



Brief Report

Health Care Spending and Insurance Premiums Among the Privately Insured

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Abstract

IMPORTANCE Large shares of the US public are struggling to afford their health insurance. High premiums limit access to coverage. Rising premiums in the market for employer-sponsored health insurance, where the plurality of the privately insured get their coverage, are also causing reductions in wage growth, lowering employment, and fueling income inequality.

OBJECTIVE To analyze the extent to which rising health insurance premiums reflect growth in health spending vs growth in markups in the large-group market, small-group market, and in the health insurance exchanges.

DESIGN, SETTING, AND PARTICIPANTS This cohort study analyzed the 2011 to 2024 Public Use Files from the Medical Loss Ratio Data provided by the Center for Consumer Information and Insurance Oversight at the Centers for Medicare & Medicaid Services. The data include information on insurance premiums, health spending, and insurer markups and are published annually. These data include information on the large-group market, small-group market, and health insurance exchanges.

MAIN OUTCOMES AND MEASURES Insurance premiums, health spending, and insurer markups (profits combined with administrative costs).

RESULTS From 2011 to 2024, across the large-group market, small-group market, and health insurance exchanges, the enrollee-weighted mean of insurance premiums grew by 78.4% (\$3143). In percentage terms, insurer markups decreased from 18.6% in 2011 to 14.9% in 2024. Ultimately, 91% of the growth in health insurance premiums was explained by growth in health spending ($R^2 = 0.91$).

CONCLUSIONS AND RELEVANCE This cohort study found that rising health spending explained 91% of the growth in insurance premiums from 2011 to 2024. This finding suggests that efforts to slow the growth in health insurance premiums should focus on slowing growth in health care spending.

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Introduction

There is growing concern among the US public about the rising cost of health insurance premiums.¹ Insurance premiums presently make up a large and growing share of household budgets. In 2024, the median household income was \$83 730, and the median personal income was \$63 360.² In the same year, annual premiums for employer-sponsored individual and family health insurance coverage were \$8951 and \$25 572, respectively, and \$7107 for an individual insurance plan purchased on the health insurance exchanges.³

In 2025, 6.2% of the US population purchased health insurance directly from an insurer.⁴ Among this cohort, 48% of individuals reported struggling to afford their monthly premiums.⁴

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Key Points

Question To what extent did growth in health spending explain growth in health insurance premiums among the privately insured from 2011 to 2024?

Findings This cohort study, which analyzed state-level data on insurance premiums, health spending, and insurer markups from 2011 to 2024, found that mean insurance premiums grew by \$3143 (78.4%), health spending grew by \$2844 (84.2%), and insurer markups decreased in proportional terms from 18.6% in 2011 to 14.9% in 2024. Overall, the growth in health spending accounted for 91% of the overall growth in mean premiums.

Meaning These findings suggest that efforts to slow the growth in insurance premiums should focus on slowing the growth in health care spending.

Supplemental content

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The same year, 54% of US adults obtained health insurance from an employer.⁵ Approximately 40% of workers expressed concerns about affording their employer-sponsored health insurance premiums.⁴ The economic consequences of high premiums in the individual market are clear: they lower access to coverage, which has knock-on health consequences.⁶ The economic consequences of rising employer-sponsored health insurance premiums are more subtle, but equally substantial. Employer-sponsored health insurance creates a mechanical link between what happens in health care markets (eg, increases in prices for health care goods and services) and what happens to non-health care labor markets (eg, the wages and employment of individuals working at firms outside the health care sector). A growing body of work suggests that increases in insurance premiums lead to reductions in employment and wages for workers outside the health care sector.⁷⁻⁹

Given the high burden insurance premiums are placing on the US public, understanding the mechanisms behind insurance premium growth is critical to being able to introduce policies that can successfully slow the growth in premiums. Our goal was to benchmark the growth in health spending and the growth in insurers' markups to understand their relative contributions to the growth in premiums.

To do so, this retrospective study analyzed state-level data on insurance premiums, health spending, and insurer markups from the Medical Loss Ratio Public Use Files from Center for Consumer Information and Insurance Oversight (CCIIO) at the Centers for Medicare & Medicaid Services. These data include information on the large-group market, small-group market, and health insurance exchanges. We used these data to determine the extent to which rising premiums reflect growth in health care spending.

From an insurer's perspective, premiums are written to cover expected costs or losses, and we therefore expected them to be sensitive to increases in health spending. On the other hand, outside of perfectly competitive insurance markets, premiums exceed average claims so that insurers can earn a profit. Moreover, even in a competitive insurance market, one would expect premiums to include a loading factor that covers the residual risk an insurer faces and the administrative (fixed) costs of operating an insurance plan. The introduction of medical loss regulations in the Patient Protection and Affordable Care Act, which require a fixed percentage of premiums be spent on medical claims, also impacts the incentives facing insurers. Cicala et al,¹⁰ for example, demonstrate that insurers who were previously paying claims under medical loss regulations experience larger increases in medical spending on their policyholders following the introduction of medical loss regulation.

