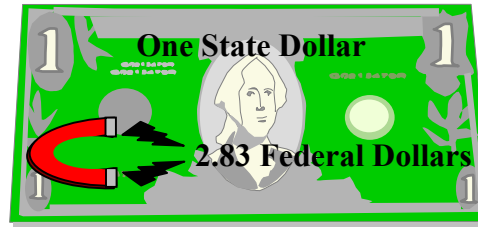
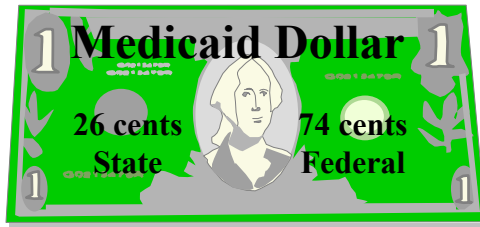


Economic Impact of the Medicaid Program on Alaska's Economy



Medicaid Expenditures

Each dollar spent is 26 cents State and 74 cents Federal.
 Each dollar the State spends attracts \$2.83 Federal dollars.
 Total Federal and State Expenditures = \$574.5 M
 Total State General Funds = \$150.1 M

Total Business Spending generated throughout Alaska's Economy from Medicaid Program
\$1.011 Billion

DIRECT IMPACT on Jobs and Income

Division and Contract Employees

Jobs	191	Income	\$9.9 M
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Expenditures for Health Care Services

Jobs	5,158	Income	\$219.8 M
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**INDUCED & INDIRECT IMPACT on the Alaska Economy
 due to employee and business spending**

Division & Contract Employee Spending

Jobs	94	Income	\$2.2 M
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Health Care Providers Spending

Jobs	3,559	Income	\$114.3 M
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**TOTAL IMPACT ON JOBS AND INCOME
 of the Medicaid Program on Alaska's Economy**

Jobs 9,002 Income \$346.2 M

**Economic Impact
of the Medicaid Program
on Alaska's Economy**

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Economic Impact of the Medicaid Program on Alaska's Economy, FY 2001

Summary of Findings

Although there is a tremendous amount of information about the Medicaid program services, providers, and recipients, the economic impact of the program on Alaska's economy is not well known. A study recently completed for the Department of Health and Human Services by a rural health care economist estimated the economic impact of the program for FY 2001. The economist used a widely-accepted input-output model known as "IMPLAN" to estimate the direct, indirect, and induced effects.

In FY 2001, total Medicaid expenditures in Alaska equaled \$574.5 million of which 74 percent was federal funds and 26 percent, or \$150.1 million, was State General Funds. Ninety-six percent of the \$574.5 million or \$553.2 million was spent on direct health care services in Alaska's economy.

As a result of the Medicaid expenditures for direct health care services, 5,158 health sector jobs were created in Alaska and \$219.8 million in income was generated in the health sector. As these health sector workers purchased goods and services in the economy, their spending generated 3,559 jobs in other businesses in Alaska's economy and created \$114.3 million in income. The total employment and income created as a result of the Medicaid program's health care services expenditures was 8,717 jobs and \$334.1 million in income in FY 2001.

Similarly, 191 division and contract employees worked directly for the Medicaid program and earned \$9.9 million in income in FY 2001. As these employees purchased goods and services in the economy, they generated 94 additional jobs and \$2.2 in income for a total employment impact of 285 jobs and a total income impact of \$12.1 million.

Combining the health care sector jobs and state/contract jobs, the total employment impact of the Medicaid program on Alaska's economy was 9,002 jobs. Combining the health care workers income and the state/contract employee income, the total income impact of the Medicaid program on Alaska's economy was \$346.2 million.

Although the focus of this report is the impact on jobs and income generated in Alaska's economy as a result of the Medicaid program, the total economic impact on Alaska's economy was estimated using an output multiplier for Alaska. The total impact of Medicaid expenditures on the health businesses purchases of goods, services, and labor was \$1,011.2 million (or \$1.0 billion).

In conclusion, Alaska's investment of \$150.1 million in State General Fund expenditures in FY 2001 for the Medicaid program created over 9,000 jobs and generated more than \$346.2 million income for Alaskans.

