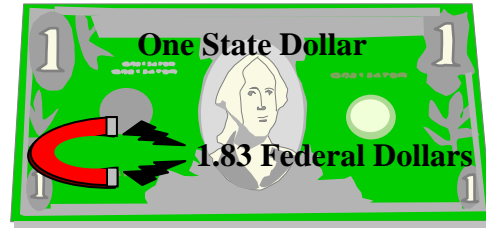
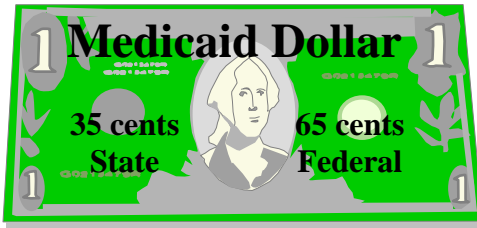


Economic Impact of the Medicaid Program on Oklahoma's Economy

May 2007 DRAFT



Medicaid Expenditures

1. Each dollar spent is 35 cents State and 65 cents Federal.
2. Each dollar the State spends attracts \$1.83 Federal dollars.

Total Federal and State Expenditures = \$3,291.4 Million
Total State General Funds = \$1,161.4 Million

Total Business Spending generated throughout Oklahoma's Economy from Medicaid Program
\$8.0 Billion

DIRECT IMPACT on Jobs and Income

Administrative Employees

Jobs	509	Income	\$29.8 Million
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Expenditures for Health Care Services

Jobs	44,518	Income	\$1,484.4 Million
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SECONDARY IMPACT on the Oklahoma Economy due to employee and business spending

Administrative Employee Spending

Jobs	387	Income	\$13.1 Million
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Health Care Providers Spending

Jobs	54,131	Income	\$1,291.5 Million
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TOTAL IMPACT FROM JOBS, INCOME, AND SELECTED TAXES of the Medicaid Program on Oklahoma's Economy

Jobs 99,036 Income \$2.8 Billion Taxes \$315.0 Million

**The Economic Impact
of the Medicaid Program
on Oklahoma's Economy**

Prepared for:

Oklahoma Health Care Authority
Oklahoma Medicaid Program

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The Economic Impact of the Medicaid Program on Oklahoma's Economy

It is well known that the Medicaid program in Oklahoma has a significant impact on the lives of eligible Oklahomans who require health care services and on Oklahoma's ability to provide health care services to its most vulnerable citizens. What is not well known is that the Medicaid program also has a huge economic impact on Oklahoma's economy. The overall objective of this report is to estimate the economic impact of the Medicaid program on Oklahoma's economy. More specifically, the report will:

1. Provide an overview of the Medicaid program participation and a summary of Oklahoma's Medicaid spending;
2. Estimate the economic impact of the administrative employees that work for Oklahoma's Medicaid program;
3. Estimate the economic impact of the health care services provided by Medicaid to the citizens of Oklahoma;
4. Estimate the impact of Medicaid on state sales taxes, state income taxes, and selected "other" state taxes; and
5. Summarize the total economic impact and tax impact that the Medicaid program has on Oklahoma's economy.

In order to calculate the economic impacts noted above, a widely-accepted input-output model known as IMPLAN was utilized to estimate the direct, secondary, and total impacts of the Medicaid program on Oklahoma's economy. The economic impact in this report will be quantified as employment, income, and output (total business spending) resulting from the Medicaid program. Information on the model and data used in this report can be found in

Appendix A. Employment is defined as full-time equivalent employees. Income is defined as personal income from wages and salaries, proprietor's income, and benefits. Output is defined as the total expenditures of the Oklahoma Medicaid program or the total "business" spending of the Medicaid program. Taxes generated by Medicaid include state sales taxes, state income taxes, and selected "other" state taxes.

Overview of the Medicaid Program

According to the FY 2005 Annual Report from the Oklahoma Department of Health and Social Services, 696,743 citizens were enrolled in the Medicaid program and the vast majority (687,451 or 98.7 percent) of the total persons enrolled utilized services paid for by Medicaid. Also, the Oklahoma Medicaid program covers more than 50.0 percent of all births in Oklahoma. Data in **Table 1** indicate that 65.0 percent of those eligible were children age 18 and under, accounting for 32.0 percent of the expenditures. The adults over 18 made up 35.0 percent of the total enrollment and accounted for 68.0 percent of the total Medicaid expenditures.

Summary of Medicaid Spending in Oklahoma in FY 2006

The Oklahoma Health Care Authority (OHCA) has responsibility for the Oklahoma Medicaid program. Federal and state Medicaid expenditures for FY 2006 for the State of Oklahoma are presented in **Table 2**, based on data from OHCA. Several important facts are illustrated in the data. In FY 2006, total Medicaid funds in Oklahoma equaled \$3.3 billion. Of the total, \$2.1 billion were federal funds and \$1.2 billion were state funds. State funds included state general funds and state matching funds. Of the total Medicaid expenditures, 65.0 percent were federal dollars and 35.0 percent were state funds. Another way of stating this is that for every \$1.00 expended by the State of Oklahoma for Medicaid, the federal government contributed \$1.83.

