

## Medicaid Financing: How the FMAP Formula Works and Why It Falls Short

Christie Provost Peters  
*Principal Policy Analyst*

**OVERVIEW** — Medicaid costs for health and long-term care services for low-income individuals are substantial. As a result, each state's "match rate," or federal medical assistance percentage (FMAP), which determines the share of Medicaid benefit costs the federal government pays, has enormous implications for state budgets and state economies, as well as for Medicaid beneficiaries and providers. Shifts in the FMAP from year to year, even minor ones, can mean the gain or loss of tens or hundreds of millions of federal matching dollars, depending on the size of the state's Medicaid program. This paper explains the FMAP formula, examines the limitations of this method for distributing federal Medicaid financing, and highlights options to address the formula's shortcomings.

# Medicaid Financing: How the FMAP Formula Works and Why It Falls Short

Medicaid financing policy has long been a source of tension between federal and state governments, which finance the program jointly, as well as an issue of debate among analysts and policymakers. The level of federal financial support for each state's Medicaid program and the way it is calculated (the federal medical assistance percentage, or FMAP, formula) are concerns of program supporters and critics alike. Medicaid's individual entitlement ensures federal subsidization of health care for low-income families and individuals and allows states financial flexibility for program expansions. At the same time, however, the entitlement, coupled with the longstanding methodology for determining the level of federal support for each state Medicaid program, creates incentives for states to maximize or enhance the federal share of Medicaid costs, sometimes to an extreme, which adds strain to the federal-state partnership.

The design and role of the FMAP formula in Medicaid financing policy is viewed by some as the origin of many of the program's problems, including the growth of federal and state Medicaid spending, program fraud and abuse, adversarial relationships between states and the federal government, questionable state accounting schemes, and more.<sup>1</sup> While the FMAP's role in contributing to these problems has more to do with the entitlement and overall Medicaid financing policy (for example, minimum federal matching rates and federal expenditures driven by state-determined levels of program spending) and less to do with the specific FMAP formula, the current FMAP formula does have its shortcomings.

The FMAP formula is criticized for not accurately accounting for states' ability to fund Medicaid services, for not adequately reflecting the excess burdens placed on states with high concentrations of poor persons, and for not being sufficiently responsive to current state economic conditions. As a result, many argue that the FMAP formula leaves states vulnerable to funding shortfalls at exactly the wrong time—when economic conditions create the greatest need for public services like Medicaid.

During an economic downturn, state revenues become stagnant or decline, while Medicaid enrollment increases as people lose their jobs and the health care coverage that comes with them. Since all but one state have balanced budget requirements, choices have to be made between increased taxes and decreased public services. As the second-largest item in most state budgets, Medicaid programs and their eligibility levels, benefits, and

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provider payments are often at risk for cuts during a recession. (See text box below for discussion of proposals to aid states.)

Both state and federal officials have a lot at stake with Medicaid and its financing structure. A downturn in the economy highlights the tensions within the financing framework and the impact of the FMAP. Whether they are examining options to address specific aspects of Medicaid's fiscal problems or looking at ways to improve the overall responsiveness of federal financial assistance, understanding the FMAP formula and its

### Economic Stimulus: Using the FMAP to Assist States During the Recession

As part of a stimulus package to stabilize the nation's economy, Congress is considering a temporary increase in the FMAP. Both the House and the Senate have included provisions in economic stimulus bills to temporarily boost FMAP percentages in an effort to head off state budget cuts in Medicaid. H.R. 7110 proposed increasing all states' FMAPs by at least 1 percentage point, and possibly an additional one to three percentage points, depending on various factors (that is, state unemployment rates, foreclosure rates, and food stamps participation). S. 3689 proposed an 8 percentage point increase across the board for all states. Both proposals required states to maintain FY 2008 Medicaid eligibility standards during the months the increased FMAP was provided. A temporary increase in the FMAP is viewed as an ideal way to provide federal assistance because it gives immediate financial relief to states, shores up state Medicaid programs, and automatically reverts to regular FMAP levels.

These efforts mark the second time in this decade that Congress has attempted to use the FMAP to temporarily infuse federal funds to states. The Jobs and Growth Tax Relief Reconciliation Act of 2003 provided \$10 billion in fiscal relief through a temporary FMAP increase of 2.95 percentage points for each state for five fiscal quarters in 2003 and 2004. States also received an additional \$10 billion in federal grants for general purpose assistance. To receive the higher FMAP, states could not lower their Medicaid eligibility thresholds during the time this fiscal relief was in effect.

