

3-1-2005

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# The Impact of Medicaid Expenditures on Florida's Sales Tax Revenues

An Analysis Performed by

CENTER FOR ECONOMIC DEVELOPMENT RESEARCH  
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March, 2005

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## *Preface*

*The Florida Hospital Association (FHA) is a statewide organization representing the interests of hospitals and health care systems. The FHA provides advocacy before the state legislature, Congress, state, and federal regulatory agencies, and the court system.*

*This study was commissioned by the FHA and performed by the Center for Economic Development Research, College of Business Administration, University of South Florida. The Center for Economic Development Research provides information and conducts research on issues related to economic growth and development in the Nation, in the state of Florida, and particularly in the central Florida region. The Center serves the faculty, staff, and students of the College of Business Administration, the University, and individuals and organizations in the Tampa Bay region and statewide. Activities of the Center for Economic Development Research are designed to further the objectives of the University and specifically the objectives of the College of Business Administration.*

Robert Anderson, Dean, College of Business Administration (COBA), USF

Dennis G. Colie, Director, Center for Economic Development Research (CEDR), COBA, USF,  
Economist and Principal Investigator

## Executive Summary

The purpose of this analysis is to estimate the fiscal impact of FY 2004-05 Medicaid expenditures on Florida's sales tax revenues. We use the REMI™ Policy Insight model to make our estimate of the fiscal impact. To implement the model we use the traditional counter-factual approach. That is, we virtually remove the projected FY 2004-05 Medicaid expenditures from Florida's economy and allow the model to find a new general equilibrium. The new general equilibrium takes into account the loss of continued circulation of the initial Medicaid expenditures throughout Florida's economy. Then, for this research we compare the estimated sales tax revenues at the new equilibrium with the projected sales tax revenues before removal of the projected Medicaid expenditures.

Medicaid pays for medical and health-related services for eligible individuals and families with limited income. In FY 2004-05, almost \$14.5 billion is projected to be spent in Florida by the Medicaid program. This spending will occur in seven main sectors of Florida's economy:

- Health and Personal Care Stores (Retail Trade)
- Insurance Carriers and Related Activities
- Ambulatory Health Care Services
- Hospitals
- Nursing and Residential Care Facilities
- Social Assistance
- Administration of Human Resource Programs (Public Administration)

**If FY 2004-05 projected Medicaid expenditures were withheld from the economy, and in the absence of substitute funds, we estimate that Florida's total sales tax revenues would decline by approximately 2.19%, or a decrease of about \$495 million.** That is, the FY 2004-05 projected Medicaid expenditures will contribute \$495 million to Florida in sales tax revenues.

## I. Introduction

According to the U.S. Centers for Medicare and Medicaid Services, “Medicaid is a program that pays for medical assistance for certain individuals and families with low incomes and resources. This program became law in 1965 and is jointly funded by the Federal and State governments (including the District of Columbia and the Territories) to assist States in providing medical long-term care assistance to people who meet certain eligibility criteria. Medicaid is the largest source of funding for medical and health-related services for people with limited income.”<sup>1</sup>

In Florida, the State’s Agency for Health Care Administration (AHCA) administers the Medicaid program, which is authorized under Chapter 409, F.S., and Chapter 59-G, F.A.C. The program is funded through federal and state cost-sharing and with Florida counties contributing a portion of inpatient hospital care and nursing home services costs. Matching federal funds are contingent upon the State’s continued compliance with Title XIX of the Social Security Act and regulations in Title 42 of the Code of Federal Regulations.

Eligibility for Medicaid participation is determined by one of two agencies: the Department of Children and Families for low income children and family programs and the institutional care program, or the Social Security Administration for aged, blind, or disabled recipients. Each agency has separate and distinct requirements for eligibility.

Performance-based program budgeting is used in ACHA’s budget process to determine how established goals are being met in the use of public funds. Analysis of results for 58 separate measures is compared to legislated targets to judge the program efficiency.<sup>2</sup> In 2003, average monthly caseload exceeded 2 million individuals. Budgeted expenditures of \$12.5 billion were available for FY 2003-04.

