



4-1-2019

The Burden of Health Care Costs for Working Families

Aaron Glickman
University of Pennsylvania

Janet Weiner
University of Pennsylvania, weinerja@mail.med.upenn.edu

Follow this and additional works at: https://repository.upenn.edu/ldi_issuebriefs

Glickman, Aaron and Weiner, Janet. The Burden of Health Care Costs for Working Families. LDI Issue Briefs. 2019; 23 (3).
<https://ldi.upenn.edu/brief/burden-health-care-costs-working-families>

" >

<https://ldi.upenn.edu/brief/burden-health-care-costs-working-families>

This paper is posted at ScholarlyCommons. https://repository.upenn.edu/ldi_issuebriefs/133
For more information, please contact repository@pobox.upenn.edu.

The Burden of Health Care Costs for Working Families

Abstract

Growing concern about the affordability of health care and the cost burden imposed on working families frequently appears in public debate about the next phase of health care reform. In an [earlier brief](#), Penn LDI and United States of Care reviewed national data on rising health care costs and different ways to measure whether health care and coverage are “affordable.” In this [second brief](#) of our affordability series, we adapt one of these measures to provide state-level data on the cost burden faced by working families who have employer-sponsored insurance (ESI). While not all working families have ESI, it is the most common form of health insurance in the United States. We examine how this burden varies across states, and how it has changed within states from 2010 to 2016.

Keywords

health care cost, cost burden, working families, insurance coverage, ESI

License

Creative

Commons

This work is licensed under a [Creative Commons Attribution-No Derivative Works 4.0 License](#).

License

THE BURDEN OF HEALTH CARE COSTS FOR WORKING FAMILIES

A State-Level Analysis

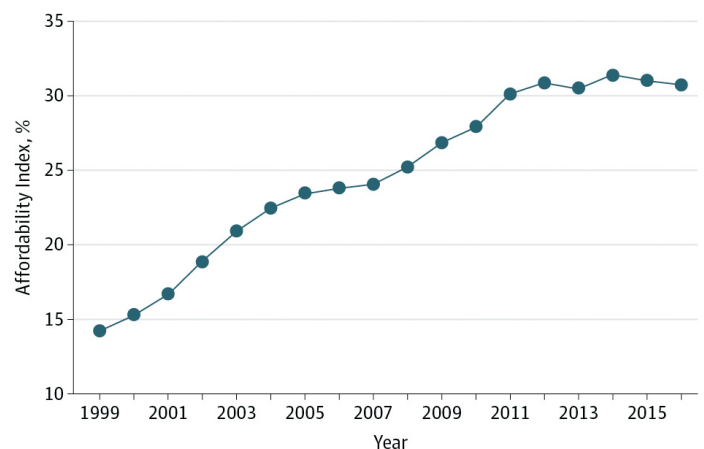
Growing concern about the affordability of health care and the cost burden imposed on working families frequently appears in public debate about the next phase of health care reform. In an [earlier brief](#), Penn LDI and United States of Care reviewed national data on rising health care costs and different ways to measure whether health care and coverage are “affordable.” Here we adapt one of these measures to provide state-level data on the cost burden faced by working families who have employer-sponsored insurance (ESI). While not all working families have ESI, it is the most common form of health insurance in the United States. We examine how this burden varies across states, and how it has changed within states from 2010 to 2016.

BACKGROUND

Our [previous brief](#)¹ discussed affordability as an economic concept, as a kitchen-table budget issue for individuals and families, and as a threshold in national policy. We reviewed different measures of affordability, all of which have their limitations. National measures can obscure important differences across states and markets, where incomes and health care costs vary substantially. As states become the testing ground for initiatives to expand access to care and contain costs, state policymakers need indicators that reflect how their constituencies experience the burden of health care costs and whether the burden is increasing or decreasing over time.

In 2016, researchers published a simple employer group market [affordability index](#)² by capturing the share of household income taken up by employer-sponsored insurance (ESI). Specifically, this index is a ratio of the average family premium for ESI (both employer and employee contributions) to the median household income. By this measure, health care premiums accounted for 30.7% of median household income on a national level in 2016, a share that has doubled since 1999.

Figure 1. National “Affordability Index” – Family Health Insurance Premiums as a Percentage of Median Income, 1999 to 2016



Ezekiel Emanuel et al., [Measuring the Burden of Health Care Costs on US Families](#), (JAMA, November 2017)

Here we adapt this index to produce state-level estimates of the cost burden to working families over time, using publicly available data. A recent Commonwealth Fund [issue brief](#) used similar methods to analyze state-level trends in ESI among middle income families (roughly \$62,000 per year) between 2008 and 2017. The analysis found that the average employee share of premiums for single and family plans rose from 5.1% to 6.9% of median income from 2008 to 2017. The analysis also found that spending on premiums and potential spending on deductibles grew to 11.7% of median income in 2017, compared to only 7.8% in 2008.

Our analysis builds on this work by considering the total premium for family coverage, which includes both employee and employer contributions, rather than only the component employees pay directly, as discussed in more depth below. Furthermore, we adjust state incomes based on local cost-of-living to facilitate interstate comparisons. We assess trends from 2010-2016 in each state, including the scale, variation, and changes in the burden of health care costs experienced by working families.

WHAT WE DID

We adapted the national “Affordability Index” and previous work by the Commonwealth Fund to describe the state-level burden of health care costs for working families since the passage of the Affordable Care Act (ACA). We describe trends from 2010-2016 to capture how health care cost burdens changed after the 2009-2009 financial crisis and during ACA implementation. We obtained data on ESI premiums from the Agency for Healthcare Research and Quality (AHRQ) Medical Expenditure Panel Survey Insurance/Employer Component (MEPS-IC), which provides detailed plan information, including average total premiums and deductibles, for employer-based plans in each state and selected metropolitan statistical areas. We obtained data on median household income for each state from the U.S. Census Bureau’s Current Population Survey (CPS).