Methods

Data

This cohort study used publicly available aggregate data and was determined to be non-human participants research, exempt from institutional review board approval by the Yale Social Science institutional review board, in accordance with the Common Rule. This study followed the Strengthening the Reporting of Observational Studies in Epidemiology (STROBE) reporting guideline. We used the 2011 to 2024 Public Use Files from the Medical Loss Ratio Data provided by the CCIIO at the Centers for Medicare & Medicaid Services.¹¹ The data contain total claims paid (covered health spending paid by insurers), premiums, and covered lives for each insurer and year. We aggregated the plan-level CCIIO data to a state-level and used them to analyze the variation and growth in mean insurance premiums and health spending (per covered life).

Outcomes

We calculated insurers' markups as the difference between their premiums and their health spending on their enrollees and report these markups as a percentage of the underlying health spending. As a result, markups include both profits and costs for insurers. The CCIIO data contain aggregate measures of premiums, spending, and enrollment across the large-group, small-group, and individual

health insurance markets. We used these data to construct state-level and national-level composite measures of premiums, health spending, and markups via weighted mean outcomes across insurance product segments. The means across product segments were weighted by the number of enrollees in each segment. We also analyzed each of these constituent markets separately. We also included data on inflation—the Consumer Price Index—from the US Bureau of Labor Statistics.

Statistical Analysis

To identify the share of the growth in premiums that could be explained by the growth in health spending, we ran a bivariate regression where the dependent variable was the state-level long difference in premiums from 2011 to 2024 and the independent variable was the state-level long difference in health spending from 2011 to 2024. The R^2 value from this regression provides the percentage of cross-state variation in premium growth from 2011 to 2024 that could be explained by growth in health spending; note that this is not a causal estimate. We also divided the long difference in national premiums by the long difference in health spending to illustrate the share of national premium growth explained by the growth in health spending. Analyses were conducted using Stata version 19 (StataCorp).

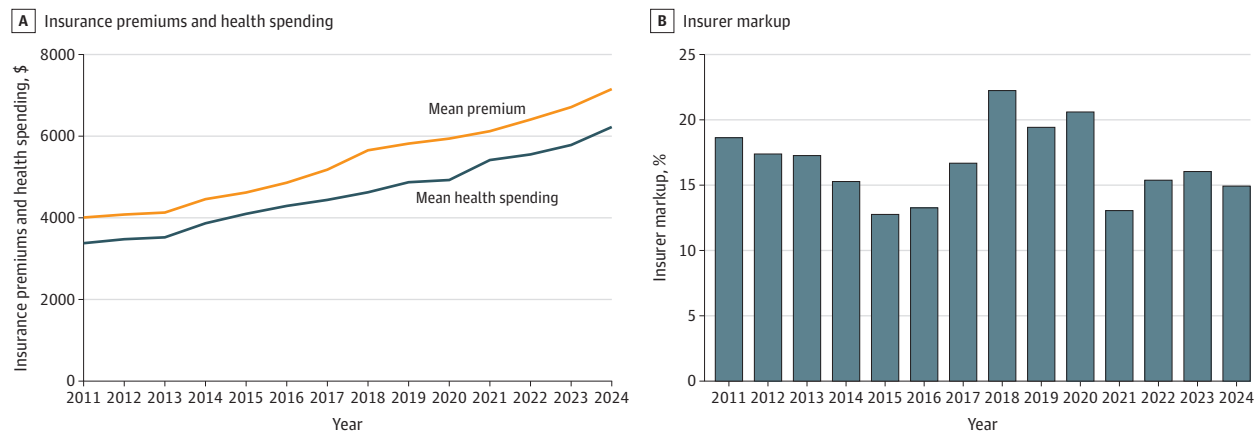
Results

eFigure 1 in Supplement 1 presents state-level premiums in 2024 averaged across the large-group market, small-group market, and individual market. Mean premiums were \$7151 per person. Mean premiums per person varied across states from \$5603 (Massachusetts) to \$11 438 (Alaska). In eFigures 2 to 4 in Supplement 1, we present similar graphs for the large-group, small-group and individual market. They show similar levels of premium variation.

As we illustrate in Figure 1, from 2011 to 2024, mean insurance premiums grew by \$3143 (78.4%). We present a map showing state-level growth in insurance premiums across our composite measure of premiums (eFigure 5 in Supplement 1) and across the product segments (eFigures 6-8 in Supplement 1). Premium growth ranged from 10.9% (Massachusetts) to 163.8% (Mississippi). We saw similar patterns of rising spending and steady markups in each of the constituent market segments (eFigures 6-8 in Supplement 1).

