

The Potential Economic Impact of Cutting Funding to the Arizona Health Care Cost Containment System

February 2010

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Executive Summary

- The Arizona economy in recent years has faced and continues to face severe budget issues at the state and local levels. In order to balance the state budget there have been numerous proposals suggested to enhance revenues, reduce expenditures or a mixture of both. This study examines the economic impact of reduced funding for the Arizona Health Care Cost Containment System (AHCCCS) for the period 2011-2030.
- For every state-funded dollar spent via the AHCCCS program there is a match by the federal government (often in the ratio 1:2 or 1:3 state to federal). Thus the total impact on the Arizona economy is far greater than the state-determined reduction alone would indicate following any state cut. The reduced expenditure estimates used within this study were provided by the Arizona Hospital and Healthcare Association. The Table below details the disaggregated expenditures by type as well as the split between state and federally funded expenditures and the overall impact on hospitals.

AHCCCS Expenditures Examined

Budget Proposal	General Fund	Federal Dollars¹	Total	Impact on Hospitals
Prop. 204 Rollback ²	\$765 M	\$1.5 B	\$2.3 B	\$1.035 B
Eliminate KidsCare	\$22.9 M	\$96.5 M	\$119 M	\$53.5 M
Optional Benefits Elimination	\$8.4 M	\$16.8 M	\$25.2 M	unknown
Eliminate Graduate Medical Education	\$13.3 M	\$24 M	\$37.3 M	\$37.3 M
Eliminate Disproportionate Share Hospital Payments	\$7.8 M	\$15.1 M	\$22.9 M	\$22.9 M
Limit Capitation Growth; Freeze and Reduce Provider Rates	\$57.1 M	\$110 M	\$167.1 M	unknown
Behavioral Health Services	\$35.9 M	N/A	\$35.9 M	unknown
Total	\$910.4 M	\$1.8 B	\$2.7 B	\$1.149 B

¹ Assumptions based on a 2:1 federal matching rate except KidsCare which is based in a 3:1 federal matching rate.

² Annualized figures.

- Our study estimates that in 2011, the first full year that reduced funding might occur, Arizona employment would be approximately 42,000 *lower* relative to the baseline. Real Gross State Product (GSP) would be *lower* relative to the baseline by approximately \$3.3 billion (2010\$) and real disposable income would be *lower* relative to the baseline by approximately \$1.74 billion (2010\$). The Arizona population would be *lower* relative to the baseline by approximately 10,000 and real disposable income per capita would be reduced by approximately \$200 (2010\$).
- In 2030, the final year of the study period, we estimate Arizona employment would be approximately 39,500 *lower* relative to the baseline. Real GSP would be *lower* relative to the baseline by approximately \$4.5 billion (2010\$) and real disposable income would be *lower* relative to the baseline by approximately \$3 billion (2010\$). The Arizona population would be *lower* relative to the baseline by 67,000 and real disposable income per capita would be higher by approximately \$7 (2010\$).
- The *cumulative* impact on Arizona's economy over the entire 2011-2030 period of reduced funding for the AHCCCS is outlined in the table below.

Aggregate Economic Impact of Reduced Funding for the AHCCCS

	Aggregate Impact: 2011-2030
Employment (Thousands of Job Years) ³	-808.1
Gross State Product (Billions 2010\$)	\$77.7
Real Disposable Personal Income (Billions 2010\$)	\$47.6

- Over the study period, in *aggregate terms*, approximately 808,000 total job years would be lost, \$78 billion (2010\$) in total real GSP would be lost as well as \$47.7 billion (2010\$) in real disposable personal income.
- The table below provides a summary for the sectoral distribution of the potential employment effects. Examining employment at a more disaggregated level it appears that the healthcare sector will suffer the majority of the reduction in employment –

³ This is job *years* and not actual jobs. A job year is equivalent to one person's employment for one year.

approximately 19,600 jobs in 2011. However, other sectors, such as construction, administrative and waste services and retail trade will also suffer significant reductions in employment.⁴

Disaggregated Employment Impact of Reduced Funding for the AHCCCS

Category	Thousands of Jobs		
	2011	2020	2030
Forestry, Fishing, Related Activities, and Other	-0.023	-0.012	-0.018
Mining	-0.009	-0.005	-0.008
Utilities	-0.069	-0.073	-0.077
Construction	-2.187	-2.317	-1.478
Manufacturing	-0.568	-0.468	-0.608
Wholesale Trade	-0.717	-0.612	-0.604
Retail Trade	-2.918	-2.958	-3.149
Transportation and Warehousing	-0.408	-0.381	-0.455
Information	-0.373	-0.333	-0.338
Finance and Insurance	-1.501	-0.871	-0.87
Real Estate and Rental and Leasing	-1.6	-2.139	-2.559
Professional and Technical Services	-1.719	-1.864	-2.211
Management of Companies and Enterprises	-0.207	-0.156	-0.176
Administrative and Waste Services	-2.426	-2.078	-2.06
Educational Services	-0.702	-0.859	-1.017
Health Care and Social Assistance	-19.556	-17.254	-16.04
Arts, Entertainment, and Recreation	-0.462	-0.57	-0.744
Accommodation and Food Services	-1.42	-1.923	-2.069
Other Services, except Public Administration	-1.738	-1.555	-1.741
Private Non-Farm Employment (TOTAL) ⁵	-38.603	-36.428	-36.222

⁴ Much of this reduction would be caused by the reduced level of economic activity associated with the initial reduced spending levels. However, some of the reduction would be caused by the population falling relative to the baseline case with a consequent smaller market to serve.

⁵ The difference between these figures and the ones reported above is due to rounding and the inclusion of public sector job losses in the prior estimates.