To account for cost-of-living differences across states, we adjusted state median incomes using the Bureau of Economic Analysis (BEA) Regional Price Parities (RPP), which expresses the price of goods and services in each state as a percentage of the national level. For example, in 2016, Hawaii had the highest RPP at 118.4% and Mississippi had the lowest at 86.4%.

For each state in each year, we estimated the health care cost burden by dividing its RPP-adjusted median income by the average ESI family premium in that state. The resulting percentage represents health insurance premiums as a share of median income in each state. We describe changes in each state’s cost burden between 2010 and 2016.

To more fully understand the factors that contribute to these changes, we describe rates of change in both adjusted income and ESI premiums by state. Finally, we consider changes in the employee’s share of premiums paid and in deductible amounts

for each state, which are more immediately salient costs faced by working families.

WHAT WE FOUND

State-level health care cost burden, 2016

In 2016, the national health care cost burden was 30%, representing average premiums of \$17,710 and median income of \$59,039. The burden varies across states. In 2016, the income-adjusted cost burden was highest in Louisiana at 37.1% and lowest in Minnesota at 24.4%. While half of states clustered between 27.3% and 30.5%, the ten costliest states had a burden ranging from 32.2% to 37.1%, and the ten least costly states had a burden ranging from 24.4% to 26.7% (Appendix Figure 1). Each state’s cost burden is listed in Appendix Figure 2.

Trends in state-level health care cost burden, 2010-2016

Between 2010 and 2016, the average health care cost burden increased from 28% to 30% nationally, with premiums growing faster than incomes (27.7% vs 19.8%). The burden increased in all but four states, including the District of Columbia. In most states, premiums grew faster than incomes. As shown in Figures 2 and 3, the number of states with a cost burden below 25% decreased from 15 to three; the number of states with a cost burden above 30% increased from five to 13.

Figure 2. Health Care Cost Burden, 2010 (Family Premiums as Share of Median Household Income)

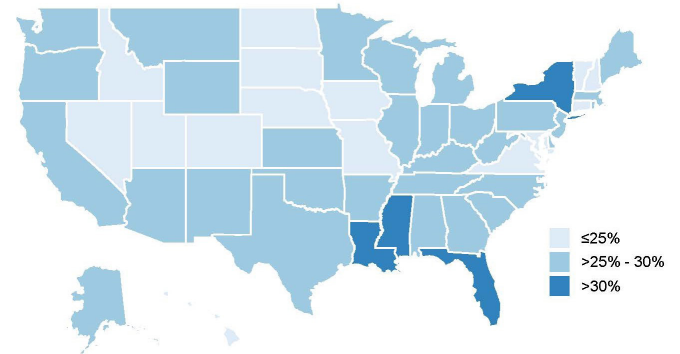
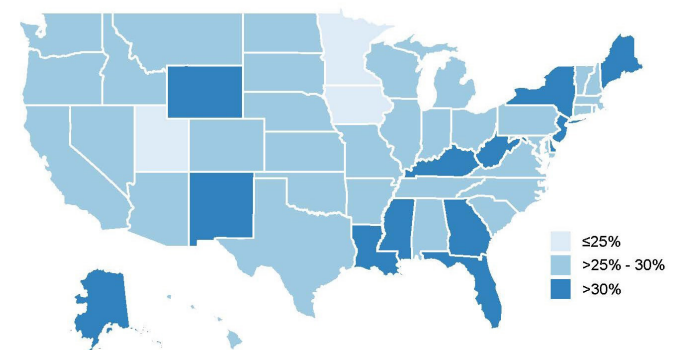


Figure 3. Health Care Cost Burden, 2016 (Family Premiums as Share of Median Household Income)



In Appendix Figure 3, we illustrate the relative changes for each state. Only four states saw their cost burden decrease; 12 states experienced an increase of greater than 15%. Minnesota's relative decrease of -5.6% reflects an absolute cost burden decrease from 25.8% to 24.4%. In contrast, Wyoming's relative increase of 28.5% reflects an absolute increase of the state's cost burden from 25.5% to 32.8% (Appendix Figure 4).

Components of a changing cost burden: income and premiums

To understand how cost burdens have shifted over time, we consider each of the subcomponents of the index. By the definition of our measure, a rising cost burden can be a symptom of stagnating income, rising premiums, or a combination of the two trends. Families can withstand rapidly rising health insurance premiums so long as incomes keep up. But if premiums rise significantly faster than incomes, then health care costs can swamp new income growth.

Insurance premiums continue to rise

Between 2010 and 2016, national average family premiums for employer-sponsored insurance rose by 27.7%, from \$13,871 to \$17,710 (Figure 4). Premiums rose in all states, ranging from a 14.7% increase in Mississippi to a 58% increase in Alaska. The five states with the smallest increase saw premiums rise by less than 21%, and the five states with the largest premium increases experienced a rise of greater than 39%. As shown in Appendix Figure 4, Alaska, Idaho, Montana, and Wyoming all saw premiums rise by more than 40% over six years, while Florida and Mississippi saw relatively modest premium increases of less than 20%. In 2016, the average premium across the five most inexpensive states was under \$16,000, but nearly \$20,000 in the most expensive states (Figure 4).

Yearly household income

Between 2010 and 2016, the national median household income rose by 19.8%, from \$49,276 to \$59,039 (Figure 5). Adjusted incomes rose in all states, ranging from less than a 5% increase in Maine and West Virginia to an increase of 38% in Montana. As shown in Appendix Figure 4, households in Delaware, Louisiana, Maine, Mississippi, New Jersey, New Mexico, Vermont, West Virginia, and Wyoming saw their median incomes rise by less than 10%, while incomes in Alaska, Minnesota, Montana, South Carolina, and Tennessee rose by more than 30%. In 2016, household incomes ranged from an average of about \$47,000 in Louisiana and Mississippi to about \$72,000 in Minnesota and New Hampshire. In both 2010 and 2016, the spread of adjusted incomes was far wider than the distribution of health insurance premiums in absolute and relative terms. The gap between the highest and lowest income states was over \$20,000 in 2016.