According to the Congressional Budget Office, more than half of the states reported that the increased matching rates enabled them either to avoid or delay making cuts or to make smaller cuts to their Medicaid program.\* Indeed, the National Governors Association has stated that the influx of federal assistance helped states meet Medicaid expenditure increases that were driven by the economic downturn, forestalled additional reductions in Medicaid, and preserved Medicaid eligibility levels.

Opponents contend, however, that this solution for shoring up Medicaid does not necessarily translate to increased federal funding for the program. A temporary increase in the FMAP reduces the amount of funding that states need to spend on Medicaid to provide the same level of Medicaid services. There is no guarantee or requirement that states use all of the additional federal funds in their Medicaid programs. Since Medicaid federal matching funds are provided on a retrospective basis to reimburse states for past expenditures, anticipation of the higher FMAP allows states to redirect the additional funds anywhere in their budgets.†

\* Peter R. Orszag, Congressional Budget Office, *Options for Responding to Short-term Economic Weakness*, testimony before the U.S. Senate Finance Committee, January 22, 2008; available at [www.cbo.gov/ftpdocs/89xx/doc8932/1-22-TestimonyEconStimulus.htm](http://www.cbo.gov/ftpdocs/89xx/doc8932/1-22-TestimonyEconStimulus.htm).

† Robert B. Helms, American Enterprise Institute, *State Fiscal Relief: Protecting Health Coverage in an Economic Downturn*, testimony before the U.S. House Energy and Commerce Committee, Subcommittee on Health, July 22, 2008; available at [www.aei.org/docLib/20080723\\_22July2008.pdf](http://www.aei.org/docLib/20080723_22July2008.pdf).

limitations is important to policymakers considering changes to any aspect of Medicaid financing policy.

## THE FEDERAL SHARE OF MEDICAID EXPENDITURES

Each state's FMAP is determined annually by a statutory formula designed to account for income variation across the states.<sup>2</sup> For fiscal year (FY) 2009, FMAP percentages range from 50 percent in California and several other states to 75.84 percent in Mississippi. (See Table 1 for the FY 2009 FMAP for all states.) Overall, the use of this formula has resulted in the federal government's financing a relatively constant average of 57 percent of all Medicaid costs annually.<sup>3</sup> Except for Puerto Rico and the territories, there is no cap on most Medicaid amounts the federal government pays: the more a state spends, the more it receives from the federal government.

This financing arrangement provides an incentive for states to commit resources to their Medicaid programs: the higher a state's FMAP, the stronger the incentive. With an FMAP of 50 percent, for every dollar a state spends on Medicaid, the federal government contributes one dollar; with an FMAP of 75 percent, the federal contribution is three dollars per state dollar. Likewise, whenever a state cuts its Medicaid spending, it will forgo the federal share. A state with a FMAP of 75 percent, for example, has a reduction of three federal dollars for every state dollar it cuts, for a total reduction in Medicaid spending of four dollars.

### The FMAP Formula

Personal income is the key variable in the FMAP formula. The formula is based on rolling three-year average per capita income data for each state and the United States, produced by the Department of Commerce's Bureau of Economic Analysis.<sup>4</sup> The Medicaid statute sets forth how a state's share of Medicaid costs is to be calculated: the state share equals the square of a state's per capita income divided by the square of U.S. per capita income, multiplied by 0.45. It also defines the federal share as 100 percent minus the state share.

**TABLE 1**  
**Federal Medical Assistance Percentages (FMAP),**  
**FY 2009**

(Effective October 1, 2008 - September 30, 2009)

