

Families USA Medicaid Calculator Methodology

Based on an analysis by Health Policy Analysts Ella Hushagen and Beth Wikler

In order to measure and quantify the role of Medicaid in state economies, Families USA conducted an economic input-output analysis of the state-level impact of the Medicaid program on the economies of all 50 states. Our analysis is based on the work of Richard Clinch, Director of Economic Research at the Jacob France Institute of the Merrick School of Business at the University of Baltimore, whom we originally retained to perform the analysis in 2004. This economic input-output analysis is based on the most recently updated Regional Input-Output Modeling System (RIMS II) economic model created by the U.S. Department of Commerce, Bureau of Economic Analysis (October 2007). The RIMS II model is built on Department of Commerce data that show the relationships among nearly 500 industries in the economy. These relationships are adjusted and updated to reflect a state economy's current industrial structure; trading patterns; and wage, salary, and personal income data.

Programs such as Medicaid have an economic impact by pulling in federal dollars, which promote new spending that would otherwise not exist in a state. A new source of spending from outside a state creates a larger impact on a state economy than the amount of new spending alone through what economists call "multiplier effects." An economic multiplier quantifies the total impact on a state economy of successive rounds of spending that occur as the new spending is earned by state businesses and residents who then spend these earnings on purchases from other state firms or residents, who in turn make other purchases, creating successive rounds of earnings and purchases. These multiplier effects are measured by the RIMS II economic model. The RIMS II model allows economists to estimate three economic impacts:

1. **Economic output**, or the value of goods and services produced in the state;
2. **Employment**, or the number of jobs in the state; and
3. **Employee earnings**, or the wage and salary income associated with the affected jobs.

In fiscal year 2008, the federal match for Medicaid will range from \$1.00 for every \$1.00 of state Medicaid spending (in 13 states) to \$3.22 for every \$1.00 of state Medicaid spending (in one state). This federal spending represents a new source of funding to a state's economy because it supports health care expenditures that would otherwise not occur or that would need to be taken from other sources of spending. The way that a state changes its Medicaid budget affects the total level of federal Medicaid matching funds that will flow into the state: When a state increases its Medicaid spending, it gains federal matching dollars; when it decreases Medicaid spending, it loses matching dollars. Because the level of state Medicaid spending determines the amount of this federal support, changes in state Medicaid budgets can have a significant impact on the overall level of health care spending and related health care-sector employment and earnings. Furthermore, these changes in spending influence the broader economy through the multiplier effects discussed above.

Relative to other kinds of state spending, spending on Medicaid is especially beneficial to the state's economy. This economic advantage derives from the federal match. Medicaid has a *net* positive economic impact when compared to state spending on other programs because it pulls a large infusion of new dollars into the economy from outside the state. The magnitude of this unique net positive impact on a state's economy differs from state to state based on both the size of the state's federal matching rate and the state's economic multipliers (which reflect economic conditions in the state).

The *Bad Medicine* report examines the economic impact of estimated state Medicaid spending in fiscal year 2008, the fiscal year for which state policymakers are currently budgeting. The economic impact of estimated state Medicaid spending in fiscal year 2008 and the economic impact multipliers for fiscal year 2008 are based on *federal* fiscal year 2008. All references in the report to fiscal year 2008 refer to the federal fiscal year that begins on October 1 of the preceding

year—in this case, October 1, 2007. State fiscal years vary. Forty-six states begin their fiscal years in July and end them in June. Alabama and Michigan have October-to-September fiscal years; New York has an April-to-March fiscal year; and Texas has a September-to-August fiscal year. In addition, 20 states operate on a biennial budget cycle.

The fiscal year 2008 economic impact multipliers presented in this calculator can be applied to changes in state Medicaid spending to calculate the economic impact on any state's 2008 fiscal year. These multipliers can also be used to estimate the economic impact of changes in state fiscal years 2009 and 2010, since the federal matching rate and the economic conditions of the state do not usually change dramatically over several months or even over a period of one or two years. (Although we also conducted an analysis of the District of Columbia, we do not present those data in this report.¹)

The Economic Impact of Estimated Fiscal Year 2008 State Medicaid Spending

The first analysis measures the economic impact of state Medicaid spending in fiscal year 2008 for the 50 states. We obtained fiscal year 2008 data on estimated state and federal Medicaid expenditures from the CMS-37 reports collected by the Centers for Medicare and Medicaid Services (CMS), U. S. Department of Health and Human Services. We derived the economic impact multipliers for state Medicaid spending in four steps:

1. The Bureau of Economic Analysis provides three RIMS II health care industry multipliers for different types of spending (rather than a single, aggregated health care industry multiplier):

- Ambulatory health care services,
- Hospital and nursing and residential care facilities, and
- Social assistance.

Using CMS-37 report expenditure data, we categorized each state's specific Medicaid spending as either ambulatory, hospital, nursing and residential care, or social assistance according to the North American Industry Classification System (NAICS) definitions of those industries. Based on each state's expenditure breakdown, we derived a weighted average health care industries multiplier for each state.

2. The next step was the development of a state-specific federal matching multiplier based on CMS-37 report expenditure data that reflected the total amount of actual federal matching funds received by the state for each dollar of state funds spent. We calculated actual federal matching rates by dividing the level of federal Medicaid assistance *and* administrative payments by the level of state Medicaid assistance *and* administrative spending to derive the average number of federal matching dollars generated for each dollar spent by the state government. We then derived the state-specific federal matching multiplier using the following formula: $(1 / (1 - \text{Federal Medical Assistance Percentage}) - 1)$. This multiplier measures the estimated federal dollars that will flow into the state for every state dollar spent on Medicaid in fiscal year 2008.

3. Then, for each state, we derived a total economic impact multiplier for Medicaid spending by combining the state-specific federal matching multiplier with the appropriate state-specific weighted health care economic multipliers.

4. The economic impact multipliers that we derived for each state calculate the impact on business activity and wages in 2005 dollars. However, the CMS expenditure data for fiscal year 2008 must be adjusted to 2005 dollars to derive the economic impact multiplier for jobs. Deflators exist for the three health care industries (ambulatory health care services, hospital and nursing and residential care facilities, and social assistance). Based on the spending breakdown we arrived at by analyzing the fiscal year 2008 CMS-37 Medicaid expenditure data, we derived weighted deflators for each state. We applied the deflators to the economic impact multipliers measuring the relationship between health care spending and jobs.

¹ As an economic system or unit, the District of Columbia is more like a city than a state. When new dollars flow into the District of Columbia and generate successive rounds of spending, a relatively high portion of purchases are made from outside the city (in the Maryland and Virginia suburbs). Therefore, comparisons of the economic multipliers in the District of Columbia to state economic multipliers are inappropriate. Data from our analysis of the District of Columbia are available from Families USA upon request.