
Effects of Changes in Medicaid on Incomes and Jobs in Michigan: Estimates from the RIMS II Model

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Introduction: Medicaid and the Federal Match

Michigan's Constitution requires that the state balance its budget each year. General fund revenues peaked in fiscal year 1999-2000. Due to a combination of factors, including an economic downturn and legislated tax reductions, general fund revenues have fallen in each year since. At the same time, costs in traditional areas of government spending, including health care and education, continue to rise, making the annual process of balancing the budget extremely challenging.

In this environment, the governor and legislature must constantly reassess the budget, looking for areas where spending cuts might inflict the least pain. The Medicaid program is the largest single element of general fund spending, and as such a natural target for cuts. For the most part, Medicaid pays for medical care for the very poor—including the disabled, elderly in nursing homes, pregnant women, and children—who haven't the resources to provide for their own care. While we should always look for more effective and efficient ways to deliver services, cutting the program in any substantial way is difficult to do without inflicting harm on those who rely on it.

Another aspect of Medicaid makes it rather unusual among state programs. Because Medicaid is a combined federal-state effort, each general fund dollar spent by Michigan taxpayers brings with it more than a dollar of federal spending. Michigan's Federal Medical Assistance Percentage (FMAP) for fiscal year 2004-05 is 56.71 percent. The FMAP is the share of a dollar of Medicaid spending that the federal government pays. Therefore each additional general fund dollar is matched by \$1.31 in federal dollars.¹ Viewed another way, each general fund dollar cut from the program reduces Medicaid spending by \$2.31.

When in the process of balancing its budget the state spends less in one area in order to avoid cutting another area or raising taxes, that decision affects the pattern of employment in the state. If, for example, the state cuts funds from the Department of Corrections budget instead of reducing School Aid for K-12 education, fewer corrections workers will be hired, and more teachers and teachers' aides. In places where a correctional facility is an important part of the local economy, the loss of corrections jobs will have ripple effects on other local businesses, such as restaurants, retail stores, and rental housing.

Usually, when the state decides to cut, for example, \$20 million from one agency instead of another, the consequence will be fewer jobs related to the area cut, but more jobs related to the area where spending was not reduced. Different individuals will be affected, but on balance the net effect on employment in the state is likely to be small. Because the economy will adjust to changes in the pattern of demand, in the long run it is

¹ In a real sense, one dollar spent by Michigan taxpayers buys (almost) \$2.31 of health care. The rest of the cost is spread broadly among U.S. taxpayers, just as federal taxes paid by Michigan taxpayers help pay for Medicaid in other states. The "almost" is inserted because Michigan taxpayers pay for a small share of the matching dollars that come back to our state. That share is about three percent, in line with Michigan's share of total federal taxes.

best to evaluate each item of state spending on its own merits, and in comparison to the benefits taxpayers derive from spending their own money.

Because of the federal match, however, cutting Medicaid general fund spending would bring into play another factor that warrants consideration. Suppose that the state faces a choice between cutting general fund spending on Medicaid by \$100 million and, for example, raising an additional \$100 million through the state income tax. Raising the income tax would take \$100 million out of taxpayers' hands. Because some portion of that \$100 million would have been spent on goods and services produced within the state, the tax increase would reduce demand for state products and thereby reduce the level of employment. But the \$100 million reduction in general fund spending on Medicaid would reduce medical care spending by a larger amount, \$231 million, because of the loss of the federal match. We should expect the adverse employment consequences of the Medicaid reduction to be larger than the effects of the tax increase (or, alternatively, of a reduction in some other state expenditure that does not carry a similar federal match).

Purpose of the Study

The purpose of this study is to estimate the effects on incomes and employment of state residents of cutting Medicaid rather than taking an alternative budget-balancing action. For illustrative purposes, we will suppose that the Medicaid general fund cut would be \$100 million. We will consider two alternatives to the Medicaid cut: (1) an additional \$100 million raised through the state income tax, or (2) cutting some alternative form of spending that has income and employment effects similar to Medicaid except that it does not generate a federal match.