Deductibles

The cost burden is an indicator of the "bite" taken out of household income by ESI premiums, but it does not include an important consideration: the plan deductible, which is the amount employees and families are expected to pay for health care before insurance

Figure 4. Average Premiums for Family Coverage, 2010 and 2016

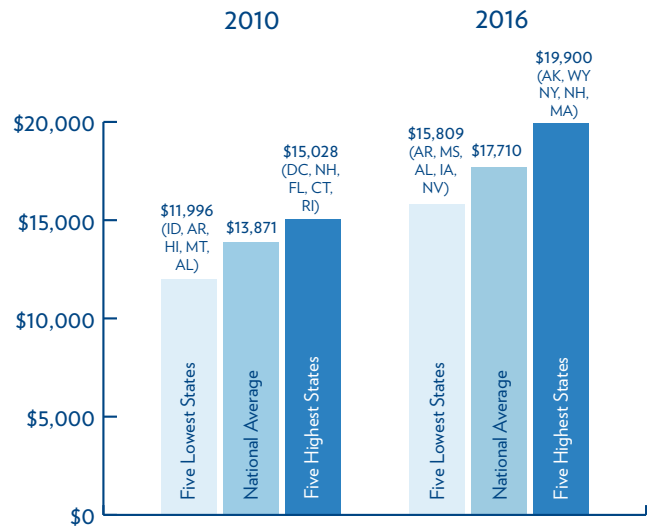


Figure 5. Median Adjusted Household Income, 2010 and 2016

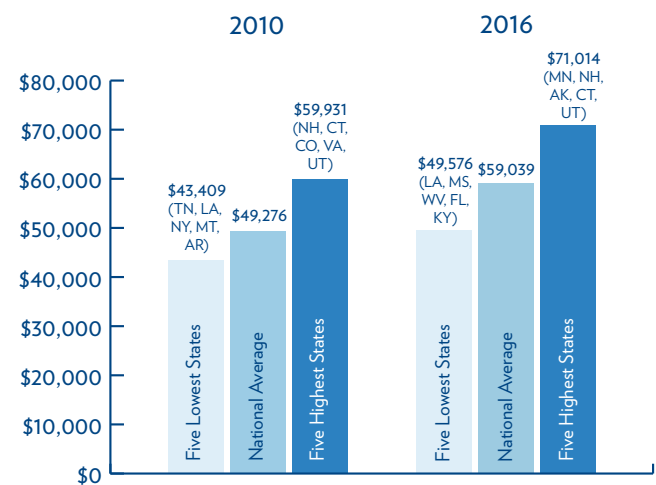
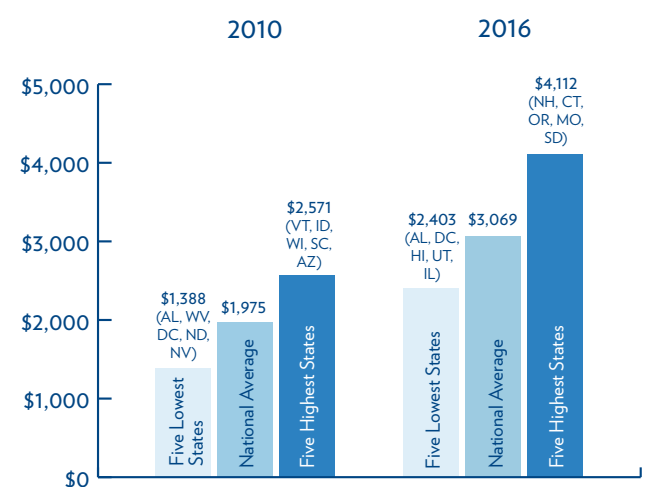


Figure 6. Average Annual Deductibles for Family Coverage, 2010 and 2016



kicks in. Unlike the premium cost, the deductible amount is only experienced by those seeking care. At a plan level, a higher deductible will usually mean lower premiums. Thus we explore whether some of the trends in state-level premiums reflect changing deductible levels.

Nationally, the presence and level of deductibles are rising. From 2010-2016, the percent of employees enrolled in health plans with a deductible climbed from 77.5% to 84.5%. The average amount of the annual deductible these families face increased as well, from \$1,975 in 2010 to \$3,069 in 2016. The level of deductibles varies considerably by state. As shown in Figure 6, families in the five states with the highest deductibles in 2016 faced deductibles of more than \$4,000 on average. Deductibles grew 55.4% nationally, but some states saw much greater growth. New Hampshire, North Dakota, and West Virginia saw deductibles more than double in six years (Appendix Figure 4).

We find little association between deductibles and premiums at the state level. Further, we found no association between the rate of premium growth from 2010-2016 and changing deductibles. Additional work is needed to understand why higher deductibles do not appear to be holding down premiums at the state level.

Employee contributions to premiums

Most economists agree that the entire burden of ESI premiums falls on the employee, either directly through payroll deductions, or indirectly through lower cash wages. While our measure of cost burden takes this into account, for employees, the amount visibly taken out of their paycheck for premiums is particularly salient. Nationally, this direct contribution for family coverage rose 33.2%, from \$3,721 to \$4,956 annually. Most of that growth reflects changes

in premiums themselves, rather than shifts in the percentage that employees pay directly. Overall, employees' shares grew modestly, from 26.8% in 2010 to 28% in 2016.