Table 1
Oklahoma – Medicaid Eligible Groups
by Percent of Enrollment and Expenditures, FY 2005

Groups	Percent of Enrollees	Percent of Expenditures
Aged, Blind, Disabled	20.0%	64.8%
Temporary Assistance for Needy Families (TANF) (formerly AFDC)	74.8%	35.1%
Other	<u>5.2%</u>	<u>0.1%</u>
	100.0%	100.0%
Age		
Adults over 18	35.0%	68.0%
Children 18 and under	<u>65.0%</u>	<u>32.0%</u>
	100.0%	100.0%

Source: FY 2005 Annual Report, Oklahoma Health Care Authority, Oklahoma Department of Health and Social Services.

Table 2
Oklahoma Medicaid Spending^a by Source of Funds and Type of Expenditure
FY 2006

Source	Totals (\$millions)	Percent
Oklahoma Medicaid Spending by Source of Funds		
Federal Funds	\$2,130.0	65%
State General Funds and State Matching Funds ^b	<u>\$1,161.4</u>	<u>35%</u>
Total Medicaid Funds	<u>\$3,291.4</u>	<u>100%</u>
Oklahoma Medicaid Spending by Type of Expenditures		
Expenditures for Health Care Services	\$3,110.1	94%
Expenditures for Administrative Services	<u>\$181.3</u>	<u>6%</u>
Total Medicaid Expenditures	<u>\$3,291.4</u>	<u>100%</u>

Source: FY 2006 State data as compiled by the Oklahoma Health Care Authority.

^a Total Medicaid expenditure includes all payments for health care services and those administrative expenditures that support payments for health care services.

^b Includes fees and taxes collected by Oklahoma Health Care Authority as state matching funds.

Another important fact is that \$3.1 billion was spent on direct health care services. This is 94.0 percent of the total Oklahoma Medicaid expenditures. Assuming the carryover funds were spent on administration of the program, approximately six percent of the total Medicaid expenditures were spent for the administration of this complex program.

The OHCA employed 357 full-time equivalent administrative employees in FY 2006 with a payroll of \$19.9 million (**Table 3**). In addition, a portion of the non-health care services spending was contracted to the private sector and other state agencies to administer the program. These functions include provider enrollment and claims payment, utilization management, and

Table 3
Oklahoma Medicaid Program – Administrative Employment and Income
FY 2006

Source	Employment	Income
Administration in OHCA		
Full-Time Equivalent Employees	357	
Income (Gross Payroll)		\$19,883,914
Administration from Contract Employees		
Estimated Full-Time Equivalent Employees	<u>152</u>	
Estimated Income (Gross Payroll)		<u>\$9,941,000</u>
Total Combined		
Estimated Full-Time Equivalent Employees	<u>509</u>	
Estimated Income (Gross Payroll)^a		<u>\$29,824,914</u>

Source: FY 2006 State data as compiled by the Oklahoma Health Care Authority.

^a Estimated income is gross payroll including salaries and benefits.

third-party recovery. It is estimated that these contracts created 152 contract jobs in Oklahoma with a payroll of \$9.9 million. The combined total of administrative jobs was 509 with a payroll of \$29.8 million.

Model to Estimate the Total Impact of the Medicaid Program

Medicaid expenditures pay directly for the delivery of health care services to the eligible recipients and pay for the administrative employees in the OHCA, as well as other contract employees and other administrative services. As the providers of the health care services and the administration spend money for goods and services, additional employment, income, and output are created in other businesses. The additional employment, income, and output can be calculated with an input-output model and IMPLAN data. This model and data are explained in more detail in **Appendix A**.

The concept is depicted in **Figure 1**, which illustrates the major flows of goods, services, and dollars in Oklahoma's economy relative to the Medicaid program. The activities of the OHCA are divided into two groups: 1) the administration function which includes the OHCA employees and contract employees, and 2) the health care services function which includes the employment, income, and output generated by the health care providers' businesses as a result of health care spending. The OHCA pays for the health services provided by the Medicaid health service providers.

The OHCA purchases goods and services from other businesses in Oklahoma and purchases labor from households. Likewise, the health care services paid for by the Medicaid program purchase goods and services from other businesses and purchase labor from households. Inputs are the goods and services that are purchased from other businesses within the state. Imports are goods and services or labor that are purchased outside of the state. The imports on **Figure 1** reflect goods and services or labor purchased outside of Oklahoma. The flow of labor and goods and services in the state is completed by households using their income to purchase

