EDITORIAL

Challenges in Measuring the Affordability of US Health Care

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In this issue of *JAMA*, Emanuel and colleagues[1] propose an Affordability Index to measure the ability of the average US household to pay for its medical expenses. As the authors point out, standard economic measures used to track health spending do not adequately represent the effect of rising costs on families.

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Emanuel and colleagues[1] correctly observe that aggregated measures of health spending in the United States are not helpful to most people. Their intent is to create a measure using readily accessible data that is intuitive and easy for the average person to understand. Such an index, if widely adopted, might help galvanize public support for efforts to bring more cost discipline to the provision of medical care.

With this in mind, the authors settle on an approach that seems intuitive: they divide the total premium associated with the mean employer-sponsored insurance plan by the median income for US households. The average employer plan had a premium equal to 9.2% of the median income in 1999 and increased to 18.4% in 2016.[2,3]

Estimating the average family's ability to pay for health care is not a straightforward calculation. Complications arise because of the complex way health insurance is financed. Employer contributions to employer-sponsored insurance and a host of subsidies for health coverage through Medicare, Medicaid, insurance exchanges, and the tax system all provide resources that must be accounted for in any calculation. However, the amount of that support varies widely across individuals. That complexity does not lend itself to a clear understanding of affordability using a single simplified measure.

When employers sponsor insurance plans, they usually pay for most of the premiums. According to the Kaiser Family Foundation/Health Research & Educational Trust annual survey[2] in 2016, employers paid an average of $12 865 for family coverage for their workers; workers paid, on average, an additional $5277.

Emanuel and colleagues[1] correctly ignore the split between what employers and workers pay and instead focus on the total premium. Economists agree that, in a competitive labor market, even when a firm pays a large share of the premium for its workers, the cost of the premium is generally passed on to the workers in some form. The firm may reduce cash compensation by the amount of the firm's premium contribution. Other adjustments would also reduce the firm's labor costs, including reducing the generosity of the health plan, modifying other benefits, or hiring fewer workers.[4] To simplify the following discussion, assume that the full cost of the employer's contribution comes out of wages.

While the affordability index correctly identifies the total premium, rather than just the workers' share, it is not clear what the corresponding measure of ability to pay should be. Median household income captures what workers are paid in salaries and wages, netting out employer contributions for insurance premiums and other benefits. The median household income of workers excludes billions of dollars in payments implicitly made by workers for health insurance. Those payments are made by the firms that employ the workers, but it is the workers who ultimately pay these premiums in the form of reductions in the other forms of compensation they receive, including wages. In concept, that money associated with employer-paid insurance premiums should be included in the measure of ability to pay.

Viewed this way, the Affordability Index double-counts a large portion of premium costs. Household income, measured in cash, reflects the implicit payment by workers that was already made for insurance premiums. However, the index implies that workers are being forced to shoulder the total premium cost of an average employer plan out of their cash compensation. That exaggerates the burden of rising health costs imposed on workers. Total compensation would be a better measure of worker ability to pay.

With rising health costs, premiums and employer contributions for insurance have increased rapidly. That has contributed to slow wage growth. Between 1999 and 2006, the total compensation of workers with incomes around the 50th percentile of annual income increased by a total of 34%, while their cash compensation increased by only 27%.[5] The rising cost of health care took up a greater share of total compensation in 2006 than it did in 1999, thus depressing the growth in cash income. If total compensation were used in the Affordability Index, it would show slower growth in the percentage of income going to health insurance, particularly for middle-class families.

The Affordability Index is intended to provide an easily understood measure that is accessible to experts and the general public. Although such an approach can be useful for some purposes, it does not capture the wide variation in health care costs and financial resources to cover those costs across the diverse US population. In addition to a national index, regional or state-level indexes would partially address geographic variations. But the index would be misleading if it did not account for the sizeable government subsidies for health insurance.

The largest single subsidy is the favorable tax treatment for employer-sponsored insurance. Employer contributions to premiums are not treated as taxable income for workers, and nearly all of their own contributions are also free from

federal income and payroll taxes. According to the Joint Committee on Taxation,[6] households with adjusted gross incomes between $50 000 and $75 000 in 2007 received an average tax break of $3106 for employer-paid premiums. In effect, this tax subsidy reduces the cost of their health insurance premium. The Affordability Index ignores this important complication.

The Affordable Care Act (ACA) provides premium subsidies for individuals with incomes between 100% and 400% of the federal poverty level purchasing coverage on the exchanges. For a family of 4, the poverty level is $98 400, substantially higher than $59 030, the median household income reported by the US Census Bureau for 2016.[3]

The ACA premium subsidy can be substantially larger than the tax subsidy for employer coverage available to the same household. For example, a family of 4 living in Richmond, Virginia, with $60 000 in annual income (about the same as the national median) would be eligible for an annual subsidy of around $5800 in 2017.[7] Further, the ACA subsidies are calibrated to protect families from rapidly rising premiums; the total amount a household must pay in insurance premiums is capped as a percentage of its income, regardless of how fast total premiums rise.

Households with incomes near the national median are generally eligible for large federal subsidies through the tax code or the ACA that reduce the burden of health insurance premiums on these households. Those subsidies are not factored into the Affordability Index, which leads to an inaccurate view of health care affordability.

Federal insurance subsidies do not lower overall health costs. Instead, the subsidies move some of the cost burden from some households to others. However, ignoring the subsidies creates a distorted impression that moderate-income households must shoulder the entire cost burden. In fact, much of that cost is borne by federal taxpayers, particularly upper-income households in higher tax brackets.[8]

The financial burden of rising health costs has increased substantially over the past half century. In 1980, spending on health care equaled 8.9% of the nation's gross domestic product; in 2015, spending on health care reached 17.8% of the gross domestic product.[9] The rapid growth of health expenses relative to growth in the economy has translated into great financial pressure on households, employers, state governments, and the federal government.

It is important to note that much of the added spending pays for medical advances that improve health outcomes. The 5-year survival rate for women diagnosed as having breast cancer increased from 75% in 1975-1977 to 91% in 2006-2012.[10] The technology and surgical procedures for hip replacements have improved, providing much greater mobility to millions of patients. In addition, beginning in 2013, many patients with hepatitis C have had access to a previously unavailable effective treatment.

Nonetheless, the cost of US health care is higher than in other countries, and much of that care is of little value to patients. The question, then, is not just how much does health care cost relative to incomes, but rather, are the health services purchased worth the price.

The most important challenge for health care policy for the foreseeable future is to bring more cost-discipline to bear on the provision of medical services, which will help to ensure what is spent improves the health of patients. The rapid rise in costs is a financial burden that is forcing difficult choices on families, state governments, and the federal government.

It would be helpful to have a better assessment of the relative financial burden of these costs over time, but it may not be possible to settle on a single simple measure because of the complexity of the current situation. Instead, it is important to continue to provide as accurate a picture as possible of what is happening to families with the information that is available, which should be sufficient to demonstrate that far more must be done to eliminate waste and reduce the costs of health care.

ARTICLE INFORMATION

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