Economic Impact of the Medicaid Program on Alaska's Economy

It is well known that the Medicaid program in Alaska has a significant impact on the lives of eligible Alaskans who require health care services and on the State'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 the state's economy. The overall objective of this report is to estimate the economic impact of the Medicaid program on Alaska's economy. More specifically, the report will:

1. provide a brief summary of Alaska's Medicaid spending;
2. provide a brief overview of the Medicaid program;
3. estimate the economic impact of the state and contract employees that work for Alaska's Medicaid program;
4. estimate the economic impact of the health care services provided by Medicaid to the citizens of Alaska; and
5. summarize the total economic impact that the Medicaid program has on Alaska's economy.

In order to calculate the economic impacts noted above, economists used a widely-accepted input-output model known as "IMPLAN" to estimate the direct, indirect and induced effects of the Medicaid program on Alaska's economy. The economic impact in this report will be quantified as "jobs" and "income" resulting from the Medicaid program. Information on the model and data used in this report can be found in **Appendix A**. Jobs are defined as full-time equivalent jobs and are also referred to as employment. Income is defined as personal income from wages and salaries, proprietor's income, and benefits and are also referred to as earnings.

Summary of Medicaid Spending in Alaska in FY 2001

Federal and state Medicaid expenditures for FY 2001 are presented in **Table 1**. Several important facts are illustrated in the data. In FY 2001, total Medicaid expenditures equaled \$574.5 million. Of the total Medicaid expenditures, 74 percent were federal dollars and 26 percent were state dollars. For every \$1.00 expended by the State of Alaska for Medicaid, the federal government contributed \$2.83.

Another important fact is that \$553.2 million was spent on direct health care services. This is 96 percent of the total Medicaid expenditures which means that only 4 percent of the total Medicaid expenditures was spent for the administration of this complex program.

Finally, it should be noted that the Division of Medical Assistance employed 73 full-time employees in FY 2001 that performed “direct-agency functions”¹ with a payroll of \$4,037,300 (**Table 1**). In addition, a portion of the division’s non-health care services spending was contracted to the private sector and other state agencies to perform “direct-agency functions.” These functions include provider enrollment and claims payment, utilization management, and third-party recovery. It is estimated that division contracts created 118 contract jobs² in Alaska with a payroll of \$5,881,000. The combined total jobs directly created by the division were 191 with a payroll of \$9,918,300.

¹ “Direct-agency functions” include both state and contract employees that perform functions that directly support payments for health care services.

² Full-time equivalents

Table 1		
Alaska Medicaid Spending by Source of Funds and Type of Expenditure		
and Medicaid Program Employment and Income		
FY 2001		
Source	Totals	Percent
Federal (and other) Funds	\$424,485,900	74%
State General Funds	\$150,061,600	26%
Total Medicaid Funds	<u>\$574,547,500</u>	<u>100%</u>
Expenditures for Health Care Services	\$553,191,600	96%
Administrative Expenditures Supporting Payments for Health Care Services	\$21,355,900	4%
Total Medicaid Expenditures^a	<u>\$574,547,500</u>	<u>100%</u>
Source	Jobs	Income
Division of Medical Assistance		
Full Time Employees	73	
Income (Gross Payroll)		\$4,037,300
Contract Employees ^b		
Estimated Full Time Employees	<u>118</u>	
Estimated Income (Gross Payroll)		<u>\$5,881,000</u>
Total Combined		
Estimated Full Time Employees	<u>191</u>	
Estimated Income (Gross Payroll)^c		<u>\$9,918,300</u>
Source: FY 2001 State Accounting System data as compiled by the Division of Medical Assistance for the unique needs of this report.		
^a Total Medicaid expenditures includes all payments for health care services and those administrative expenditures that support payments for health care services. These figures exclude out-of-state payments for health care services.		
^b Includes private and other state agency contracts for "direct agency functions."		
^c Estimated income (gross payroll) includes salaries and benefits.		