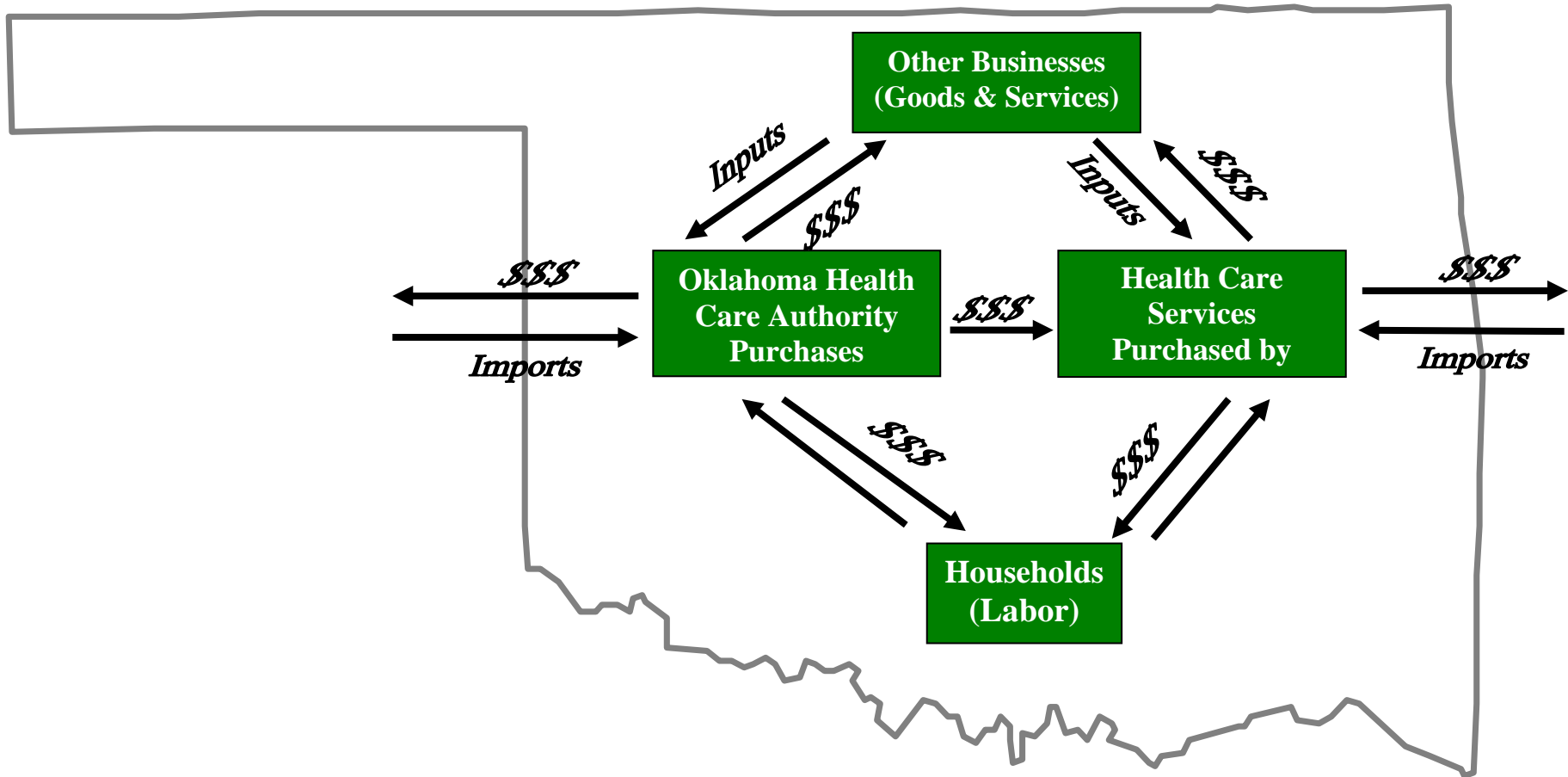


Figure 1
Flow of Goods, Services, and Dollars in Oklahoma's Economy
relative to the Medicaid Program

goods and services from other businesses within the state. Whenever goods and services or labor are purchased outside of the state, those dollars do not impact Oklahoma's economy.

Consider, for instance, the closing of a hospital. Health care is a service industry; as in this case, a hospital is a "service" business. When a hospital closes, it will no longer pay employees and income (dollars) going to households will stop. Likewise, the hospital will not purchase goods from other businesses and the dollar flow to other businesses will stop. This decreases income in the "households" segment of the economy. Since household income would decrease, households decrease their purchases of goods and services from businesses within the "services" segment of the economy. This, in turn, decreases these businesses' purchases of labor and inputs. Thus, the change in the economic base works its way throughout the entire economy.

The total impact of a change in the economy consists of direct and secondary impacts. Direct impacts are the changes in the activities (i.e. jobs, income, and business spending) of the impacting industry or business; in this example, the closing of a hospital. The impacting business, such as the hospital, changes its purchases of inputs as a result of the direct impact. This produces an "indirect impact" in the business sectors. Both the direct and indirect impacts change the flow of dollars to the state's households. The households alter their consumption accordingly. The effect of this change in household consumption upon businesses in the state is referred to as an "induced impact." The combination of the indirect and induced impacts is the secondary impact.