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1 See <http://www.cms.hhs.gov/medicaid/default.asp?>

2 From The 2003 Annual Report on Medicaid Outcome Measures, AHCA, September, 2003, found at [http://www.fdhc.state.fl.us/Medicaid/deputy\\_secretary/recent\\_presentations/2003\\_Medicaid\\_Outcome\\_Measures.pdf](http://www.fdhc.state.fl.us/Medicaid/deputy_secretary/recent_presentations/2003_Medicaid_Outcome_Measures.pdf)

## II. Analysis and Findings

The purpose of this analysis is to estimate the fiscal impact of FY 2004-05 Medicaid expenditures on Florida's sales tax revenues. We use the REMI<sup>TM</sup> Policy Insight model to make our estimate of the fiscal impact. (See Appendix A for a brief description of the model.) To implement the model we use the traditional counter-factual approach. That is, we virtually remove the projected FY 2004-05 Medicaid expenditures from Florida's economy and allow the model to find a new general equilibrium. The new general equilibrium takes into account the loss of continued circulation of the initial Medicaid expenditures throughout Florida's economy. This circulation is often referred to as the ripple effect or the multiplier effect. Then, for this research we compare the estimated sales tax revenues at the new equilibrium with the projected sales tax revenues before removal of the projected Medicaid expenditures.

The ripple effect is the consequence of an initial round of spending. The initial spending is called the direct, or first round, spending. This spending is used to purchase goods and services, which in this study is Medicaid-funded health care. The suppliers of the health care must spend additional amounts to purchase raw materials, labor and other inputs to their production processes. The spending of these additional amounts in Florida constitutes the second and subsequent rounds of spending, known as indirect or secondary spending. Thus, the direct spending ripples through the economy and direct spending plus indirect spending equals total spending.

**Table 1** shows projected FY 2004-05 Medicaid expenditures. The basic data is from the February 25, 2005 Social Services Estimating Conference and provided to us by the Florida Hospital Association (FHA). Based on the description provided with the data, we can determine applicable industry subsectors of the economy in which these funds will purchase goods and services. The North American Industry Classification System (NAICS) was developed jointly by the U.S., Canada, and Mexico to provide comparability in statistics about business activity across North America and defines all categories of economic activity. We take the basic data, shown in the "Expense" column of Table 1 and allocate these expenses to various NAICS industry subsectors as shown in the columns to the right of the "Expense" column. This allows us to input the dollar amounts of projected Medicaid spending into appropriate REMI model sectors. For example, NAICS sector 446 – Health and Personal Care Stores and the REMI Retail sector captures Medicaid spending for Prescribed Medicine / Drugs.

**Table 2**, Florida Sales Taxes, reports the results of our analysis. The first column of Table 2 lists the type of sales tax. The second column reports the model's FY 2004-05 projected sales taxes with Medicaid spending at its projected FY 2004-05 levels reflected in Table 1. The third column reports estimated sales tax revenues without the projected Medicaid spending. An implicit assumption is that Medicaid recipients do not substitute funds from other sources, such as savings or local governments, to continue health care services that would otherwise be paid for by Medicaid. To the extent that there is such substitution the loss of sales tax revenues may be less than reported here.

The fourth column of Table 2 shows the difference in sales tax revenues in dollars, and the fifth column shows the difference expressed as a percentage of total projected sales tax revenues (including sales tax generated by the projected FY 2004-05 Medicaid expenditures).

In summary, if FY 2004-05 projected Medicaid expenditures were withheld from the economy, and without substitute funds, we estimate that Florida's total sales tax revenues would decline by approximately 2.19%, or a decrease of about \$495 million. That is, we estimate that FY 2004-05 projected Medicaid expenditures will contribute \$495 million to Florida in sales tax revenues.



