiums. The tax calculations were made by creating a spreadsheet version of federal and state tax returns, with accompanying schedules.

## Calculating the Living Wage

The next step in our analysis is to determine the before-tax earnings needed to ensure that the family has net resources after taxes sufficient to cover the basic needs budget. We focus here on what it costs to get by and on how much a household must earn to cover those costs. When there is a gap between actual earnings and the costs of living, a variety of work supports and public assistance programs are available to low-income households to help fill that gap. In calculating the living wage we include only those work supports that operate through the income-tax system: the state and federal earned income tax credits, the federal child tax credits and the state and federal credits for child care costs. We assume, in other words, that households apply for and receive all such credits when they file their income taxes. For other work supports and public assistance, we illustrate their effects in closing the gap between after tax earnings and needs, but we consider a living wage what you would need to earn if you did not apply for any assistance programs: public health insurance or subsidies, food or housing assistance, home heating assistance and other programs.

### ► Work Supports and Public Assistance

Public health insurance programs are probably the most important form of public assistance helping to bridge the gap between earnings and the basic needs budget, but it is complicated. Individuals can receive health insurance coverage through an employer, on the individual market, or from one or more public programs. There are three major health care programs for low-income families: Medicaid, for adults up to 138 percent of poverty and for children up to 167 percent, Hawki for children in families up to 302 percent of poverty, and Affordable Care Act (ACA) subsidies, which disappear between 250 and 400 percent of poverty. The ACA subsidies operate in part through the tax system as premium tax credits on the family's federal income tax return. Like the EITC, the federal child tax credit, and Iowa's Child and Dependent Care Credit, the premium tax credits are refundable — the taxpayer receives the full amount even if the credit exceeds the tax due. The excess is refunded.

In addition to calculating which health insurance programs a family would qualify for at various income levels, we calculate eligibility and benefits for three other public assistance programs — food assistance

(Supplemental Nutrition Assistance Program, or SNAP), Low Income Home Energy Program (LIHEAP) assistance, and Child Care Assistance. Temporary Assistance to Needy Families (TANF) is not included because the eligibility ceiling is at too low an income level to play any role for families with a full-time worker. Public housing programs are not included because they tend to have long waiting lists; they cannot be considered a generally available work support.

## **Estimating Proportions of Iowa Working Households Unable to Meet Basic Needs**

The estimates presented in the report are based on data for Iowa from the most recent five years of the American Community Survey (ACS): 2015-2019 released by the U.S. Bureau of Census.<sup>11</sup> We excluded households where either the head or spouse was age 65 or older, and where there was not at least one adult working at least 30 hours per week. We also eliminated certain types of households because there is no way to know whether or how income and expenses are shared within the household: those that included adult relatives of the head or spouse (adult children, siblings, aunts and uncles, parents), households that included a subfamily or more than one family, and single individuals (such as college students) sharing a residence or living in group quarters. We include cohabiting couples and same-sex couples, and families with up to six children.

For each family in the ACS sample we calculate a self-sufficiency budget based on the following:

- ages of adults (which affects health insurance premiums)
- ages of any children (which determines the need for child care)
- total family size (which determines, along with ages of family members the basic food budget, rent, and miscellaneous household expenses)
- number of working adults (which affects transportation costs because of commuting)
- whether or not family members were covered by health insurance from an employer

The assumptions underlying these costs are the same as for the basic family budgets: 40th percentile fair market rent for the area of the state where the household resides, health insurance premiums based on the insurance rating area within the state, child care costs for that region, etc.

Basic family budgets are constructed both for families with health insurance from an employer and those without. Those in the ACS sample with health insurance from an employer for all or most family members were assigned the break-even budget that includes the average employee contribution to employer health insurance plans in Iowa, plus the estimated out-of-pocket expense for those with such insurance. Those without employer-sponsored insurance were assumed to have public health insurance for family members who qualified (Medicaid or Hawki) and ACA-subsidized insurance purchased on the Iowa exchange for those who did not. Their break-even budgets included their share of premiums and out-of-pocket costs.