A measure is needed that yields the effects created by an increase or decrease in economic activity. In economics, this measure is called the "multiplier effect." The multipliers can measure employment, income, and output shifts created by any economic change (such as the Medicaid program). The health employment multiplier indicates the total employment

change throughout the economy of Oklahoma for each employment change in the health sector. The health income multiplier indicates the total change in income (dollars) throughout the economy due to a one dollar change in income in the health sector. The output multiplier indicates the total business spending change throughout the economy of Oklahoma for each dollar of business spending from the Medicaid program. For example, an income multiplier of 1.5 indicates that if one dollar of (direct) income is generated in the health sector, then \$0.50 of income is generated in other sectors due to the spending of both businesses and households. An employment multiplier of 1.75 indicates that if one (direct) job is created by the health sector, an 0.75 job is created in other sectors due to business and household spending.

Economic Impact of the Medicaid Program

The impact from employment, income, and output will be illustrated for the Oklahoma Medicaid program. This section shows the calculations of impact of the administration of the program and the impact of the health care services provided by the program separately. The administration and health services impacts are combined in the summary of the program.

Economic Impact of the Medicaid Administration

The administration of the Oklahoma Medicaid program creates an economic impact on the economy of Oklahoma. Employment, income, and output impacts from the administration of the Medicaid program are presented in **Table 4**. The administrative employment includes both state and contract employees that perform functions that directly support payments for health care services. The total number of OHCA state administrative employees in FY 2006 was 357 and the contract employment was 152, for a total of 509 administrative employees. As the administrative employees purchase goods and services, secondary employment and income

impacts are created in other businesses in Oklahoma's economy. These secondary benefits are estimated on the basis of an employment multiplier for the government sector.

Table 4
Employment, Income, and Output Impact
from Oklahoma Medicaid Administration
on the Economy of the State of Oklahoma
FY 2006

Category	Administration Impact		
Employment Impact			
Total Direct Employment	509		
Employment Multiplier		1.76	
Secondary Impact			<u>387</u>
Total Employment Impact			<u>896</u>
Income Impact			
Total Direct Income	\$29,824,914		
Income Multiplier		1.44	
Secondary Impact			<u>\$13,122,962</u>
Total Income Impact			<u>\$42,947,876</u>
Output Impact (Total Business Spending)			
Total Direct Expenditures	\$181,300,000		
Output Multiplier		2.29	
Secondary Impact			<u>\$233,877,000</u>
Total Income Impact			<u>\$415,177,000</u>

SOURCE: Employment and income for administration from Oklahoma Health Care Authority; Minnesota IMPLAN Group, Inc., IMPLAN multipliers for the State of Oklahoma.

The employment multiplier for the government sector in Oklahoma is 1.76. The employment multiplier indicates that for each person employed in the government sector, another 0.76 job is created in other sectors of the economy throughout Oklahoma. By applying

the employment multiplier of 1.76 to the total direct administrative employment of 509, secondary employment is estimated at 387 employees ($509 \times 0.76 = 387$). Thus, the total of direct and secondary employment created by the OHCA and contract employees was 896 ($509 \times 1.76 = 896$).

The income impact created by the OHCA administration can be estimated in a similar manner. The total combined direct payroll was estimated at \$29.8 million. Applying the income multiplier for the government sector of 1.44 to this payroll generated a secondary impact of \$13.1 million and a total income impact of \$42.9 million throughout the Oklahoma economy. Again, the income multiplier of 1.44 implies that for each dollar of income change, another 44 cents of income is created in other sectors (or businesses) throughout the economy of Oklahoma.

OHCA has provided data that the Oklahoma Medicaid program spent approximately \$181.3 million on administration of the program in FY 2006. This includes the administrative employees both within the OHCA and on contracts and all other administrative expenditures (building expenses, furniture, utilities, supplies, etc.). An output multiplier for the government sector is 2.29. Upon applying the output multiplier, secondary business expenditures resulting in other businesses throughout the economy totals \$233.9 million. The total output impact of the Medicaid administration is \$415.2 million; this represents total business expenditures from the Medicaid program administration and total business expenditures in all other sectors or businesses in the economy due to the Medicaid administration's expenditures.

National and Oklahoma Health Care Expenditures and Medicaid Expenditures

In order to determine the employment and income for the Oklahoma Medicaid program from health care services expenditures, a brief look at the total personal health care expenditures and the total Medicaid personal health care expenditures for the United States and the State of

Oklahoma for 2004 are included in **Table 5**. Total personal health care includes the health care expenses that are included in Medicaid health care expenditures. The percent of total personal

Table 5
Total and Medicaid Personal Health Care Expenses by Major Expense Categories
for the United States and Oklahoma, 2004