However, the employee share of premiums varies across states. In 2016, employees directly paid an average of 21.9% in the five states with the lowest share and 34.4% in the five states with the highest share. Generally speaking, states with higher overall premiums have a lower employee share, suggesting that families in high cost burden states experience more of the burden indirectly – through stagnating wages – rather than directly – through higher employee contributions to premiums.

State highlights

While most states share similar stories of premiums rising faster than incomes, causing a rise in health care cost burden, some outliers are worth highlighting (Table 1).

Minnesota and Tennessee are outliers in that their burdens decreased from 2010 to 2016. This was not a result of slowing health care cost growth. Premiums rose by 26.2% and 31.4% in Minnesota and Tennessee, respectively. However, both states experienced above-average growth in incomes, which outpaced premium growth, leading to a relative decrease in their health care cost burden.

In contrast, Idaho and Nevada demonstrate two paths to an increased cost burden. Incomes in Idaho rose a percentage point above the national average. However, the 53.8% rise in premiums was well above national trends and completely swamped new income. In Nevada, premiums rose 29.1% (just above the national average), but incomes remained relatively flat—only rising by 11%. Furthermore,

Table 1. State Highlights, 2010-2016

State	Premium 2016	Premium Change from 2010	Deductible 2016	Deductible Change from 2010	Income 2016	Income Change from 2010	Cost Burden 2016	Cost Burden Change from 2010
US Average	\$17,710	27.7%	\$3,069	55.4%	\$59,039	19.8%	30.0%	7.0%
New Hampshire	\$19,066	25.4%	\$4,992	116.9%	\$72,011	15.1%	26.5%	9.0%
Minnesota	\$17,545	26.2%	\$3,295	51.0%	\$72,018	33.7%	24.4%	-5.6%
Tennessee	\$16,721	31.4%	\$3,662	79.7%	\$56,922	33.0%	29.4%	-1.3%
Idaho	\$17,499	53.8%	\$3,410	24.0%	\$60,822	20.9%	28.8%	27.2%
Nevada	\$16,133	29.1%	\$2,712	81.0%	\$56,911	11.0%	28.3%	16.3%

while deductibles in Minnesota and Tennessee rose above the national average, deductibles in Idaho rose much more slowly than the country as a whole. New Hampshire saw the largest overall increase in deductibles, but a below average rise in premiums and income. Thus, its increased health care cost burden appears average, despite a spike in out-of-pocket costs.

KEY TAKEAWAYS

Significant variation across states. The national health care cost burden as measured by the index is high (30%). While the health care cost burden is substantial even in the “lowest burden” state of Minnesota at 24.4%, it is markedly higher in other states and is approaching 40% of median income in some cases. Although the health care cost burden increased significantly between 2010 and 2016, in 17 states, it actually decreased, or increased by 5% or less. It is likely that many state-level factors contribute to variation across states and across time, including different facets of the labor and insurance markets, such as provider concentration and network sizes. These state-by-state findings can help policymakers understand the impact of health care costs on their constituents and identify the pain points for working families.

No state escapes a high cost burden. These findings demonstrate a high cost burden imposed by rising health insurance premiums in the ESI market. Even in the least-burdened state, premiums account for nearly a quarter of a family’s wages. This measure does not account for out-of-pocket expenses, such as deductibles, which have risen by 55% in six years. Families, especially those with high-cost health conditions, will incur these costs when they seek care.

Implications for families. Our estimates suggest that health care premium costs are more urgently felt in some states than others, especially at the tails of the distribution. It is important to note, however, that a state’s cost burden index does not necessarily reflect how all families experience health care costs. Many families in states with a below-average cost burden may still struggle to pay health care expenses. This is especially true of families with underlying health conditions who may incur high out-of-pocket expenses or face high deductibles. In other families, employees may not see the impact of rising health care premiums directly as increased contributions, but instead may experience less noticeable changes in income, such as depressed or flat wages.

Ultimately, increases in burden are really a measure of families falling further behind, with a higher percentage of their income devoted to premiums and not available for other needs. While large increases in median wages would, by this measure, lessen the health care cost burden on families, lasting solutions will come from addressing the cost drivers that result in higher ESI premiums.

LIMITATIONS OF THIS INDEX – WHAT IT CAN’T TELL US

This measure is helpful for understanding how the burden of health care costs is growing for the average family with ESI, but its simplicity is accompanied by important limitations. By not including [federal subsidies](#),³ such as the tax exclusion of ESI premium payments, the cost burden appears inflated. However, this would not change the general direction and trend of the cost burden across states. It also does not reflect the cost burdens faced by uninsured families or those with public or individual coverage.