Table 1  
 FY 04-05 Projected Medicaid Expenditures

MEDICAID SERVICES TO INDIVIDUALS

Service	NAICS	Expense	NAICS 446	NAICS 524	NAICS 621	NAICS 622	NAICS 623	NAICS 624	NAICS 923
Case Management Services	621	\$101,219,926			\$101,219,926				
Therapeutic Services for Children	621	\$235,994,239			\$235,994,239				
Community Mental Health Services	621	\$59,772,790			\$59,772,790				
Adult Dental Services	621	\$14,517,907			\$14,517,907				
Dev Evaluation / Early Intervention Svcs	621	\$3,599,931			\$3,599,931				
Early & Periodic Screening / Children	621	\$127,261,066			\$127,261,066				
G/A Rural Hosp Financial Assist / DSH	622	\$12,746,090				\$12,746,090			
Family Planning Services	621	\$7,724,249			\$7,724,249				
Healthy Start Services	621	\$13,634,401			\$13,634,401				
Home Health Services	621	\$165,070,061			\$165,070,061				
Hospice Services	623	\$218,870,458					\$218,870,458		
Hospital Inpatient Services	622	\$1,999,907,739				\$1,999,907,739			
Hospital Inpatient Special Medicaid Payments	622	\$582,196,096				\$582,196,096			
Regular Disproportionate Share	622	\$226,923,978				\$226,923,978			
Freestanding Dialysis Centers	621	\$13,434,427			\$13,434,427				
Hospital Insurance Benefits	524	\$140,962,450		\$140,962,450					
Hospital Outpatient Services	621	\$551,312,544			\$551,312,544				
Hospital Outpatient - Special Medicaid Pymts	621	\$8,383,501			\$8,383,501				
Respiratory Therapy Services	621	\$4,716,108			\$4,716,108				
Nurse Practitioner Services	621	\$5,341,798			\$5,341,798				
Birthing Center Services	621	\$1,243,176			\$1,243,176				
Othe Lab and X-ray Services	621	\$45,687,802			\$45,687,802				
Patient Transportation	621	\$112,690,977			\$112,690,977				
Physician Assistant Services	621	\$2,128,163			\$2,128,163				
Personal Care Services	621	\$21,472,458			\$21,472,458				
Physical Therapy Services	621	\$17,844,485			\$17,844,485				
Physician Services	621	\$666,766,804			\$666,766,804				
Physician Svcs - Special Medicaid Payments	621	\$102,196,275			\$102,196,275				
Prescribed Medicine / Drugs	446	\$2,617,296,082	\$2,617,296,082						
Private Duty Nursing Services	621	\$128,057,073			\$128,057,073				
Rural Health Clinics	621	\$53,814,512			\$53,814,512				
Speech Therapy Services	621	\$29,719,809			\$29,719,809				
MediPass Services	621	\$28,860,500			\$28,860,500				
G/A RPICC DSH	622	\$168,300				\$168,300			
Supplemental Medical Insurance	524	\$603,660,421		\$603,660,421					
Occupational Therapy Services	621	\$21,777,436			\$21,777,436				
Clinic Services	621	\$74,350,063			\$74,350,063				
Medicaid School Refinancing	923	\$50,000,000							\$50,000,000
<b>Total Medicaid Services to Individuals</b>		<b>\$9,071,324,095</b>	<b>\$2,617,296,082</b>	<b>\$744,622,871</b>	<b>\$2,618,592,481</b>	<b>\$2,821,942,203</b>	<b>\$218,870,458</b>	<b>\$0</b>	<b>\$50,000,000</b>

Table 1 (continued)  
 FY 04-05 Projected Medicaid Expenditures

MEDICAID LONG TERM CARE

Service	NAICS	Expense	NAICS 446	NAICS 524	NAICS 621	NAICS 622	NAICS 623	NAICS 624	NAICS 923
Assistive Care Services	623	\$32,917,835					\$32,917,835		
Home & Community Based Services	624	\$777,778,695						\$777,778,695	
ALF Resident Waiver	623	\$30,022,154					\$30,022,154		
Intermediate Care Fac./ Sunland Ctrs	923	\$139,093,059							\$139,093,059
Intermediate Care Fac./ Community	923	\$199,057,315							\$199,057,315
Nursing Home Care	623	\$2,355,015,969					\$2,355,015,969		
Nursing Home Special Medicaid Payments	623	\$11,069,716					\$11,069,716		
State Mental Health Hospital Services	923	\$7,555,206							\$7,555,206
Mental Health DSH	622	\$68,635,186				\$68,635,186			
TB Hospital DSH	622	\$2,444,444				\$2,444,444			
Community Supported Living Waiver	923	\$21,408,819							\$21,408,819
Nursing Home Diversion Waiver	923	\$131,712,008							\$131,712,008
<b>Total Medicaid Long Term Care</b>		<b>\$3,776,710,406</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$71,079,630</b>	<b>\$2,429,025,674</b>	<b>\$777,778,695</b>	<b>\$498,826,407</b>

MEDICAID PREPAID HEALTH PLANS

Service	NAICS	Expense	NAICS 446	NAICS 524	NAICS 621	NAICS 622	NAICS 623	NAICS 624	NAICS 923
Prepaid Health Plans - Elderly and Disabled	524	\$694,200,692		\$694,200,692					
Prepaid Health Plans - Families	524	\$863,888,370		\$863,888,370					
<b>Total Medicaid Prepaid Health Plans</b>		<b>\$1,558,089,062</b>	<b>\$0</b>	<b>\$1,558,089,062</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>

EXECUTIVE DIRECTION & SUPPORT SERVICES

Service	NAICS	Expense	NAICS 446	NAICS 524	NAICS 621	NAICS 622	NAICS 623	NAICS 624	NAICS 923
Medicaid Fiscal Contract	923	\$79,851,714							\$79,851,714

TOTAL MEDICAID \$14,485,975,277 \$2,617,296,082 \$2,302,711,933 \$2,618,592,481 \$2,893,021,833 \$2,647,896,132 \$777,778,695 \$628,678,121

Key to NAICS codes:

- 446 Health and Personal Care Stores (Retail Trade)
- 524 Insurance Carriers and Related Activities
- 621 Ambulatory Health Care Services
- 622 Hospitals
- 623 Nursing and Residential Care Facilities
- 624 Social Assistance
- 923 Administration of Human Resource Programs (Public Administration)