Expense Categories	Total Personal Health Care Expenses (\$millions)	Percent of Personal Health Care	Total Medicaid Personal Health Expenses (\$millions)	Percent of Medicaid Personal Health	Medicaid Percent of Personal Health
UNITED STATES					
Hospital Care	\$566,886	36.5%	\$96,814	35.9%	17.1%
Physician/Clinic Services	\$393,713	25.4%	\$27,840	10.3%	7.1%
Other Professional Services	\$52,636	3.4%	\$3,114	1.2%	5.9%
Dental Services	\$81,476	5.3%	\$4,041	1.5%	5.0%
Other Personal Health Care	\$53,278	3.4%	\$36,684	13.6%	68.9%
Home Health Care	\$42,710	2.8%	\$13,614	5.0%	31.9%
Nursing Home Care	\$115,015	7.4%	\$51,496	19.1%	44.8%
Drugs, DME, & Nondurables	<u>\$245,540</u>	<u>15.8%</u>	<u>\$36,289</u>	<u>13.4%</u>	14.8%
Total Personal Health Care	<u>\$1,551,255</u>	100.0%	<u>\$269,891</u>	100.0%	17.4%
STATE OF OKLAHOMA					
Hospital Care	\$6,226	37.3%	\$812	32.6%	13.0%
Physician/Clinic Services	\$4,192	25.1%	\$311	12.5%	7.4%
Other Professional Services	\$544	3.3%	\$8	0.3%	1.5%
Dental Services	\$823	4.9%	\$42	1.7%	5.1%
Other Personal Health Care	\$614	3.7%	\$458	18.4%	74.6%
Home Health Care	\$470	2.8%	\$38	1.5%	8.1%
Nursing Home Care	\$1,160	6.9%	\$487	19.5%	42.0%
Drugs, DME, & Nondurables	<u>\$2,682</u>	<u>16.1%</u>	<u>\$336</u>	<u>13.5%</u>	12.5%
Total Personal Health Care	<u>\$16,709</u>	100.0%	<u>\$2,493</u>	100.0%	14.9%

SOURCE: U. S. Department of Health and Human Services, Centers for Medicare and Medicaid Services, National Health Expenditure Data and State Data, 2004 data, Accessed website February 22, 2007, <http://www.cms.hhs.gov/NationalHealthExpendData>.

health care for the U.S. and for Oklahoma are shown. These percents clearly indicate that the Oklahoma Medicaid expenditures are much higher in the health expense categories of “Other Personal Health Care,” “Home Health Care,” and “Nursing Home Care.” The weights by health expense category for Oklahoma Medicaid are critical in calculating the estimated Medicaid employment and income from total Medicaid health services expenditures.

Employment and Income - Medicaid Health Care Services Expenditures

The employment and income from Medicaid health care services expenditures were calculated, utilizing the percent of Medicaid personal health care expenditures by health expense categories from **Table 5**. The total expenditures for health care services from the Oklahoma Medicaid program were \$3.1 billion, as provided by the OHCA. In order to allocate the total to the health expense categories, the percent of Medicaid personal health care expenditures was applied to the \$3.1 billion total. These FY 2006 estimated Medicaid health care expenditures by health expense category were the basis of calculating the employment and income in **Table 6**.

From the IMPLAN model, data by health care categories were available for the number of employees per one million dollars of output. Applying this ratio to the estimated Medicaid expenditures by health expense category, employment for FY 2006 was estimated at 44,009 employees. Also, from the IMPLAN model, data by health care categories were available for the percent of income per one dollar of output. This percent was applied to the estimated Medicaid expenditures by health expense categories and resulted in the estimated income from Medicaid personal health care expenses. The estimated income (wages and salaries plus proprietor income) was \$1.5 billion from the Medicaid health services expenditures.

Table 6
Calculating Medicaid Employment and Income from Medicaid Health Care Services Expenditures

OK Medicaid Expenditures for Health Care Services, FY 2006							<u>\$3,110,100,000</u>
Expense Category	% Medicaid Personal Health Expenses	Estimated FY 2006 Medicaid Expenses by Health Categories	Employment/\$Million Total Output	Estimated FY 2006 Medicaid Employment	% of Income/\$1 Output	Estimated FY 2006 Medicaid Income	
Hospital Care	32.6%	\$1,010,000,000	10.55	10,656	44.5%	\$449,450,000	
Physician/Clinic Svcs	12.5%	\$390,000,000	9.82	3,830	61.3%	\$239,070,000	
Other Prof Svcs	0.3%	\$10,000,000	9.82	98	61.3%	\$6,130,000	
Dental Svcs	1.7%	\$50,000,000	9.82	491	61.3%	\$30,650,000	
Other Pers Hlth Care	18.4%	\$570,000,000	7.9	4,503	35.7%	\$203,490,000	
Home Hlth Care	1.5%	\$50,000,000	25.4	1,270	57.5%	\$28,750,000	
Nursing Home Care	19.5%	\$610,000,000	25.5	15,555	56.7%	\$345,870,000	
Drugs/DME/Nondurables	<u>13.5%</u>	<u>\$420,000,000</u>	18.11	<u>7,606</u>	43.1%	<u>\$181,020,000</u>	
Total Health Expenses	<u>100.0%</u>	<u>\$3,110,000,000</u>		<u>44,009</u>		<u>\$1,484,430,000</u>	

SOURCE: Total Medicaid Expenditures, FY 2005, from Oklahoma Health Care Authority; Percent Medicaid Expenses by Health Care Categories, US DHHS, Centers for Medicare and Medicaid Services, National Health Expenditure Data and State Data, 2004 data, Accessed website February 22, 2007, <http://www.cms.hhs.gov/NationalHealthExpendData>; Employment/\$million total output and percent of income/\$1 output from Minnesota IMPLAN Group, Inc.