A Summary of Results

Before describing in more detail how the results were derived, we summarize them briefly and comment on how to interpret them. We estimate (see Table 1) that a \$100 million cut in Medicaid general fund spending, resulting in a \$231 million cut in total Medicaid spending with the loss of the federal match, would lead to a loss of \$181 million in income for state residents, and about 6,300 jobs in the state. The alternative of raising \$100 million through the income tax would, we estimate, lead to a loss of about \$35 million in income to state residents, and about 1,000 jobs. The net effect of cutting Medicaid general fund spending by \$100 million instead of raising taxes by a similar amount would thus be a loss of about \$146 million in income and 5,300 jobs.

We emphasize that this calculation does not count the direct loss of \$100 million from taxpayers' pockets in the case of the income tax. But neither does it count the loss of the services that the \$231 million would have bought in the case of the Medicaid cut. These may be called the primary effects of these policy alternatives. The effects identified in Table 1 are in addition to them.

In the second scenario, where the alternative to cutting Medicaid is to cut another program with similar income and employment effects except that the program generates

no federal match, the net effect of cutting Medicaid instead is about \$105 million in lost income and about 3,600 lost jobs.

**Table 1: Income and Employment Effects for Michigan
Of Cuts in Medicaid and Alternatives**

	Loss of Income to State Residents (\$ millions)	Loss of Jobs in State
(A) \$100 million cut in Medicaid spending (\$231 million with Federal match)	180.6	6,300
(B) \$100 million increase in state income tax	34.7	1,000
(C) \$100 million cut in alternative program with no Federal match	76.0	2,700
<i>Net Effects</i>		
Scenario 1: A – B	145.9	5,300
Scenario 2: A – C	104.6	3,600

The net effects on income shown in Table 1 do not take account of several factors that would, if included, make Medicaid cuts look less attractive. First, if general fund spending on Medicaid were cut by \$100 million, the resulting loss in income would reduce tax revenue going into the general fund (conservatively, by about five percent of the income loss). In effect, the \$100 million cut would improve the general fund balance by less than \$100 million. Second, for spending on hospitals, nursing homes, and HMOs, Michigan has enacted “provider taxes” that are used to generate additional federal matching funds. To the extent that spending cuts would reduce provider tax revenue, the general fund cuts would reduce federal matching revenue by even more than Table 1 assumes. Third, some of the cost of an income tax increase would be shifted to federal taxpayers through an increase in deductions for Michigan taxpayers who itemize.

Even if these are viewed as permanent policy changes, we should not view the numbers as indicating permanent differences in the income level or number of jobs in the state. Over time we expect the economy to adapt. New job opportunities for unemployed workers are likely to develop. However, it is fair to say that until reasonably full employment can be reached, cutting Medicaid as a way to balance the state budget contributes to higher unemployment, because of the loss of Federal matching funds and the ensuing multiplier effects.

How the Results were Derived

We carried out the analysis using the Regional Input-Output Modeling System (RIMS II), developed by the U.S. Bureau of Economic Analysis and widely used to analyze the

regional impacts of both public and privately funded programs and projects.² Input-output modeling, of which RIMS II is an example, is a framework for taking account of the interrelationships among industries, and for calculating the “multiplier effects” that are generated as spending in one industry creates income for workers and firms, which leads to additional spending. These multiplier effects are limited in size because at each “round” of spending, only a limited share stays within the state. A portion goes to federal taxes, and a large portion goes to sellers and producers outside of Michigan.

The RIMS II model is constructed from national data that show for each industry the pattern of its purchases from other industries. The model is then adapted to a regional economy like Michigan’s by making adjustments for the shares of purchases that go to within-state suppliers. Generating multipliers from the model relies on an assumption that existing spending patterns by industry would continue to hold if spending were increased or decreased (for example, that a \$1 million increase in hospital spending would be divided among workers and various suppliers in the same way as an average \$1 million of current hospital spending). The results from any analysis from RIMS II or any similar model should not be interpreted as precisely accurate, but rather as providing reasonable estimates of likely effects.

The effects of a cut in Medicaid—both the primary effects on program beneficiaries and the secondary effects on income and employment—would of course depend on the details of how the cut was carried out. We must therefore make some assumptions about the nature of the cut. Because the set of industries incorporated in RIMS II does not include a great deal of detail on health care, we must also make assumptions to match a change in Medicaid spending to the RIMS II model.

