

## What Level of Health Spending Is “Affordable”?

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**Among the much-repeated words** woven into the US debate on national health policy are “affordability” and “sustainability.” Indeed, this debate is not confined to the United States.



Viewpoint [page 1863](#) and

Editorial [page 1871](#)

Remarkably, no one knows what these words actually mean at the practical level. Is there any economist or other expert, for example, who could be sure what percentage of the gross domestic product (GDP) the United States can “afford” to spend on health care, or what level of spending on Medicare is “sustainable”?

To illustrate, according to the latest report from the Boards of Trustees of the Federal Hospital Insurance and Federal Supplementary Medical Insurance Trust Funds,<sup>1</sup> spending on the federal Medicare program currently is 3.6% of a GDP per capita of about \$58 000. That leaves \$55 912 of non-Medicare GDP for all other spending. The trustees project that by 2050, Medicare will account for 6% of GDP. Assuming a low future rate of growth of only 1% per year for real GDP per capita, spending on Medicare will be 6% of a projected inflation-adjusted GDP per capita of \$80 544 (with the 6% spending leaving the contemporaries living in 2050 a non-Medicare GDP per capita of \$75 500). That amount is 35% higher than non-Medicare GDP per capita today. So will a spending level of 6% of GDP per capita in 2050 be affordable? Is Medicare sustainable?

Undaunted by these definitional difficulties, in this issue of *JAMA*, Emanuel and colleagues,<sup>2</sup> propose a new Affordability Index defined as “dividing the mean cost of employer-sponsored family health insurance by median household income.” Household income in this calculation represents household income from any source minus all taxes paid by households plus transfer payments, such as Social Security payments received by households.

As the authors note, the data for this index are readily available from income surveys regularly published by the US Census Bureau. The numerators are from the annual surveys of employer-sponsored insurance (ESI) conducted by the Kaiser Family Foundation. The denominators are from annual surveys of household income published by the US Census Bureau.

This proposed new index is closely related to information already routinely made available by the Kaiser Family Foundation surveys.<sup>3</sup> That information is reported in a graph that presents, in index form, the time path over the past several decades of (1) total ESI premiums, including the employers’ and the employees’ contributions to that premium; (2) the premium contributions made by employees; (3) a wage index; and (4) an index of general price inflation measured by the Consumer Price Index. That graphical display conveys

a good sense of the changing burden health insurance premiums impose on household income.

The proposed Affordability Index also is closely related to the Milliman Medical Index (MMI),<sup>4</sup> which is based on a large data bank of ESI-covered US families. The data bank is maintained by the employer-benefit consulting firm Milliman. The MMI shows, in dollars, the total cost of health care for a typical US family of 4 covered by a Preferred Provider Health Insurance Plan under ESI. Total costs in the index include the employee’s direct contribution toward his or her family’s insurance coverage, plus the family’s out-of-pocket health spending. In 2017, the estimated total cost is \$26 944, of which employers paid \$15 259 and employees, \$11 685.

As Emanuel et al<sup>2</sup> suggest, the estimated out-of-pocket spending in the MMI is more than twice as high as the estimate reported in data series maintained by the Medical Expenditure Panel Survey (MEPS) of the Agency for Healthcare Research and Quality and another estimate published by the US Bureau of Labor Statistics. But the MMI represents a family of 4, whereas the other 2 indexes represent an average family of only 2.5 persons.

In short, there already exist well-known sources of information on health spending per family that can easily be related to family income. The virtue of the Affordability Index proposed by the authors is that it is compact and easy to calculate. As such, it is a welcome new potential tool in the armamentarium of health statistics.

Based on 2016 data, the Affordability Index proposed by Emanuel et al<sup>2</sup> would be 30.7%. What does that number really mean? Was the spending it represented “affordable”? If not, how could the United States spend that much nevertheless?

The affordability of health spending can be measured at 2 distinct levels: (1) at the aggregate, macroeconomic level based on national mean or median values and (2) at the microeconomic level of health spending by individual families in relation to their “discretionary disposable income,” ideally defined as disposable income after taxes minus essential expenditures on food, housing, clothing, transportation to and from work, and other essentials. (It is not the definition of income used by Emanuel et al.<sup>2</sup>)

The proposed Affordability Index is aimed at the aggregate level, as it is based on the mean cost of health insurance coverage per family divided by median family income. This index has some meaning to health economists, who believe, on the basis of theory and some limited empirical evidence, that the cost of the contributions employers make to their employees’ health insurance is recovered by employers out of the cash take-home wages they pay their employees.<sup>5,6</sup> Based on that theory, the median income figure used by the authors

already has the mean premium cost for health insurance deducted from it, which leads to an exaggeration of the burden of health insurance the authors seek to measure.

However, economists do not know exactly how an employer's total outlay for the employees' health insurance is reflected in lower take-home pay for particular individual employees. So to tell a particular employee that the Affordability Index in 2016 was 30.7% does not really tell that employee much about how their employer adjusted wages for health care expenses because it is unlikely that the employee's take-home pay was reduced by 30.7% owing to health spending. Furthermore, many, perhaps most, employees probably do not believe the economists' story and assume instead that the owners of their companies absorb that part of the premium paid by employers.

What has long been needed in the United States is a regular, user-friendly annual report on the burden that total health spending by individual families imposes on their family budgets. For example, some individuals would like to know how many US families actually went bankrupt over health spending or were teetering on bankruptcy. Such a report could be stratified by age, income, race/ethnicity, geographic location, and other factors.

In place of a written report, an interactive information system could be used that makes it easy for individuals to relate

health-spending data to the income of households of different types. The Kaiser Family Foundation now routinely provides interactive maps showing the influence of health reform proposals on different types of families.<sup>7</sup>

The MEPS, conducted regularly by the Agency for Healthcare Research and Quality of the US Department of Health and Human Services,<sup>8</sup> already contains most of the survey data required for such reports. The survey "gathers data on individuals' health status, health conditions, medical events, charges and payments, employment, health insurance coverage, income, access to and satisfaction with care..."<sup>8</sup> If additional data were needed, they could most likely be accommodated in future MEPS surveys.

The desired reports or interactive information systems could be produced by the Agency for Healthcare Research and Quality or the Kaiser Family Foundation. But because the MEPS database is an open-access file, it could be produced by any organization capable of producing such analyses. All that is needed would be the fashioning from the data regular user-friendly reports or interactive information systems that would make them prominent for the media and the general public. Most importantly, such a data system could help constrain the folklore on which health policy so often is conducted and provide to legislators robust data about the fragile US health insurance system over which they preside.

#### ARTICLE INFORMATION

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