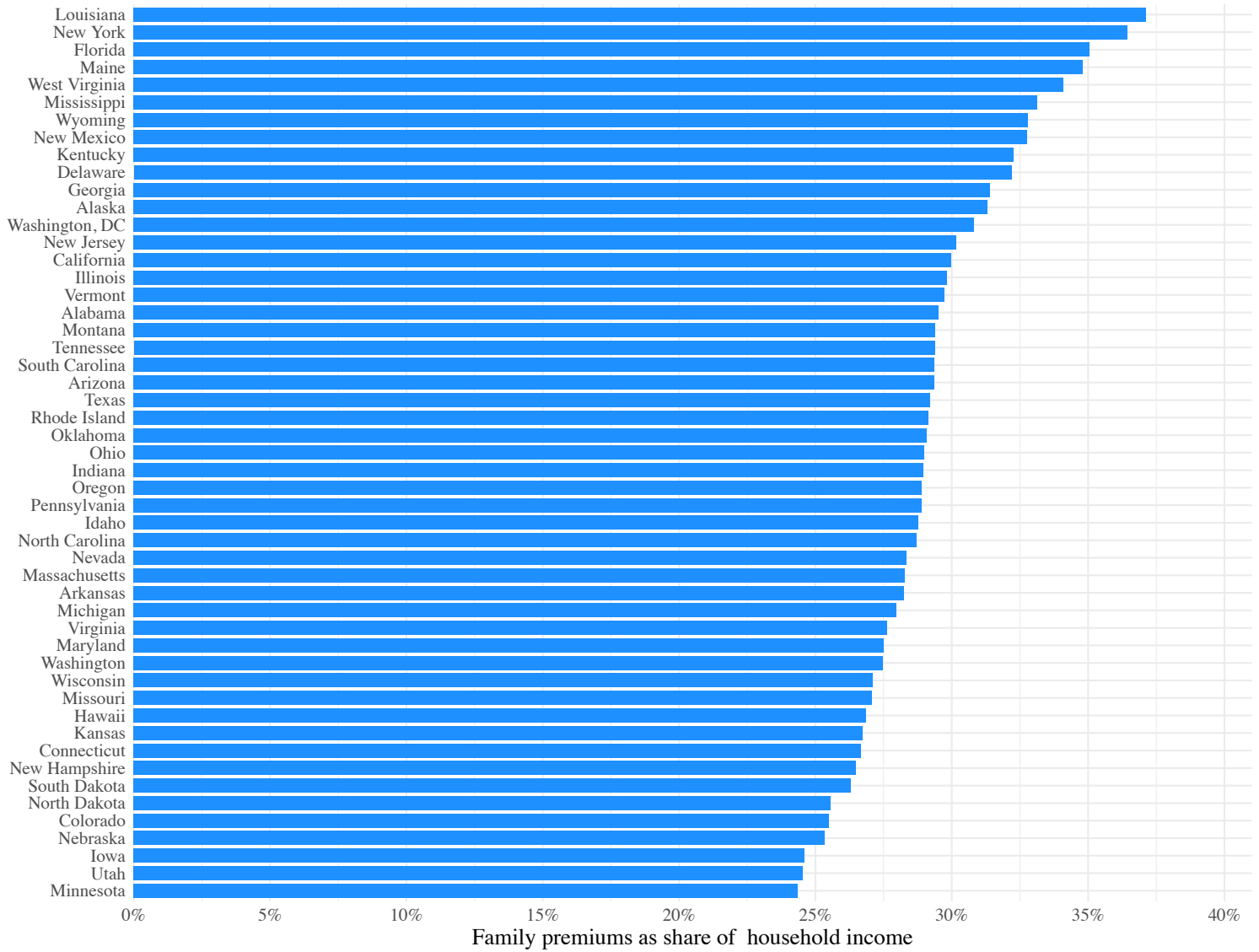
Another limitation is a technical one, in that the employer contribution to health insurance appears in both the numerator and denominator of the measure: it is included in the total average premium, and most economists would argue it is also reflected in median income (as foregone wages). Using average annual total compensation (e.g., cash wages and all benefits) as a denominator would lessen this concern, but such data are not readily available. Furthermore, while [prevailing theory](#)⁴ suggests the employer contributions are ultimately paid by workers via foregone wages or other benefits, it is not clear exactly how much of employer premium payments would actually convert to wages.

LOOKING AHEAD

In this brief, we have explored one approach to measuring how the price of health insurance is experienced by working families, and how this varies across states. It is a glimpse into the trends within each state and provides some insight into cost concerns that might be particularly salient for families, such as higher deductibles or growing paycheck deductions. A fuller picture of the cost burden within each state would factor in health plan quality, out-of-pocket expenses, taxes paid for public health insurance programs, and how rising health insurance costs affect people differently along the income distribution. Further research is needed to understand the relationship between income stagnation and rising health care costs in different labor markets. Additionally, the composition of the employer-based insurance market might be changing as states expand Medicaid and families opt for ACA marketplace plans. Policymakers should consider the interplay between income growth, health care costs, and insurance market structures when looking to address working families’ health care cost burden.

This issue brief was authored by Aaron Glickman and Janet Weiner at Penn LDI, with input from Megan McCarthy-Alfano (Penn LDI) and Kristin Wikelius (United States of Care). We would also like to thank Rebecka Rosenquist and Megan Garratt-Reed. This brief was produced as part of a research partnership between United States of Care and Penn LDI, and we thank collaborators from both organizations for their valuable review and feedback.