For our main analysis we assumed that if Medicaid were cut, all services would be reduced in proportion to their current shares in Medicaid spending. This probably does not correspond precisely to any particular cut that might be made, but it may be approximately correct if there were cuts in eligibility affecting individuals who use a “typical” mix of Medicaid services, or if payment rates to all Medicaid providers were cut proportionately.

Table 2 shows a breakdown of Medicaid spending by categories used by the Department of Community Health for fiscal year 2003. In conjunction with Table 3, the last column shows the RIMS II industry that we matched to each category. Currently a large share of Medicaid payments go to managed care organizations (HMOs and Community Mental Health Service Boards). Because most of these payments pass on to providers of care, we have treated 25 percent of Medicaid payments to managed care as going to the insurance industry, and allocated the other 75 percent across all other payment types in proportion to their shares of total Medicaid expenditures.

The loss of income and jobs shown for the Medicaid cut in Table 1 are generated by taking the \$231 million reduction in spending (or \$100 million in the case of line (C)), allocating it across industries according to the breakdown in Table 2, and then

² See <http://www.bea.doc.gov/bea/regional/rims/>

multiplying by RIMS II earnings and employment multipliers by industry and aggregating the total.³

In modeling the effects of an income tax increase (line (B) of Table 1), we use the RIMS II earnings and employment multipliers that apply to a change in compensation for the household sector.

Provider Category and Type	Amount	%	RIMS Sector
<u>Practitioners</u>	\$ 372,560,477	100.0%	
Physician, M.D. & Physical Therapists	\$ 150,020,593	40.3%	(1)
Physician, D.O.	\$ 30,888,829	8.3%	(1)
Clinical Laboratory	\$ 4,759,849	1.3%	(2)
Family Planning Clinic	\$ 527,565	0.1%	(1)
Medical Clinic	\$ 186,363,641	50.0%	(1)
<u>Inpatient Hospital</u>	\$ 881,169,877	100.0%	
I/P Hospital Claims	\$ 473,844,849	53.8%	(3)
I/P Hospital Special Payments	\$ 407,325,028	46.2%	(3)
<u>Outpatient Hospital</u>	\$ 123,068,772	100.0%	
O/P Hospital Claims	\$ 123,068,772	100.0%	(3)
<u>Pharmacy</u>	\$ 599,951,054	100.0%	
Pharmacy Claims	\$ 599,951,054	100.0%	(7)
<u>Vision</u>	\$ 4,010,601	100.0%	
Optical Company	\$ 371,875	9.3%	(7)
Optometrist, O.D.	\$ 2,398,270	59.8%	(2)
Optical House	\$ 1,240,456	30.9%	(7)
<u>Mental Health Outpatient</u>	\$ 26,474,712	100.0%	
Community Mental Health Service Board	\$ 26,474,712	100.0%	(2)
<u>Mental Health Inpatient</u>	\$ 16,384,484	100.0%	
State psychiatric hospital, inpatient	\$ 16,384,484	100.0%	(3)
<u>Mental Health Capitation</u>	\$ 1,287,434,195	100.0%	
Community Mental Health Service Board	\$ 1,287,434,195	100.0%	**
<u>Dental</u>	\$ 91,413,694	100.0%	
Dentist	\$ 61,938,693	67.8%	(1)
Dental Clinic	\$ 29,475,001	32.2%	(1)
<u>Home Health</u>	\$ 61,051,020	100.0%	
Home Health Agency and Hospices	\$ 61,051,020	100.0%	(5)
<u>Home Help</u>	\$ 212,675,308	100.0%	
Home Help Workers and Case Managers	\$ 212,675,308	100.0%	(5)
<u>Durable Medical Equipment & Supplies</u>	\$ 65,073,966	100.0%	
Orthotist & prosthetist	\$ 3,276,422	5.0%	(2)
Medical Supplier	\$ 61,797,544	95.0%	(7)
<u>Hearing</u>	\$ 5,176,380	100.0%	
Hearing & speech center	\$ 729,266	14.1%	(7)
Hearing aid supplier – dealer	\$ 4,447,114	85.9%	(7)

³ See the RIMS II User Handbook at <http://www.bea.doc.gov/bea/ARTICLES/REGIONAL/PERSINC/Meth/rims2.pdf> for more information about various types of multipliers.