Economic Impact of the Medicaid Health Care Services Expenditures

From the total Medicaid health services expenditures and the estimated employment and income in **Table 6**, the economic impact of the Medicaid health care services expenditures were calculated in **Table 7**. Even though this report estimates the aggregate impact of the Medicaid program on the state's economy, it is important to note that many other non-Medicaid health care services in rural Oklahoma could not survive without Medicaid spending.

Table 7
Employment, Income, and Output Impact
from Oklahoma Medicaid Health Services
on the Economy of the State of Oklahoma
FY 2006

Category	Medicaid Health Care Services Impact		
Employment Impact			
Total Direct Employment	44,009		
Employment Multiplier		2.23	
Secondary Impact			<u>54,131</u>
Total Employment Impact			<u>54,131</u>
Income Impact			
Total Direct Income	\$1,484,430,000		
Income Multiplier		1.87	
Secondary Impact			<u>\$1,291,454,100</u>
Total Income Impact			<u>\$2,775,884,100</u>
Output Impact (Total Business Spending)			
Total Direct Expenditures	\$3,110,100,000		
Output Multiplier		2.44	
Secondary Impact			<u>\$4,478,544,000</u>
Total Income Impact			<u>\$7,588,644,000</u>

SOURCE: Employment and income for health services estimated in Table 6; Minnesota IMPLAN Group, Inc., IMPLAN multipliers for the State of Oklahoma.

The direct impacts identified and estimated are employment, income, and output resulting from the Medicaid health care services expenditures. To estimate the total economic impact on Oklahoma's economy, employment, income, and output multipliers for Oklahoma were derived from IMPLAN.

The model calculates the employment, income, and output change in all of the businesses that are impacted by these purchases. The health sector employment and income multipliers are 2.23 and 1.87, respectively. The total employment impact of Oklahoma's Medicaid program was 54,131 jobs, which includes those employees directly employed as a result of the Medicaid expenditures (44,009 employees) and the secondary employment created throughout the other sectors of Oklahoma's economy (54,131 employees).

The income impact of Oklahoma's Medicaid program includes the income directly resulting from the Medicaid program of \$1.5 billion and the secondary income created throughout the other sectors of Oklahoma's economy of \$1.3 billion, for the total income impact of \$2.8 billion.

The direct impact of Oklahoma's Medicaid health care services expenditures was the total health care services expenditures of \$3.1 billion. The health services output multiplier was 2.44 and, when applied, resulted in a secondary impact of \$4.4 billion in business spending in other businesses or sectors as a result of the Medicaid health care services expenditures. The total impact of the Medicaid health care services expenditures was estimated at \$7.6 billion, representing the total business spending from Medicaid health care services and the total business spending from all other businesses or sectors as a result of the Medicaid health care services expenditures.

The Impact of Oklahoma Medicaid Spending on Oklahoma Taxes

The impact that Medicaid has on employment and income is tremendous. The bottom line is that the \$1.2 billion from the Oklahoma state funds generates 99,036 jobs and \$2.8 billion in income. The income in turn generates state taxes which come back to the state. State sales taxes, state income taxes, and selected “other” state taxes resulting from Medicaid expenditures are presented in **Table 8**.

State taxes were estimated by deriving the amount of Oklahoma sales tax generated per employee for the state from the Oklahoma Office of State Finance, Oklahoma Comprehensive Annual Financial Reports for Fiscal Years ending June 30, 2005 and June 30, 2004. The average sales tax per employee was then multiplied by the number of direct employees of 44,518 and secondary employees of 54,518 to derive the estimates of \$51.1 million and \$62.6 million, respectively. The total sales tax impact was estimated at \$113.7 million.

State income taxes were estimated from data provided by the OHCA, compared to state data from the Oklahoma Office of State Finance, Oklahoma Comprehensive Annual Financial Reports for Fiscal Years ending June 30, 2005 and June 30, 2004. The total amount of state taxes withheld for OHCA employees was obtained. From this total, the amount of state income tax withholding per employee was calculated and applied to both direct and secondary employment. The total estimated state income taxes resulting from the Oklahoma Medicaid Program are \$187.1 million.