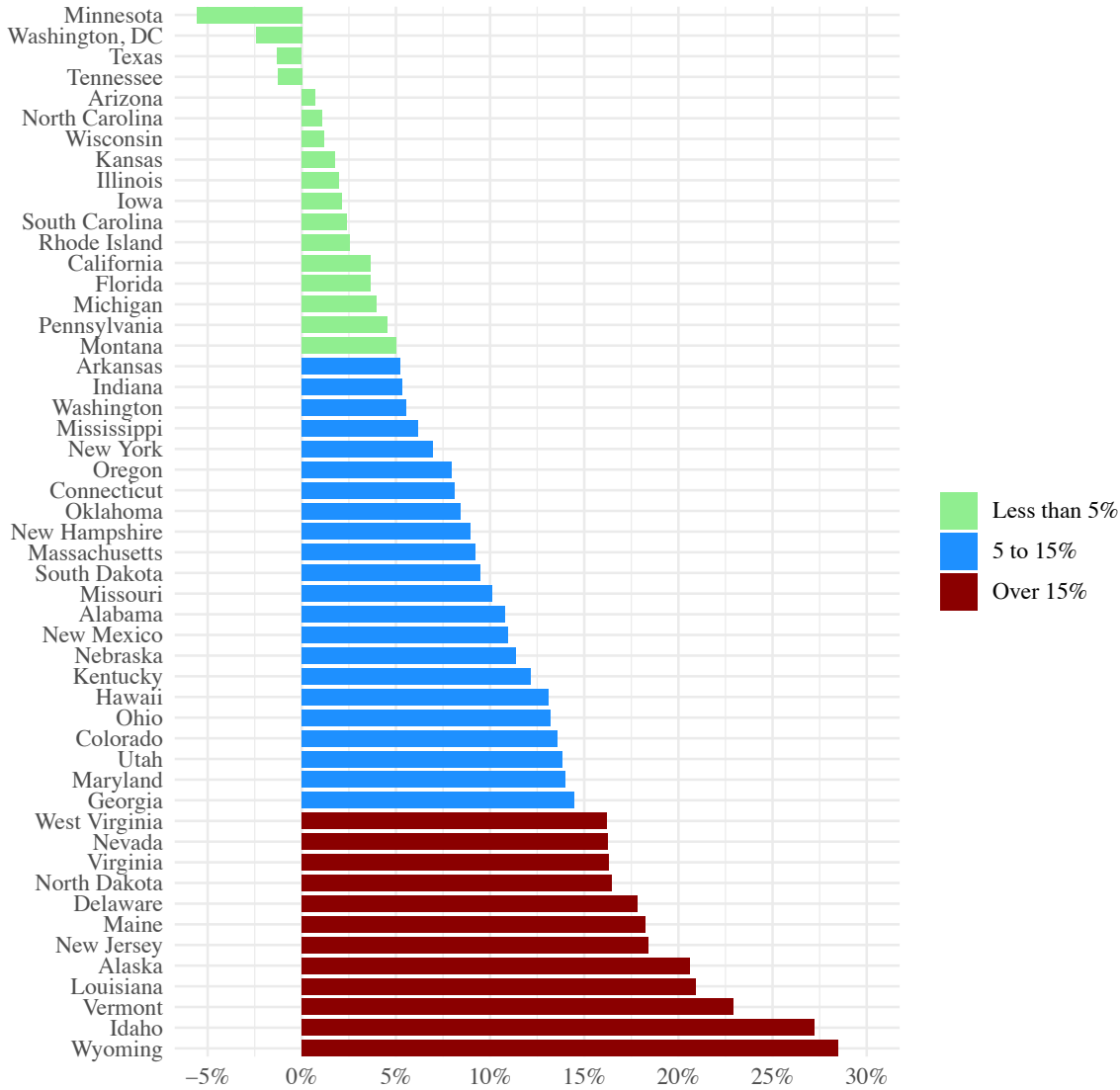
Appendix Figure 1: Health Care Cost Burden, 2016



Appendix Figure 2: State Cost Burden, 2010 and 2016

State	Cost Burden in 2010	Cost Burden in 2016	Relative Change	Absolute Change
Alabama	26.6%	29.5%	10.79%	2.9%
Alaska	26.0%	31.3%	20.61%	5.3%
Arizona	29.2%	29.4%	0.69%	0.2%
Arkansas	26.9%	28.3%	5.23%	1.4%
California	28.9%	30.0%	3.64%	1.1%
Colorado	22.4%	25.5%	13.59%	3.0%
Connecticut	24.7%	26.7%	8.12%	2.0%
Delaware	27.3%	32.2%	17.85%	4.9%
Washington, DC	31.6%	30.8%	-2.44%	-0.8%
Florida	33.8%	35.0%	3.67%	1.2%
Georgia	27.4%	31.4%	14.46%	4.0%
Hawaii	23.7%	26.9%	13.11%	3.1%
Idaho	22.6%	28.8%	27.23%	6.2%
Illinois	29.2%	29.8%	1.97%	0.6%
Indiana	27.5%	29.0%	5.33%	1.5%
Iowa	24.1%	24.6%	2.14%	0.5%
Kansas	26.3%	26.7%	1.76%	0.5%
Kentucky	28.8%	32.3%	12.15%	3.5%
Louisiana	30.7%	37.1%	20.93%	6.4%
Maine	29.4%	34.8%	18.23%	5.4%
Maryland	24.1%	27.5%	13.97%	3.4%
Massachusetts	25.9%	28.3%	9.22%	2.4%
Michigan	26.9%	28.0%	3.94%	1.1%
Minnesota	25.8%	24.4%	-5.58%	-1.4%
Mississippi	31.2%	33.1%	6.16%	1.9%
Missouri	24.6%	27.1%	10.12%	2.5%
Montana	28.0%	29.4%	4.99%	1.4%
Nebraska	22.7%	25.3%	11.39%	2.6%
Nevada	24.4%	28.3%	16.27%	4.0%
New Hampshire	24.3%	26.5%	8.95%	2.2%
New Jersey	25.5%	30.2%	18.40%	4.7%
New Mexico	29.5%	32.8%	10.96%	3.2%
New York	34.1%	36.5%	6.95%	2.4%
North Carolina	28.4%	28.7%	1.05%	0.3%
North Dakota	21.9%	25.5%	16.46%	3.6%
Ohio	25.6%	29.0%	13.21%	3.4%
Oklahoma	26.8%	29.1%	8.45%	2.3%
Oregon	26.8%	28.9%	7.95%	2.1%
Pennsylvania	27.6%	28.9%	4.56%	1.3%
Rhode Island	28.4%	29.2%	2.53%	0.7%
South Carolina	28.7%	29.4%	2.37%	0.7%
South Dakota	24.0%	26.3%	9.47%	2.3%
Tennessee	29.8%	29.4%	-1.27%	-0.4%
Texas	29.6%	29.2%	-1.30%	-0.4%
Utah	21.6%	24.5%	13.84%	3.0%
Vermont	24.2%	29.7%	22.93%	5.5%
Virginia	23.8%	27.6%	16.31%	3.9%
Washington	26.0%	27.5%	5.54%	1.4%
West Virginia	29.3%	34.1%	16.22%	4.8%
Wisconsin	26.8%	27.1%	1.16%	0.3%
Wyoming	25.5%	32.8%	28.47%	7.3%

Appendix Figure 3: Relative Change of Income-Adjusted Cost Burden in Each State, 2010-2016