We pool five years of data to get a larger sample in order to increase the reliability of estimates. In reporting results we consider both the estimate and the margin of error. The smaller the sub-population (a particular family type, or a particular region of the state), the smaller the ACS sample and the larger the margin of error of the estimate. That is why we do not present estimates for smaller population groups (e.g., married couples with one child vs. two children, or smaller geographic areas): The margin of error becomes too large. It is also why we cannot provide reliable estimates even for the overall

working population by county – there is no microdata available at the county level, and there is no way to construct basic family budgets from published census tables, and no published tables showing the number of non-elderly households with a full-time worker, with and without children needing child care, at various income levels, by county.

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## Notes

- 1 See, for example, Wilde, P. E. and Llobrera, J. (2009), "Using the thrifty food plan to assess the cost of a nutritious diet." *Journal of Consumer Affairs*, 43(2), 274-304. <http://onlinelibrary.wiley.com/doi/10.1111/j.1745-6606.2009.01140.x/full>; davis, g. c. and you, w. (2010). "the thrifty food plan is not thrifty when labor cost is considered." *the journal of nutrition*, 140(4), 854-857. <http://jn.nutrition.org/content/140/4/854.full.pdf>
- 2 U.S. Department of Agriculture, "Official USDA Food Plans: Cost of Food at Home at Three Levels, U.S. Average, June 2021," accessed at <https://fns-prod.azureedge.net/sites/default/files/media/file/CostofFoodJun2021LowModLib.pdf>
- 3 U.S. Department of Housing and Urban Development, Office of Policy Development and Research, "Fair Market Rents (40th Percentile Rents,)" accessed at <https://www.huduser.gov/portal/datasets/fmr.html#2021>
- 4 Our break-even budgets generally apply to those who are under age 65 and between 150 and 300 percent of poverty. If we consider only non-elderly lowans in that income range, 56 percent are covered by a policy through an employer, and 25 percent by public health insurance (Medicaid or Hawki, primarily). About 10 percent purchase insurance on the individual market, which would include the 53,000 lowans who purchased insurance on the exchange for 2018. About 9 percent are uninsured.
- 5 U.S. Department of Health and Human Services, Agency for Healthcare Research and Quality: Medical Expenditure Panel Survey, Insurance/Employer Component, available at. <http://meps.ahrq.gov/mepsweb/index.jsp>
- 6 Kaiser Family Foundation. Average Monthly and Annual Worker Premium Contributions Paid by Covered Workers for Single and Family Coverage, by Plan Type and Region, 2021.
- 7 Final Report: Analysis of Actuarial Values and Plan Funding Using Plans from the National Compensation Survey. Compiled for Office of Policy and Research (OPR), Employee Benefits Security Administration (EBSA), Department of Labor (DOL) by Actuarial Research Corporation (ARC). May 12, 2017.
- 8 We assume that families in the Iowa Health and Wellness Plan participate in the Health Behaviors Program and therefore avoid paying the monthly contribution.
- 9 If Benefits equal .6 times total health costs (THC), and benefits also equal .8 times premiums, then .7 times THC = .8 times premiums, and  $THC = (.8/.6)$  times premiums, or 1.333 times premiums.
- 10 Iowa Child Care Resource and Referral data, accessed at <https://iowaccrr.org/data/>
- 11 Steven Ruggles, Katie Genadek, Ronald Goeken, Josiah Grover, and Matthew Sobek. Integrated Public Use Microdata Series: Version 6.0 [Machine-readable database]. Minneapolis: University of Minnesota, 2021. IPUMS-USA is available at [www.ipums.org](http://www.ipums.org)

**Common Good Iowa** is a nonpartisan, nonprofit organization built on the collective 50 years of experience of the Child and Family Policy Center and Iowa Policy Project. Common Good Iowa informs policymaking to turn Iowa values into concrete solutions that advance opportunity for all Iowans. Learn more at [www.commongoodiowa.org](http://www.commongoodiowa.org).