The selected “other” state taxes include alcoholic beverage excise taxes, mixed beverage gross receipts taxes, beverage taxes, cigarette taxes, and tobacco products taxes and data were from the Oklahoma Office of State Finance, FY 2006 Executive Budget, Schedule of Tax

Table 8
Impact of Selected Oklahoma Taxes
Generated by Oklahoma Medicaid Program

Type of Tax	Average Tax/Employee (\$\$)	State Total Tax Amounts (\$\$)	
State Sales Tax			
State sales tax - Direct employees	\$1,148.26	\$51,118,062	
State sales tax - Secondary employees	\$1,148.26	<u>\$62,600,518</u>	
Total Impact - State Sales Taxes			\$113,718,580
State Income Tax			
State income tax - Direct employees	\$1,889.29	\$84,107,221	
State income tax - Secondary employees	\$1,889.29	<u>\$102,999,909</u>	
Total Impact - State Income Taxes			\$187,107,130
Selected "Other" State Taxes ¹			
Selected "Other" state taxes - Direct employees	\$143.00	\$6,366,074	
Selected "Other" state taxes - Secondary employees	\$143.00	<u>\$7,796,061</u>	
Total Impact - Selected "Other" State Taxes			<u>\$14,162,135</u>
Total Impact - State Sales, State Income, & Selected "Other" State Taxes			<u>\$314,987,845</u>

¹ Selected "other" state taxes include: alcoholic beverage excise taxes, mixed beverage gross receipts taxes, beverage taxes, cigarette taxes, and tobacco products taxes.

Revenues, Fiscal Years 2002-2006. The selected “other” state taxes were calculated by deriving the state average tax per employee. This procedure produced an estimate of \$14.1 million in selected “other” state taxes.

In summary, the state contributed approximately \$1.2 million from Oklahoma state funds. These dollars when matched by the federal dollars and secondary impacts generated a total of state sales tax, state income tax, and selected “other” state taxes of \$315.0 million.

Summary

The objective of this report was to estimate the economic impact of the Medicaid program on Oklahoma’s economy. Although there is a tremendous amount of information about the program services, providers, and recipients, the economic impact is not well known. This summary will present selected economic impact highlights of the Oklahoma Medicaid program (**Table 9**).

The 509 administrative employees created 387 additional secondary jobs in Oklahoma’s economy for a total employment impact of 896 jobs. The \$29.8 million in income paid to administrative employees generated \$13.1 million additional secondary income dollars in Oklahoma’s economy, for a total income impact of \$42.9 million. The total administrative expenditures (or business spending) directly generated were \$181.3 million. When including the secondary business spending of \$233.9 million, the total impact from the business spending (or output) of the Medicaid administration was \$415.2 million.

As a result of the Medicaid health care services expenditures, 44,009 jobs were created directly in the health sector and 54,131 secondary jobs were created in other businesses in Oklahoma’s economy. The total jobs generated in the State of Oklahoma as a result of the Medicaid health care services expenditures were 98,140. As a result of the Medicaid health care

Table 9
Summary of Employment, Income, Output, and Tax Impacts
from the Oklahoma Medicaid Program, FY 2006

Category of Impact	Direct Impact	Secondary Impact	Total Impact
EMPLOYMENT			
Administrative from OHCA and Contractual	509	387	896
Health Care Services	<u>44,009</u>	<u>54,131</u>	<u>98,140</u>
EMPLOYMENT TOTAL	<u>44,518</u>	<u>54,518</u>	<u>99,036</u>
INCOME			
Administrative from OHCA and Contractual	\$29,824,914	\$13,122,962	\$42,947,876
Health Care Services	<u>\$1,484,430,000</u>	<u>\$1,291,454,100</u>	<u>\$2,775,884,100</u>
INCOME TOTAL	<u>\$1,514,254,914</u>	<u>\$1,304,577,062</u>	<u>\$2,818,831,976</u>
OUTPUT (TOTAL BUSINESS SPENDING)			
Total Medicaid Expenditures for Administration	\$181,300,000	\$233,877,000	\$415,177,000
Total Medicaid Expenditures for Health Care Services	<u>\$3,110,100,000</u>	<u>\$4,478,544,000</u>	<u>\$7,588,644,000</u>
OUTPUT TOTAL	<u>\$3,291,400,000</u>	<u>\$4,712,421,000</u>	<u>\$8,003,821,000</u>
TAXES			
State Sales Taxes	\$51,118,062	\$62,600,518	\$113,718,580
State Income Taxes	\$84,107,221	\$102,999,909	\$187,107,130
Selected "Other" State Taxes	<u>\$6,366,074</u>	<u>\$7,796,061</u>	<u>\$14,162,135</u>
STATE TAXES TOTAL	<u>\$141,591,357</u>	<u>\$173,396,488</u>	<u>\$314,987,845</u>

services expenditures, \$1.5 billion in income was directly generated in the health sector and \$1.3 billion in secondary income was generated in other businesses throughout Oklahoma's economy. The total income impact from Medicaid health care services was \$2.8 billion. The total Medicaid health care services expenditures were \$3.1 billion. This results in secondary business spending of \$4.5 billion in other businesses throughout Oklahoma's economy. The total impact of Medicaid's health care services expenditures was estimated to be \$7.6 billion.

Combining the administrative employment and health care employment, the total employment impact of the Medicaid program on Oklahoma's economy was 99,036 jobs. Combining the administrative income and the health services income, the total income impact of the Medicaid program on Oklahoma's economy was \$2.8 billion. Combining the total business spending resulting from Medicaid administration and Medicaid health care services, the total business spending impact of the Medicaid program was estimated to be \$8.0 billion through the economy of Oklahoma.