State	FMAP	State	FMAP
Alabama	67.98	Montana	68.04
Alaska	50.53	Nebraska	59.54
American Samoa	50.00	Nevada	50.00
Arizona	65.77	New Hampshire	50.00
Arkansas	72.81	New Jersey	50.00
California	50.00	New Mexico	70.88
Colorado	50.00	New York	50.00
Connecticut	50.00	North Carolina	64.60
Delaware	50.00	North Dakota	63.15
D.C.	70.00	No. Mariana Islands	50.00
Florida	55.40	Ohio	62.14
Georgia	64.49	Oklahoma	65.90
Guam	50.00	Oregon	62.45
Hawaii	55.11	Pennsylvania	54.52
Idaho	69.77	Puerto Rico	50.00
Illinois	50.32	Rhode Island	52.59
Indiana	64.26	South Carolina	70.07
Iowa	62.62	South Dakota	62.55
Kansas	60.08	Tennessee	64.28
Kentucky	70.13	Texas	59.44
Louisiana	71.31	Utah	70.71
Maine	64.41	Vermont	59.45
Maryland	50.00	Virgin Islands	50.00
Massachusetts	50.00	Virginia	50.00
Michigan	60.27	Washington	50.94
Minnesota	50.00	West Virginia	73.73
Mississippi	75.84	Wisconsin	59.38
Missouri	63.19	Wyoming	50.00

Source: Federal Register 72, no. 228, November 28, 2007, p. 67304.

The formula for the state share can be expressed as follows.<sup>4</sup>

$$\text{STATE SHARE} = 0.45 \times [\text{State Per Capita Income}^2 / \text{U.S. Per Capita Income}^2]$$

Therefore, the federal share can be expressed as:

$$\text{FMAP} = 1 - 0.45 \times [\text{State Per Capita Income}^2 / \text{U.S. Per Capita Income}^2]$$

The formula was established in statute when Medicaid was authorized in 1965.<sup>6</sup> It is designed to pay a higher FMAP to states with lower per capita income relative to the national average, such as Mississippi, and a lower FMAP to states with higher per capita income relative to the national average, such as Washington. The state multiplier of 0.45 ensures that states with average per capita income, such as Pennsylvania, receive a federal share of 55 percent. The goal of this formula structure is to reduce differences among states in medical care coverage for low-income people and to distribute fairly the burden of financing program benefits among the states so that states able to shoulder a bigger share of their costs do.

The statute establishes a minimum FMAP of 50 percent for states, stipulating that no state shall bear more than 50 percent of total costs, regardless of the result of applying the formula. Thirteen states have FMAPs equal to the 50 percent floor in 2009. The statute also contains an upper FMAP limit of 83 percent. The FMAP formula also does not apply to the territories, which are subject to an annual cap on federal Medicaid matching funds. Their FMAP is defined in the statute as 50 percent: the federal government pays 50 percent of the cost of Medicaid items and services up to the spending caps. In addition, the statute sets a 70 percent FMAP for the District of Columbia

The FMAP applies to state expenditures for most medical services and medical insurance services.<sup>7</sup> It does not apply to expenditures for certain services (for example, family planning services and supplies), specified populations (for example, Native Americans and Centers for Disease Control and Prevention-identified uninsured women with breast or cervical cancer), or Medicaid administrative costs.<sup>8</sup> Federal matching percentages for these services and populations are specified separately under federal law.

The Secretary of Health and Human Services publishes the FMAP between October 1 and November 30 each year. The FMAP is in effect for a one-year period, beginning the following federal fiscal year. For example, FMAP percentages for FY 2009 were published in the *Federal Register* in November 2007 and went into effect October 1, 2008.

## A FLAWED FORMULA

The FMAP formula has long been criticized. Many analysts and policymakers are concerned that the FMAP formula does not adequately reflect the differences among states' fiscal capacities, concentrations of low-income citizens, or service delivery costs. The FMAP formula also is criticized for not adequately responding to changes in individual state economic circumstances over time.<sup>9</sup> The reliance on per capita personal

income for determining the federal match is blamed for many of these shortcomings.

State resources, the number of people in poverty, and the cost of serving people in poverty are all indicators of two criteria that the Government Accountability Office (GAO) has said are appropriate for allocating federal funds: a state's ability to pay for health care services and the level of need of its citizens. Neither of these is adequately reflected in per capita personal income data, according to the GAO. Per capita income measures income received by state residents, such as wages, rents, and interest income, but it does not include taxable state product that minimally affects income data. This omission can result in the understatement of state resources, as occurs in the case of energy-exporting states, such as Alaska and Wyoming, and in the case of states that house numerous corporate headquarters, such as Delaware.