Appendix Figure 4: Average Premiums, Deductibles, Incomes, and Cost Burden by State, 2010-2016

State	Premium 2010	Deductibles 2010	Income 2010	Cost Burden 2010	Premium 2016	Deductibles 2016	Income 2016	Cost Burden 2016	Premium Change	Deductible Change	Income Change	Relative Cost Burden Change
Alabama	\$12,409	\$1,274	\$46,568	26.6%	\$16,098	\$2,193	\$54,528	29.5%	29.7%	72.1%	17.1%	10.8%
Alaska	\$14,232	\$2,036	\$54,832	26.0%	\$22,490	\$2,845	\$71,843	31.3%	58.0%	39.7%	31.0%	20.6%
Arizona	\$13,871	\$2,371	\$47,562	29.2%	\$17,484	\$3,652	\$59,541	29.4%	26.0%	54.0%	25.2%	0.7%
Arkansas	\$11,816	\$1,827	\$43,999	26.9%	\$14,929	\$2,632	\$52,827	28.3%	26.3%	44.1%	20.1%	5.2%
California	\$13,819	\$1,942	\$47,784	28.9%	\$17,458	\$2,790	\$58,249	30.0%	26.3%	43.7%	21.9%	3.6%
Colorado	\$13,393	\$2,262	\$59,696	22.4%	\$17,459	\$3,481	\$68,511	25.5%	30.4%	53.9%	14.8%	13.6%
Connecticut	\$14,888	\$2,308	\$60,327	24.7%	\$18,637	\$4,041	\$69,846	26.7%	25.2%	75.1%	15.8%	8.1%
Delaware	\$14,671	\$1,997	\$53,710	27.3%	\$18,648	\$3,112	\$57,930	32.2%	27.1%	55.8%	7.9%	17.8%
Florida	\$15,032	\$1,862	\$44,466	33.8%	\$17,989	\$3,118	\$51,330	35.0%	19.7%	67.5%	15.4%	3.7%
Georgia	\$13,114	\$1,890	\$47,797	27.4%	\$18,252	\$2,950	\$58,118	31.4%	39.2%	56.1%	21.6%	14.5%
Hawaii	\$12,062	\$1,709	\$50,801	23.7%	\$16,362	\$2,358	\$60,923	26.9%	35.6%	38.0%	19.9%	13.1%
Idaho	\$11,379	\$2,750	\$50,321	22.6%	\$17,499	\$3,410	\$60,822	28.8%	53.8%	24.0%	20.9%	27.2%
Illinois	\$14,703	\$1,943	\$50,276	29.2%	\$18,510	\$2,628	\$62,069	29.8%	25.9%	35.3%	23.5%	2.0%
Indiana	\$13,884	\$1,860	\$50,480	27.5%	\$17,996	\$3,391	\$62,120	29.0%	29.6%	82.3%	23.1%	5.3%
Iowa	\$13,240	\$1,859	\$54,951	24.1%	\$16,123	\$2,921	\$65,514	24.6%	21.8%	57.1%	19.2%	2.1%
Kansas	\$13,460	\$1,750	\$51,228	26.3%	\$16,784	\$3,056	\$62,773	26.7%	24.7%	74.6%	22.5%	1.8%
Kentucky	\$13,352	\$1,980	\$46,393	28.8%	\$16,678	\$3,520	\$51,673	32.3%	24.9%	77.8%	11.4%	12.1%
Louisiana	\$13,230	\$2,083	\$43,092	30.7%	\$17,330	\$2,738	\$46,677	37.1%	31.0%	31.4%	8.3%	20.9%
Maine	\$14,576	\$2,281	\$49,515	29.4%	\$17,987	\$3,714	\$51,683	34.8%	23.4%	62.8%	4.4%	18.2%
Maryland	\$13,952	\$1,677	\$57,839	24.1%	\$18,519	\$3,100	\$67,361	27.5%	32.7%	84.9%	16.5%	14.0%
Massachusetts	\$14,606	\$1,639	\$56,420	25.9%	\$18,955	\$2,746	\$67,037	28.3%	29.8%	67.5%	18.8%	9.2%
Michigan	\$13,148	\$1,763	\$48,866	26.9%	\$17,113	\$2,834	\$61,191	28.0%	30.2%	60.7%	25.2%	3.9%
Minnesota	\$13,903	\$2,182	\$53,884	25.8%	\$17,545	\$3,295	\$72,018	24.4%	26.2%	51.0%	33.7%	-5.6%
Mississippi	\$13,740	\$2,011	\$44,014	31.2%	\$15,765	\$3,111	\$47,568	33.1%	14.7%	54.7%	8.1%	6.2%
Missouri	\$12,754	\$2,146	\$51,888	24.6%	\$16,638	\$3,773	\$61,470	27.1%	30.5%	75.8%	18.5%	10.1%
Montana	\$12,312	\$2,295	\$43,962	28.0%	\$17,835	\$3,590	\$60,654	29.4%	44.9%	56.4%	38.0%	5.0%
Nebraska	\$13,221	\$1,938	\$58,144	22.7%	\$16,617	\$3,424	\$65,607	25.3%	25.7%	76.7%	12.8%	11.4%
Nevada	\$12,496	\$1,498	\$51,251	24.4%	\$16,133	\$2,712	\$56,911	28.3%	29.1%	81.0%	11.0%	16.3%
New Hampshire	\$15,204	\$2,302	\$62,566	24.3%	\$19,066	\$4,992	\$72,011	26.5%	25.4%	116.9%	15.1%	9.0%
New Jersey	\$14,058	\$2,128	\$55,187	25.5%	\$18,242	\$2,689	\$60,484	30.2%	29.8%	26.4%	9.6%	18.4%
New Mexico	\$14,083	\$1,867	\$47,710	29.5%	\$16,954	\$2,724	\$51,764	32.8%	20.4%	45.9%	8.5%	11.0%
New York	\$14,730	\$1,728	\$43,213	34.1%	\$19,375	\$3,099	\$53,146	36.5%	31.5%	79.3%	23.0%	6.9%
North Carolina	\$13,643	\$1,932	\$48,007	28.4%	\$16,986	\$3,215	\$59,146	28.7%	24.5%	66.4%	23.2%	1.1%
North Dakota	\$12,544	\$1,435	\$57,182	21.9%	\$16,804	\$2,877	\$65,775	25.5%	34.0%	100.5%	15.0%	16.5%
Ohio	\$13,083	\$2,121	\$51,098	25.6%	\$17,523	\$3,119	\$60,454	29.0%	33.9%	47.1%	18.3%	13.2%
Oklahoma	\$12,900	\$1,977	\$48,106	26.8%	\$16,646	\$3,051	\$57,239	29.1%	29.0%	54.3%	19.0%	8.4%
Oregon	\$13,756	\$2,250	\$51,373	26.8%	\$17,127	\$3,988	\$59,254	28.9%	24.5%	77.2%	15.3%	7.9%
Pennsylvania	\$13,550	\$1,647	\$49,050	27.6%	\$17,900	\$3,030	\$61,971	28.9%	32.1%	84.0%	26.3%	4.6%