Whereas premiums grew 78.4% between 2011 to 2024, health spending grew by \$2844 (84.2%) during the same period. For context, if premiums had grown at the pace of general inflation, they would have only grown by \$1582 (39.5%). While insurer markups increased in dollar terms by

Figure 1. Line and Bar Graph of Insurance Premiums, Health Spending, and Insurer Markups, 2011-2024



Authors' calculations using data from the Center for Consumer Information and Insurance Oversight.¹¹ This figure presents a weighted mean of the premiums, health spending, and markups in the large-group market, small-group market, and exchange market.

\$299 (47.6%) during this period, they fell in percentage terms from 18.6% to 14.9% of premiums; this indicates that insurer margins accounted for a declining share of premium revenue over this period.

In **Figure 2**, we present a scatterplot showing the association of growth in state-year level mean premiums with state-year level mean health spending. The linear fit between state-year level mean premiums and state-year level mean health spending yielded an R^2 value of 0.91, indicating that state-level variation in health spending growth from 2011 to 2024 explained 91% of the variation in state-level growth in insurance premiums during that same period; this is an accounting decomposition rather than a causally identified estimate. As we illustrate in eFigures 9 to 11 in [Supplement 1](#), we saw similar results for each of the constituent market segments. To illustrate the robustness of this result, when we divided the long difference in national health insurance premiums from 2011 to 2024 by the long difference in health spending during the same period, we also found that the spending growth accounted for 91% of the growth in premiums.

The mean insurer markups nationwide were \$936 and were approximately 12.8% of insurance premiums. eFigure 12 in [Supplement 1](#) presents mean markups across states, and eFigures 13 to 15 in [Supplement 1](#) show similar results across insurance product segments. While insurance premiums varied by a factor of 2, markups varied from a median of \$90 in Arkansas to \$1678 in Alaska across states.

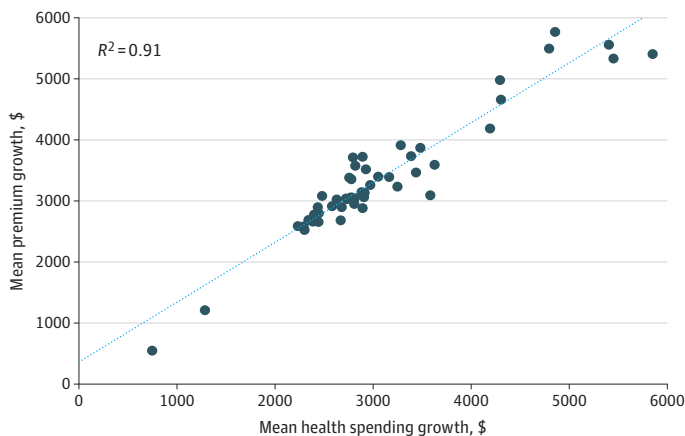
Discussion

In this cohort study, we found that most of the growth in health insurance premiums from 2011 to 2024 was explained by the growth in health care spending that occurred during the same period. From 2011 to 2024, health spending increased, and in percentage terms, insurer markups decreased. We document substantial variation in the level and growth in premiums across geographies and extensive variation in insurer markups across states.

Limitations

This study has limitations. First, our data do not include premiums and health spending for self-insured employers, which cover approximately one-half of the US population.¹² Self-insured employers typically contract with health insurers to provide the non-risk bearing components of health insurance (eg, structuring networks of hospitals and physicians or paying claims). These employers pay for their own health spending directly and remit a separate fee to the plan administrator for these services. Prior work has found that aggregate trends in premiums between self-insured and large group employers are similar.¹³ However, future studies should seek to

Figure 2. Scatterplot of the Change in Health Spending and the Change Premiums Between 2011 and 2024 Across States



Authors' calculations using data from the Center for Consumer Information and Insurance Oversight.¹¹ Each point represents state-level growth rates in mean premiums and health spending from 2011 to 2024. The R^2 value reported was estimated using a linear regression between premiums growth and spending growth. These patterns were found to be consistent when examining variation in growth rates across market segments (eFigures 9-11 in [Supplement 1](#)).

understand the association of health spending with the fees charged by insurers for administrative services. Second, this study is not causal.

Conclusions

In this cohort study, we found that growth in health care spending explained 91% of the growth in health insurance premiums from 2011 to 2024. Although average premiums increased over this period, insurer markups decreased in percentage terms.

ARTICLE INFORMATION

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Author Contributions: Drs Cooper and Craig had full access to all of the data in the study and take responsibility for the integrity of the data and the accuracy of the data analysis.

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SUPPLEMENT 1.

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SUPPLEMENT 2.

Data Sharing Statement