Per capita income also is not a good proxy for the differences in the cost of providing health care services to a state's Medicaid beneficiaries. Elderly individuals typically cost more to serve than adults and children, and states with similarly low per capita incomes can have very different proportions of elderly persons potentially eligible for Medicaid. In addition, to the extent per capita income does not reflect service cost differences, the FMAP formula does not truly reflect the burden on states with higher costs.

The GAO further argues that per capita income is "a poor measure of the size of states' poverty populations"<sup>10</sup> and therefore is a poor reflection of state-by-state beneficiary need. Two states with similar per capita incomes, for example, can vary widely in their percentages of people in poverty. In fact, a state with a relatively high per capita income and therefore a low FMAP percentage (for example, New York, which has an FMAP of 50 percent), can have a high concentration of people living in poverty.

Finally, there is a substantial time lag in the collection and calculation of the rolling three-year average per capita income data by the Commerce Department. As a result, FMAP percentages that are in effect are based on income data from three to six years earlier. Using a three-year average per capita income aids state budget planning by making the FMAP more stable and predictable.<sup>11</sup> However, the data lag for three-year average per capita income prevents the FMAP formula from responding quickly in the short term to economic downturns.<sup>12</sup> Since state economic growth can change dramatically within a year or two, this lack of responsiveness can leave states in a financial bind (see text box).

### Why FMAP Is Not Countercyclical

The inherent time lag in the FMAP formula means that some states receive lower FMAPs when their economies are performing poorly, because the per capita income data used is from a period when the state economy was stronger. As a result, when those states need greater financial assistance from the federal government to maintain their Medicaid programs' coverage, benefits, and provider payments during a time of fiscal crisis, the FMAP formula prevents them from getting it. As an example, states with the highest foreclosure rates (Florida, Arizona, and Nevada) will receive FMAPs in FY 2010 based on personal income data from 2005 through 2007, when their economies were booming. Florida's reduced FMAP in FYs 2009 and 2010 will mean that the state would have to add almost \$300 million in state funds in FY 2010 to maintain its FY 2008 program.

The poor economic conditions of states for FY 2009, for example, will not begin to be reflected in FMAP calculations until FY 2012, at the earliest; at that point, the FMAP will be based on per capita income data from 2007 through 2009.

## A MORE RESPONSIVE FMAP?

Proposals to revise the FMAP formula and/or how it is applied have been discussed over the years. Many of these address concerns of equity and responsiveness to state economic conditions. Modifying a formula that has been in place since 1965, however, generates “winners” and “losers” among the states. The Equitable Federal Medicaid Assistance Percentage Act of 1999, for example, sought to “replace the per capita income factor with an indicator to reflect the mismatch between state resources and the number of low-income residents in need of health care services.”<sup>13</sup> The proposed formula called for both a more comprehensive measure of state resources that would be adjusted for cross-state differences in the cost of health care services and a measure of people in need of services based on state poverty rates adjusted for state differences in cost of living. The GAO found this proposal “would substantially shift federal Medicaid funding among the states,” reducing some states’ FMAPs and increasing those of others. The new formula also would result in greater overall federal funding of the Medicaid program.

Other proposals focus on modifying the application of the FMAP formula. These include shortening the time period for which average per capita income is calculated and establishing a “trigger,” such as an increase in state or national unemployment rates, that leads to automatic, temporary increases in the FMAP when the economy slows down dramatically within a state or nationally.<sup>14</sup>

The shorter time period for determining per capita income would allow changes in economic conditions to be accounted for sooner and would help avoid “procyclical FMAPs” where some states have higher FMAPs during better economic times because the income data are from a period when the state economy was weaker. This change would address the general responsiveness of the FMAP formula, although some time lag would likely always exist. The automatic trigger approach for temporary increases in FMAP based on unemployment data could be targeted to assist only states facing difficult economic conditions, a large set of states with economic downturns, or all states. While this alternative would not address the sensitivity of the current FMAP formula with regard to general fluctuations in economic conditions, it would provide the states with predictable, automatic federal relief during more severe situations, such as a recession, when the threshold for the trigger is met.