Provider Category and Type	Amount	%	RIMS Sector
<u>Auxiliary</u>	\$ 9,944,737	100.0%	
Podiatrist/chiropracist d.p.m.	\$ 807,600	8.1%	(2)
Chiropractor (d.c.)	\$ 556,602	5.6%	(2)
Ambulance	\$ 8,580,535	86.3%	(2)
<u>HMOs</u>	\$ 1,478,401,958	100.0%	
HMO	\$ 1,478,401,958	100.0%	**
<u>HCBS Case Management</u>	\$ 23,888,156	100.0%	
Waiver Agents	\$ 23,888,156	100.0%	(5)
<u>Long Term Care</u>	\$ 1,291,403,608	100.0%	
Privately owned nursing home	\$ 926,057,312	71.7%	(4)
Publicly owned nursing home	\$ 176,205,981	13.6%	(4)
Hospital long term care unit	\$ 67,941,531	5.3%	(4)
Hospital swing beds (LTC)	\$ 18,554,694	1.4%	(4)
County medical care facility O/P	\$ 34	0.0%	(4)
State mental retardation facility inpatient	\$ 28,261,333	2.2%	(3)
Elderly and Disabled Waiver	\$ 73,092,268	5.7%	(5)
Nursing home mental retardation	\$ 28,544	0.0%	(4)
Nursing home mental illness	\$ 1,261,910	0.1%	(4)
Grand Total	\$ 6,550,082,999		

Source for Medicaid expenditures by category: Michigan Department of Community Health

**Expenditures are allocated 25% to industry (6) and 75% to a weighted average of the industries used for all other Medicaid services

RIMS II Industry Title	RIMS II Industry Code	Related 1997 NAICS Codes
(1) Offices of physicians, dentists and other health practitioners	621A00	6211, 6212, 6213
(2) Other ambulatory health care services	621B00	6214, 6215, 6219
(3) Hospitals	622000	622
(4) Nursing and residential care facilities	623000	623
(5) Home health care services	621600	6216
(6) Insurance carriers and related activities	524200	5242
(7) Retail trade	4A0000	44, 45

For comparison purposes, we considered two other scenarios. In one case we assume that the hypothetical Medicaid cut comes entirely out of hospital expenditures. We therefore apply multipliers appropriate for the hospital industry. In the other case we assume that it comes entirely out of the services of health practitioners such as doctors and dentists, and so use multipliers appropriate to that industry. In each case we compare the effects of the cuts to an increase in state income taxes.

Table 4 shows the estimated net effects on income and employment in these two scenarios. In conjunction with Table 1, Table 4 shows that as compared with the across-the-board Medicaid cuts, these more targeted cuts lead to somewhat larger income losses, but somewhat smaller job losses. These results indicate that according to the RIMS II model as we have applied it, a larger share of a dollar spent on either hospital care or

practitioner services remains in the state than is true for a typical Medicaid dollar. At the same time, the somewhat smaller numbers of jobs lost indicates that the average job lost in these scenarios is a somewhat higher paying job.

**Table 4: Net Income and Employment Effects for Michigan
Of Cuts in Medicaid Instead of Income Tax Increases**

	Loss of Income to State Residents (\$ millions)	Loss of Jobs in State
Cut in general fund Medicaid spending for hospital care	150.7	4,600
Cut in general fund Medicaid spending for services of medical practitioners	163.4	4,100

Cuts are \$100 million in general fund, or \$231 million including federal match

Conclusion

Michigan lawmakers face very difficult budgetary choices. The primary costs of spending cuts are the value of the services lost; the primary costs of tax increases are the reductions in taxpayers' purchasing power. Tax and spending policies also affect economic incentives of households and businesses. Lawmakers need to weigh these issues carefully as they consider different budget-balancing options.

This study concentrates on an issue that arises when state spending is matched with federal dollars, as in Medicaid. When state spending generates federal matching funds, the price of a dollar of services to Michigan taxpayers is reduced, and the federal dollars brought in can generate additional income and jobs in a less-than-fully employed economy.