In conclusion, Oklahoma's investment of \$1.2 billion in FY 2006 for the Medicaid program created over 99,000 jobs, generated more than \$2.8 billion of income in Oklahoma, resulted in approximately \$315.0 million in state sales, state income, and selected "other" state taxes, and generated total business spending of \$8.0 billion throughout the State of Oklahoma.

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Appendix A

Model and Data Used to Estimate Employment and Income Multipliers

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Model and Data Used to Estimate Employment and Income Multipliers

A computer spreadsheet that uses state IMPLAN multipliers was developed to enable community development specialists to easily measure the secondary benefits of the health sector on a state, regional or county economy. The complete methodology, which includes an aggregate version, a disaggregate version, and a dynamic version, is presented in Measuring the Economic Importance of the Health Sector on a Local Economy: A Brief Literature Review and Procedures to Measure Local Impacts (Doeksen, et al., 1997). A brief review of input-output analysis and IMPLAN are presented here.

A Review of Input-Output Analysis

Input-output (I/O) (Miernyk, 1965) was designed to analyze the transactions among the industries in an economy. These models are largely based on the work of Wassily Leontief (1936). Detailed I/O analysis captures the indirect and induced interrelated circular behavior of the economy. For example, an increase in the demand for health services requires more equipment, more labor, and more supplies, which, in turn, requires more labor to produce the supplies, etc. By simultaneously accounting for structural interaction between sectors and industries, I/O analysis gives expression to the general economic equilibrium system. The analysis utilizes assumptions based on linear and fixed coefficients and limited substitutions among inputs and outputs. The analysis also assumes that average and marginal I/O coefficients are equal.

Nonetheless, the framework has been widely accepted and used. I/O analysis is useful when carefully executed and interpreted in defining the structure of a region, the interdependencies among industries, and forecasting economic outcomes.

The I/O model coefficients describe the structural interdependence of an economy. From the coefficients, various predictive devices can be computed, which can be useful in analyzing economic changes in a state, a region or a county. Multipliers indicate the relationship between some observed change in the economy and the total change in economic activity created throughout the economy.

MicroIMPLAN

MicroIMPLAN is a computer program developed by the United States Forest Service (Alward, et al., 1989) to construct I/O accounts and models. Typically, the complexity of I/O modeling has hindered practitioners from constructing models specific to a community requesting an analysis. Too often, inappropriate U.S. multipliers have been used to estimate local economic impacts. In contrast, IMPLAN can construct a model for any county, region, state, or zip code area in the United States by using available state, county, and zip code level data. Impact analysis can be performed once a regional I/O model is constructed.

Five different sets of multipliers are estimated by IMPLAN, corresponding to five measures of regional economic activity. These are: total industry output, personal income, total income, value added, and employment. Two types of multipliers are generated. Type I multipliers measure the impact in terms of direct and indirect effects. Direct impacts are the changes in the activities of the focus industry or firm, such as the closing of a hospital. The focus business changes its purchases of inputs as a result of the direct impacts. This produces indirect impacts in other business sectors. However, the total impact of a change in the economy consists of direct, indirect, and induced changes. Both the direct and indirect impacts change the flow of dollars to the state, region, or county's households. Subsequently, the households alter their consumption accordingly. The effect of the changes in household consumption on

businesses in a community is referred to as an induced effect. To measure the total impact, a Type II multiplier is used. The Type II multiplier compares direct, indirect, and induced effects with the direct effects generated by a change in final demand (the sum of direct, indirect, and induced divided by direct). IMPLAN also estimates a modified Type II multiplier, called a Type III multiplier that also includes the direct, indirect, and induced effects. The Type III multiplier further modifies the induced effect to include spending patterns of households based on a breakdown of households by nine difference income groups.

Minnesota IMPLAN Group, Inc. (MIG)

Dr. Wilbur Maki at the University of Minnesota utilized the input/output model and database work from the U. S. Forest Service's Land Management Planning Unit in Fort Collins to further develop the methodology and to expand the data sources. Scott Lindall and Doug Olson joined the University of Minnesota in 1984 and worked with Maki and the model.

As an outgrowth of their work with the University of Minnesota, Lindall and Olson entered into a technology transfer agreement with the University of Minnesota that allowed them to form MIG. At first, MIG focused on database development and provided data that could be used in the Forest Service version of the software. In 1995, MIG took on the task of writing a new version of the IMPLAN software from scratch. This new version extended the previous Forest Service version by creating an entirely new modeling system that included creating Social Accounting Matrices (SAMs) – an extension of input-output accounts, and resulting SAM multipliers. Version 2 of the new IMPLAN software became available in May of 1999. For more information about Minnesota IMPLAN Group, Inc., please contact Scott Lindall or Doug Olson by phone at 651-439-4421 or by email at info@implan.com or review their website at www.implan.com.