**The poor economic conditions of states for FY 2009 will not begin to be reflected in FMAP calculations until FY 2012, at the earliest.**

## CONCLUSION

Medicaid program financing is not easily directed or controlled, particularly when the economy is performing poorly. It is not designed to be. As a major line item in state budgets and the largest source of federal grant support to states, both state and federal governments have a substantial fiscal interest in Medicaid and how well both coverage and costs can be managed. Predictable federal funding through the FMAP formula allows states to better plan their budgets in general and prevent deep program cuts in times of recession and budget shortfalls. The limitations of the current formula, however, can make this a challenge. Moreover, these limitations can leave states shouldering a larger share of the Medicaid cost burden, during a state or national economic crisis.

Addressing the limitations of this longstanding formula will raise many questions, including the following:

- What is the best way to update a formula with many state “winners” and “losers” in a time when overall budget neutrality is critical for federal and state governments?
- Is changing the current FMAP formula and its application the key to ensuring countercyclical financing, or should the provision of federal funds to states during economic downturns be addressed through other means?
- Is it possible to overcome political obstacles to change?

Until the shortcomings of the FMAP formula are addressed, states and the federal government will continue to face challenges in managing Medicaid costs and coverage, particularly during times of poor economic performance. As Medicaid costs increase in the future, especially but not exclusively in response to our aging population, the issue will grow in importance.

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## ENDNOTES

1. Robert B. Helms, “The Medicaid Commission Report: A Dissent,” Health Policy Outlook, no. 2 (January 12, 2007); available at [www.aei.org/publication25434/](http://www.aei.org/publication25434/).
2. This section, “The Federal Share of Medicaid Expenditures,” and the following section, “The FMAP Formula,” are taken almost entirely from Christie Provost Peters, “FMAP: The Federal Share of Medicaid Costs,” The Basics, National Health Policy Forum, October 10, 2008; available at [www.nhpf.org/pdfs\\_basics/Basics\\_FMAP\\_10-10-08.pdf](http://www.nhpf.org/pdfs_basics/Basics_FMAP_10-10-08.pdf).
3. Christine Scott, *Federal Medical Assistance Percentage (FMAP) for Medicaid*, CRS Report for Congress RS21262, March 1, 2005.
4. Section 1101(a)(8)(B) and section 1905(b) of the Social Security Act instruct how the FMAP is to be calculated.
5. State per capita income is the sum of the average annual per capita income over three years.

Endnotes / continued ►

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6. The FMAP formula was adapted from a per capita income formula originally used to fund hospital construction under the Hill-Burton Act of 1946.
7. The FMAP percentages also are used to determine the amount of federal matching for state expenditures for assistance payments for Temporary Assistance for Needy Families (TANF) Contingency Funds, the Child Care and Development Fund, and Title IV-E Foster Care and Adoption Assistance Maintenance payments.
8. Vic Miller and Andy Schneider, “The Medicaid Matching Formula: Policy Considerations and Options for Modification,” AARP Public Policy Institute, Washington, DC, September 2004; available at [http://assets.aarp.org/rgcenter/health/2004\\_09\\_formula.pdf](http://assets.aarp.org/rgcenter/health/2004_09_formula.pdf).
9. Miller and Schneider, “The Medicaid Matching Formula.”
10. General Accounting Office (GAO), *Medicaid Formula Differences in Funding Ability Among States Often Are Widened*, GAO-03-620, July 2003; available at [www.gao.gov/new.items/d03620.pdf](http://www.gao.gov/new.items/d03620.pdf).
11. Lynda Flowers. “The Medicaid Matching Formula: Responding to States in Times of Need,” AARP Public Policy Institute, Washington, DC, March 2007; available at [www.aarp.org/research/assistance/medicaid/fs134\\_medicaid.html](http://www.aarp.org/research/assistance/medicaid/fs134_medicaid.html).
12. For example, FMAP percentages for fiscal year 2009 are based on state per capita data over the three-year calendar period of 2004 through 2006.
13. GAO, *Medicaid Formula Differences*.
14. Vic Miller, “Stabilizing Medicaid Financing During Economic Downturns,” Policy Paper No. 2, Center for Children and Families, Georgetown University Health Policy Institute, December 2007; available at [http://ccf.georgetown.edu/index/cms-filesystem-action?file=ccf\\_publications/federal\\_medicaid\\_policy/stabilizing\\_medicaid.pdf](http://ccf.georgetown.edu/index/cms-filesystem-action?file=ccf_publications/federal_medicaid_policy/stabilizing_medicaid.pdf).



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