Table 2  
Florida Sales Taxes

Type	Projected with Medicaid Spending FY 2004-05 (2004 \$)	Estimated without Medicaid Spending FY 2004-05 (2004 \$)	Difference w & w/o Medicaid Spending FY 2004-05 (2004 \$)	Difference as % of Projected FY 2004-05
General Sales Tax	\$17,591,000,000	\$17,188,000,000	-\$403,000,000	-2.29%
Motor Fuel Sales Tax	\$1,944,000,000	\$1,908,000,000	-\$36,000,000	-1.85%
Alcoholic Bev Sales Tax	\$694,000,000	\$681,000,000	-\$13,000,000	-1.87%
Tobacco Sales Tax	\$593,000,000	\$589,000,000	-\$4,000,000	-0.67%
Public Utility Sales Tax	\$770,000,000	\$754,000,000	-\$16,000,000	-2.08%
Other Sales Tax	\$988,000,000	\$965,000,000	-\$23,000,000	-2.33%
Total Sales Taxes	\$22,580,000,000	\$22,085,000,000	-\$495,000,000	-2.19%

## Appendix A

### REMI Policy Insight™ Model

*The Center for Economic Development Research (CEDR), College of Business Administration, University of South Florida (USF), uses the **REMI Policy Insight™** model to estimate economic and demographic effects that policy initiatives or external events may cause on a regional economy. Data - the last available historical year is 2000 - for each of USF's seven county economic development region, Hernando, Hillsborough, Manatee, Pasco, Pinellas, Polk and Sarasota; as well as the counties of Brevard, Lake, Orange, Osceola, Seminole and Volusia; and a consolidation of the remaining 54 Florida counties are available. The REMI software is managed by CEDR and available to the USF community for research and teaching purposes. The following article briefly explains the policy insight model.*

Founded in 1980, Regional Economic Models, Inc. (REMI) constructs models that reveal the economic and demographic effects that policy initiatives or external events may cause on a local economy. REMI™ Policy Insight model users include national, regional, state, and city governments, as well as universities, nonprofit organizations, public utilities and private consulting firms. REMI™ users in Florida include the State of Florida (Legislature, Governor's Office, Agency for Workforce Innovation), Tampa Bay Regional Planning Council, the University of South Florida, Florida State University, City of Jacksonville, Florida's Space Coast Economic Development Commission, and the Northeast Florida Regional Planning Council.

REMI™ is a dynamic model that predicts how changes in an economy will occur on a year-by-year basis. The model is sensitive to a wide range of policy and project alternatives as well as interactions between regional economies and the national economy. The model uses data from the Bureau of Economic Analysis, the Bureau of Labor Statistics, the Department of Energy, the Census Bureau and other public sources.

The model's dynamic property means that it forecasts not only what will happen but also when it will happen. This results in long-term predictions that have general equilibrium properties. This means that the long-term properties of general equilibrium models are preserved without sacrificing the accuracy of event timing predictions and without simply taking elasticity estimates from secondary sources.

REMI™ is a structural model, meaning that it clearly includes cause and effect relationships. The model shares two key underlying assumptions with mainstream economic theory: households maximize utility and producers maximize profits. Because these assumptions make sense to most people, the model can be understood by intelligent lay people as well as trained economists.

In the model, businesses produce goods to sell to other firms, consumers, investors, governments and purchasers outside of the region. The output is produced using labor, capital, fuel and intermediate inputs. The demand for labor, capital and fuel per unit of output depends on

their relative costs, because an increase in the price of any one of these inputs leads to substitution away from that input to other inputs. The supply of labor in the model depends on the number of people in the population and the proportion of those people who participate in the labor force. Economic migration affects the population size. People will move into an area if the real after-tax wage rates or the likelihood of being employed increases in a region.

Supply and demand for labor in the model determines the wage rates. These wage rates, along with other prices and productivity, determine the cost of doing business for every industry in the model. An increase in the cost of doing business causes either an increase in price or a cut in profits depending on the market for the product. In either case, an increase in cost would decrease the share of the local and US market supplied by local firms. This market share combined with the demand described above determines the amount of local output. There are also many other feedback loops in the model such as the feedback from changes in wages and employment to income and consumption, the feedback of economic expansion to investment, and the feedback of population to government spending.

The model brings together the fundamental economic elements mentioned in the previous two paragraphs to determine a baseline forecast for each year. The model includes all the inter-industry relationships that are in an input-output model, like IMPLAN Professional<sup>TM</sup>, and goes beyond the input-output model by including added relationships with population, labor supply, wages, prices, profits, and market shares.