Appendix Figure 4 cont'd: Average Premiums, Deductibles, Incomes, and Cost Burden by State, 2010-2016

State	Premium 2010	Deductibles 2010	Income 2010	Cost Burden 2010	Premium 2016	Deductibles 2016	Income 2016	Cost Burden 2016	Premium Change	Deductible Change	Income Change	Relative Cost Burden Change
Rhode Island	\$14,812	\$1,999	\$52,092	28.4%	\$18,010	\$2,912	\$61,775	29.2%	21.6%	45.7%	18.6%	2.5%
South Carolina	\$13,234	\$2,396	\$46,126	28.7%	\$17,673	\$3,133	\$60,173	29.4%	33.5%	30.8%	30.5%	2.4%
South Dakota	\$12,542	\$2,034	\$52,189	24.0%	\$17,117	\$3,767	\$65,062	26.3%	36.5%	85.2%	24.7%	9.5%
Tennessee	\$12,729	\$2,038	\$42,784	29.8%	\$16,721	\$3,662	\$56,922	29.4%	31.4%	79.7%	33.0%	-1.3%
Texas	\$14,526	\$2,283	\$49,082	29.6%	\$17,529	\$3,185	\$60,006	29.2%	20.7%	39.5%	22.3%	-1.3%
Utah	\$12,618	\$1,846	\$58,515	21.6%	\$17,025	\$2,606	\$69,354	24.5%	34.9%	41.2%	18.5%	13.8%
Vermont	\$13,588	\$2,765	\$56,209	24.2%	\$17,795	\$3,145	\$59,879	29.7%	31.0%	13.7%	6.5%	22.9%
Virginia	\$13,907	\$1,866	\$58,552	23.8%	\$17,945	\$2,683	\$64,957	27.6%	29.0%	43.8%	10.9%	16.3%
Washington	\$14,188	\$1,888	\$54,527	26.0%	\$18,301	\$2,747	\$66,645	27.5%	29.0%	45.5%	22.2%	5.5%
Washington, DC	\$15,206	\$1,371	\$48,162	31.6%	\$18,864	\$2,234	\$61,244	30.8%	24.1%	62.9%	27.2%	-2.4%
West Virginia	\$14,194	\$1,365	\$48,390	29.3%	\$17,260	\$3,156	\$50,632	34.1%	21.6%	131.2%	4.6%	16.2%
Wisconsin	\$14,542	\$2,572	\$54,258	26.8%	\$17,477	\$3,534	\$64,458	27.1%	20.2%	37.4%	18.8%	1.2%
Wyoming	\$13,899	\$2,171	\$54,433	25.5%	\$19,617	\$3,024	\$59,802	32.8%	41.1%	39.3%	9.9%	28.5%

REFERENCES

- Weiner, J., and Glickman, A. (2018). What is "Affordable" Health Care? A Review of Concepts to Guide Policymakers. Retrieved from <https://ldi.upenn.edu/brief/what-affordable-health-care>
- Emanuel E.J., Glickman A., Johnson D. (2017). Measuring the Burden of Health Care Costs on US Families: The Affordability Index. *JAMA*, 318(19), 1863-1864. doi: 10.1001/jama.2017.15686
- Antos J. and Capretta J.C. (2017). Challenges in Measuring the Affordability of US Health Care. *JAMA*, 318(19), 1871-1872. doi:10.1001/jama.2017.16188
- Reinhardt U. (2017). What Level of Health Spending Is "Affordable"? *JAMA*, 318(19), 1869-1870. doi: 10.1001/jama.2017.16187



UNITED STATES OF CARE

United States of Care is a non-partisan non-profit organization mobilizing stakeholders to achieve long-lasting solutions that make health care better for all. United States of Care aims to ensure every American has access to an affordable regular source of health care; protection from financial devastation due to illness or injury; and to accomplish this in an economically and politically sustainable fashion.

UNITEDSTATESOF CARE.ORG

@USOFCARE



LEONARD DAVIS INSTITUTE OF HEALTH ECONOMICS

Since 1967, the University of Pennsylvania's Leonard Davis Institute of Health Economics (Penn LDI) has been the leading university institute dedicated to data-driven, policy-focused research that improves our nation's health and health care. Penn LDI works on issues concerning health care reform, health care delivery, healthy behaviors, and vulnerable populations. Penn LDI connects all of Penn's schools and the Children's Hospital of Philadelphia through its more than 300 Senior Fellows.

LDI.UPENN.EDU

@PENNLDI