Overview of the Medicaid Program³

As noted in **Table 1**, over \$553.2 million was spent in FY 2001 on direct health care services.⁴ During FY 2001 118,062 citizens were eligible and 100,144 or 85 percent utilized services paid for by the program. It is important to note that during the year approximately 19 percent of the state's population was eligible for Medicaid. Data in **Table 2**⁵ indicate that 66 percent of those eligible were children and they accounted for 35 percent of the expenditures. The disabled, which includes children and adults, made up 10 percent of those eligible and accounted for 36 percent of the expenditures.⁶ Beneficiaries of the Medicaid program reside in all regions of Alaska; however, the majority live in Anchorage (33 percent), Fairbanks (7 percent) and the Wasilla area (6 percent).

³ The material used in this section are taken directly from the Division of Medical Assistance FY 2001 Annual Report, State of Alaska, Department of Health and Social Services.

⁴ FY 2001 State Accounting System as compiled by the Division of Medical Assistance.

⁵ The material used in this section are taken directly from the Division of Medical Assistance FY 2001 Annual Report, State of Alaska, Department of Health and Social Services.

⁶ The disabled are disproportionately over-represented in the Medicaid program as compared to privately insured groups.

Table 2
Alaska – Medicaid Eligible Groups
by Percent of Eligibles and Percent of Total Expenditures
FY 2001

Eligible Groups	Percent of Eligibles	Percent of Total Expenditures
Children	66%	35%
Adult	18%	14%
Disabled*	10%	36%
Elderly	6%	15%

* The disabled category includes both children and adults, from the Source as listed below.

Source: Division of Medical Assistance FY 2001 Annual Report, State of Alaska, Department of Health and Social Services.

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 state employees in the Division of Medical Assistance as well as other contract employees. As the providers of the health care services and the state and contract employees spend money for goods and services, additional jobs and income are created in other businesses. The additional jobs and income 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 Alaska's economy relative to the Medicaid program. The activities of the Division of Medical Assistance are divided into two groups: 1) the administration function which includes the division employees and contract employees and 2) the health care services function which includes the jobs and income generated by the health care providers' businesses as a result of health care spending. The Division of Medical Assistance pays for the health services provided by the Medicaid health service providers.

The division purchases goods and services from other businesses in Alaska 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 Alaska. The flow of labor and goods and services in the state

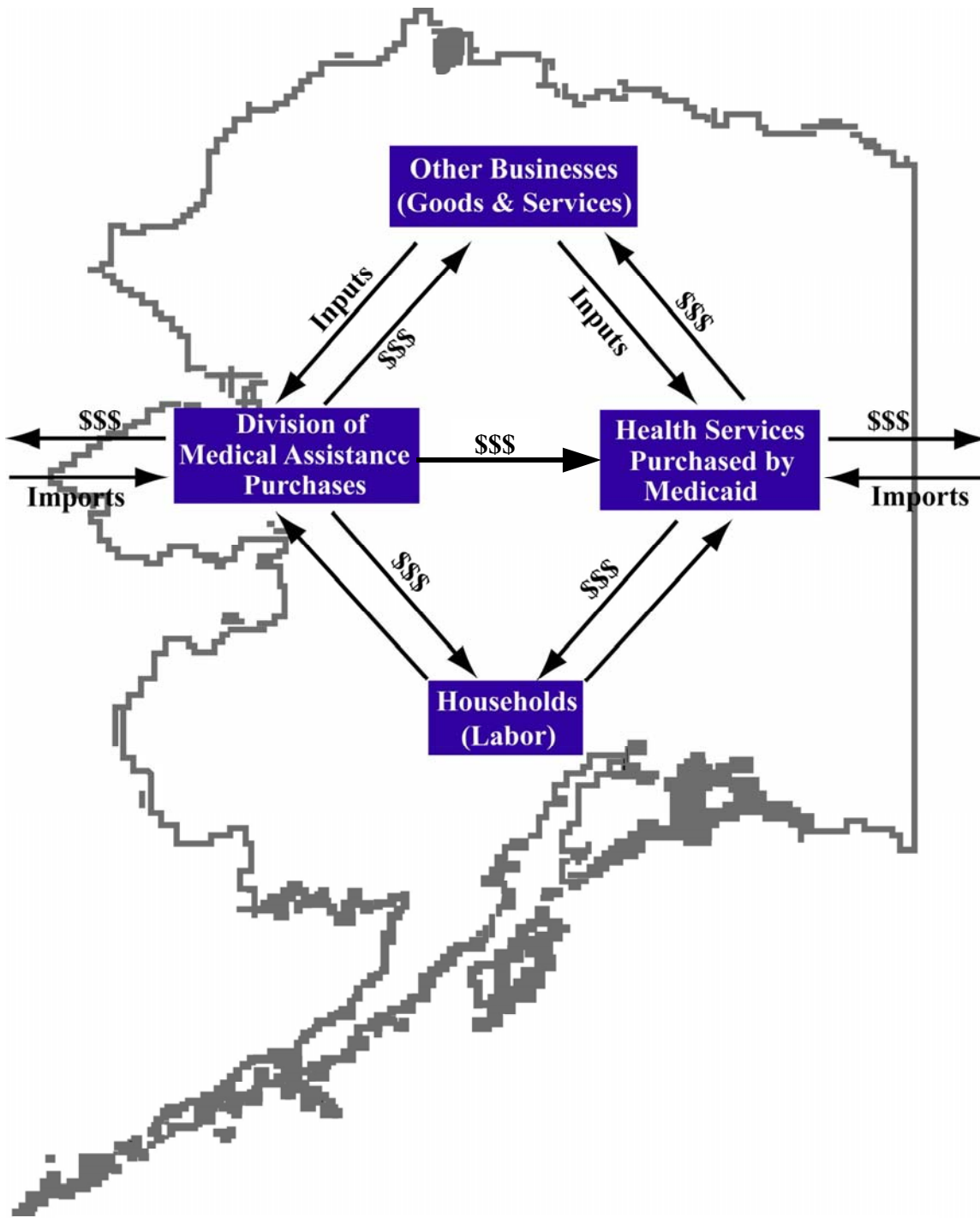


Figure 1
Flow of Goods, Services, and Dollars in Alaska's
Economy relative to the Medicaid Program

is completed by households using their income to purchase goods and services from the state's service businesses. Whenever goods and services or labor are purchased outside of the state, those dollars do not impact Alaska'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 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, indirect, and induced impacts. Direct impacts are the changes in the activities (i.e. jobs and income) 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".

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 model can measure jobs and income through these multipliers. The health employment multiplier indicates the total employment (jobs) change throughout the economy of Alaska for each employment

(job) change in the health sector. The health income multiplier indicates the total change in income through the economy due to a one unit change of income in the health sector. 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 businesses (indirect) and households (induced) spending. An employment multiplier of 1.75 indicates that if one (direct) job is created by the health sector, 0.75 jobs are created in other sectors due to business (indirect) and household (induced) spending.

Economic Impact of the Medicaid Program Administrative Jobs and Income

Division of Medical Assistance and contract employees create an economic impact on Alaska's economy. Jobs and income for "direct-agency functions" are presented in **Table 3**. "Direct-agency functions" include both state and contract employees that perform functions that directly support payments for health care services. The total number of Division and contract employees in FY 2001 was 191. As the Division and contract employees purchase goods and services, secondary employment (jobs) and income impacts are created in other businesses in Alaska's economy. These indirect and induced benefits are estimated on the basis of employment and income multipliers for the government sector.

The employment multiplier for Alaska is 1.49 for the government sector. The employment multiplier indicates that for each person employed in the government sector, another 0.49 job is created in other sectors of the economy throughout Alaska. Thus, the

Table 3
Jobs and Income Impact
of Medicaid Program Employees on Alaska's Economy
FY 2001

Category	Division Employees	Contract Employees	Combined Totals	Government Multipliers*	Total Impact
Jobs	73	118	<u>191</u>	1.49	<u>285</u>
Income	\$4,037,300	\$5,881,000	<u>\$9,918,300</u>	1.22	<u>\$12,100,300</u>

SOURCE: Employment and income for division and contract workers were obtained from the Division of Medical Assistance, State of Alaska, Department of Health and Social Services.

* Multipliers were derived from the IMPLAN model for the State of Alaska.

total number of direct, indirect, and induced jobs created by the division and contract employees was 285.

Likewise, the income impact created by the division can be estimated. The total direct payroll was estimated at \$9,918,300. Applying the income multiplier of 1.22 to this payroll generated a total income impact of \$12,100,400 throughout the Alaska economy. Again, the multiplier is defined that for each dollar worth of income created by the division and contract employees, another 0.22 dollars worth of income are created in other sectors (or businesses) throughout the economy of Alaska.

Economic Impact of the Medicaid Health Care Services Expenditures

Many assumptions had to be made to convert the Medicaid health care services expenditures to jobs and income. Data in **Table 4** presents the economic impact of the Medicaid health care expenditures. As these are discussed, the assumptions behind the estimates are presented. As more recent data are available, the model can be quickly reworked to illustrate the impact. Even though this report will estimate 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 Alaska could not survive without Medicaid spending.

The latest health care expenditure estimates for Alaska from the Office of the Actuary, Health Care Financing Administration (now the Center for Medicare and Medicaid Services, <<http://www.hcfa.gov>>) are for 1998. Adjusting these by annual increases in expenditures for the U.S. yields a total Alaska health care expenditure for

Table 4
Jobs and Income Impact of
Medicaid Expenditures on Alaska's Economy

Alaska Estimated Total Health Expenditures, 2000 ^a	\$2,533,144,000
Alaska Medicaid Expenditures for Health Care Services, FY 2001 ^b	\$553,191,600
Percent Medicaid Expenditures of Total Health Expenditures	<u>22%</u>
Total Jobs in Health Sector, 2000 ^c	23,447
Jobs Attributed to Medicaid Program (Direct Impact)	5,158
Health Sector Employment Multiplier for Alaska ^d	1.69
Indirect and Induced Impact of Jobs Attributed to Medicaid Program	3,559
Total Medicaid Program Jobs Impact (Direct, Indirect, and Induced)	<u>8,717</u>
Total Income in Health Sector, 2000 ^e	\$999,102,300
Income Attributed to Medicaid Program (Direct Impact)	\$219,802,500
Health Sector Income Multiplier for Alaska ^d	1.52
Indirect and Induced Impact of Income Attributed to Medicaid Prog.	\$114,297,300
Total Medicaid Program Income Impact (Direct, Indirect, and Induced)	<u>\$334,099,800</u>

^a 1998 personal health care expenditures in Alaska were \$2,299,000,000 (Office of the Actuary, Health Care Financing Administration; now CMS). Adjusted to 2000 based on U.S. health care per capita expenditures from 1998-2000 (HCFA; now CMS).

^b FY 2001 State Accounting System data as compiled by the Division of Medical Assistance for the unique needs of this report.

^c 1999 health sector employment (includes wage and salary and proprietor) was 23,171 for 1999 (County Business Patterns, U.S. Census). Adjusted to 2000 based on U.S. health sector employment from 1999-2000 (Bureau of Labor Statistics [BLS]).

^d Health sector employment and income multipliers were derived from IMPLAN data for Alaska. See Appendix A for description of data and model.

^e 1999 health sector earnings (includes wage and salary and proprietor) is \$987,326,000 (CBP, U.S. Census). Adjusted to 2000 based on increase in U.S. health sector employment from 1999-2000 (BLS).

2000 of \$2,533,144,000.⁷ The Medicaid expenditures for health care services for FY 2001 were \$553,191,600 (the direct impact) or 22 percent of the total estimated Alaska health care expenditures. It is assumed that 22 percent of the total Alaska health care employment (jobs) and income are attributed to Medicaid. This equates to 5,158 jobs (22 percent of 23,447) with income of \$219,802,500 (22 percent of \$999,102,300) that were directly created by Medicaid expenditures. Employment and income estimates from the County Business Patterns, U.S. Census Bureau, were utilized in this report as this data includes both wage and salary workers and proprietors; thus, the estimates are comprehensive.

The primary impacts identified and estimated in this report are on “jobs” and “income” resulting from the Medicaid program. To estimate the total economic impact on Alaska’s economy, output, employment and income multipliers for Alaska were derived from IMPLAN. The direct impact of the Medicaid program is the total Medicaid expenditures of \$574,547,500. The output multiplier for the health sector is 1.76. Thus, the total impact on the health businesses purchases of goods and services and labor was \$1,011,203,600 (1.76 x \$574,547,500).

The model then calculates the employment (jobs) and income change in all of the businesses that are impacted by these purchases. The health sector employment and income multipliers are 1.69 and 1.52, respectively. The direct employment (jobs) impact of Alaska’s Medicaid program includes those employees directly employed as a result of the Medicaid expenditures (5,158 jobs) and the indirect and induced employment (jobs) created throughout the other sectors of Alaska’s economy (3,559 jobs) as a result of the direct employment, for the total the income (earnings) directly resulting from the Medicaid program (\$219,802,500) and the

⁷ 1998 Alaska personal health care expenditures were \$2,299,000,000. This was adjusted to reflect 2000 estimate based on U.S. per capita health care expenditures increase of 4.67% from 1998-99 & 5.27% from 1999-00.

employment impact of 8,717 jobs. The income impact of Alaska's Medicaid program includes induced and indirect income (earnings) created throughout the other sectors of Alaska's economy (\$114,297,300) as a result of the direct income, for the total income impact of \$334,099,800.

Summary

The objective of this report was to estimate the economic impact of the Medicaid program on Alaska's economy. Although there is a tremendous amount of information about the program services, providers, and recipients, the economic impact is not well known. The summary will present selected economic impact highlights.

The 191 division and contract employees created 94 additional jobs in Alaska's economy for a total employment impact of 285 jobs. The \$9,918,300 division and contract income (earnings) generated \$2,182,000 additional income dollars in Alaska's economy for a total income impact of \$12,100,300.

As a result of the Medicaid health care services expenditures, 5,158 jobs were created in the health sector and 3,559 jobs were created in other businesses in Alaska's economy. The total jobs generated in Alaska as a result of the health care services expenditures of the Medicaid program were 8,717.

As a result of the Medicaid health care expenditures, \$219,802,500 in income was generated in the health sector and \$114,297,300 in income was generated in other businesses in Alaska's economy. The total income from Medicaid health care services expenditures was \$334,099,800.

Combining the administrative jobs and health care jobs, the total employment (jobs) impact of the Medicaid program on Alaska's economy was 9,002 jobs. Combining the

administrative income and the health care services income, the total income impact of the Medicaid program on Alaska's economy was \$346,200,100. A summary of the direct, indirect, and induced impacts on jobs and income is in **Table 5**.

Although the focus of this report is the impact on jobs and income generated in Alaska's economy as a result of the Medicaid program, the total economic impact on Alaska's economy was estimated using the IMPLAN output multiplier for Alaska. The total impact of Medicaid expenditures on the health businesses purchases of goods and services and labor was \$1,011,203,600.

In conclusion, Alaska's investment of \$150 million in State General Fund expenditures in FY 2001 for the Medicaid program created over 9,000 jobs and generated more than \$346 million income in Alaska.

Table 5
Summary of Jobs and Income Impacts

Category of Impact	Direct Impacts	Indirect & Induced Impacts	Total Impact
JOBS			
Division of Medical Assistance and Contract Employees	191	94	285
Medicaid Expenditures for Health Care Services	5,158	3,559	8,717
TOTAL JOBS	5,349	3,653	9,002
INCOME			
Division of Medical Assistance and Contract Employees	\$9,918,300	\$2,182,000	\$12,100,300
Medicaid Expenditures for Health Care Services	\$219,802,500	\$114,297,300	\$334,099,800
TOTAL INCOME	\$229,720,800	\$116,479,300	\$346,200,100

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Appendix A
Model and Data Used to Estimate
Alaska's 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 and county-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 effects 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 III multiplier is used. The Type III 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 estimates Type III-induced effects based on the changes in employment and population to minimize the overestimation that occurs with a linear consumption function (Alward, et al., 1989).