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1. Introduction

The state of Arizona faces numerous budget challenges that require a reassessment of spending initiatives and available revenue sources. As one part of this reassessment process, the Governor's Office has proposed⁶ that the voters be asked to reconsider some of the expansion in AHCCCS coverage of childless adults that was provided under the provisions of proposition 204 and capping payments to other AHCCCS recipients at amounts that may be covered by the tobacco settlement money available in Fiscal Year (FY) 2011.

The tobacco settlement funds were referenced in the original proposition 204 as the funding source for expanded AHCCCS coverage but have been inadequate since FY 2003. The state's general fund has been used to make up the difference in recent years.

According to the budget recommendations proposed by the Governor's Office for Strategic Planning and Budgeting (OSPB), the recommendation calls for the voters to consider a rollback of proposition 204 provisions that would result in a reduction of the general fund obligation of some \$382.5 million in FY 2011 and approximately \$1 billion in FY 2012 and thereafter annually.

Due to the matching provisions provided by the federal government, this rollback would have the effect of a reduction in \$737.6 million dollars in federal matching funds in FY 2011 and an additional loss of federal matching funds of approximately \$1.9 billion in FY 2012 and thereafter.

Additional reductions are noted in the OSPB budget summary. These include reductions in support for graduate medical training, provider rate reductions, elimination of kids care, transfers regarding behavioral health and reductions in Title XIX support.

The Governor's Office has acknowledged the hardships low income households would inevitably face with the loss of this support for health insurance coverage but notes that budget options are extremely limited given the legislature's reluctance to consider alternative revenue

⁶ In the Fiscal Year 2011 budget communicated to the legislature in January 2010.

sources and the public's unwillingness to accept cuts to other programs. Thus, proposals like this will invariably be debated among policymakers and all Arizonans in the next several years. Indeed, the State Legislature is considering their own expenditure reduction plan.

Under instruction from the Arizona Hospital and Healthcare Association, the Seidman Institute has produced estimates of the economic impact of the reductions in spending in the Arizona health care sector that might accompany the expenditure reductions. Our analysis is based on an independent assessment of the situation and the conclusions drawn are based on our own independent analysis.⁷ The scope of the analysis is limited to the issue of job and income changes that occur as a result of changes in the spending on the health care sector. Broader issues surrounding pricing, optimal health care delivery, the incentives created by the Federal matching formulas are not considered in this brief study.

The analysis that follows focuses initially on the direct impact of the health care sector in Arizona and how the reduction in spending in that sector could result in reduced income and employment opportunities statewide with secondary effects in all sectors.

2. Study Method and Scenario Examined

Below is a brief description of the study method adopted and scenario examined to estimate the impact of reduced funding for the Arizona Health Care Cost Containment System in Arizona.

2.1. Study Method

This study makes use of an Arizona-specific version of the Regional Economic Models, Inc. (REMI) regional forecasting model to produce numeric estimates of the impact on the Arizona economy reduced funding for the AHCCCS. The method for estimating the macroeconomic impact involves four fundamental steps:⁸

⁷ See the Appendix for a more detailed discussion on what is and what isn't included in the analysis that follows.

⁸ See Appendix for a more technical discussion surrounding REMI and the policy Scenario examined.

- 1. Preparation of a baseline forecast for the state economy:** This baseline scenario provides a forecast of the future path of the Arizona economy based on a combination of the extrapolation of historic economic conditions and an exogenous forecast of relevant national economic variables.
- 2. Development of a policy scenario:** The policy scenario describes the direct effects (reduced expenditures) that reduced state, and due to matching rules federal, total funding for the AHCCCS would have on the Arizona economy. It is assumed total reduced expenditures (from state and federal sources) would be approximately \$2.7 billion⁹ (nominal 2011 dollars). It is assumed that the first full year the reduced funding would occur would be in 2011 and that the direct impact would stay constant in real terms.¹⁰ Finally, it is assumed that no other exogenous change in public policy would occur.
- 3. Preparation of a forecast of the state economy based on the policy scenario:** This alternative forecast provides a simulation of the future path of the Arizona economy, incorporating the effects of the changes specified in the policy scenario.
- 4. Comparison of the baseline and policy scenario forecasts:** The differences between the future values of each variable in the forecast results provide estimates of the nature and magnitude that reduced funding for the AHCCCS will have on the Arizona economy, relative to the baseline.

3. Simulation Results

Using REMI, the results provided below incorporate the direct economic impacts associated with reduced funding for the Arizona Health Care Cost Containment System in Arizona as well

⁹ Which is a combination of state and federal financed expenditures.

¹⁰ Even with unemployment expected to fall in the future, Arizona is predicted to face an increase in population throughout the study period which would invariably lead to an increase in expenditures via AHCCCS. Thus the assumption of constancy in real terms is relatively conservative.

as any indirect impacts that could occur.¹¹ Again, it is important to note that all figures are relative to the baseline forecast; no changes in AHCCCS funding.¹²

Examining Table 1, in 2011, the first full year that reduced funding would occur, Arizona employment would be approximately 42,000 *lower* relative to a baseline. Real Gross State Product (GSP) would be *lower* relative to the baseline by approximately \$3.3 billion (2010\$), real disposable income would be *lower* relative to the baseline by approximately \$1.74 billion (2010\$). The Arizona population would be *lower* relative to the baseline by approximately 10,000 and real disposable income per capita would be reduced by approximately \$200 (2010\$).

In 2030, the final year of the study period, it is forecast Arizona employment will be approximately 39,500 *lower* relative to the baseline. Real GSP would be *lower* relative to the baseline by approximately \$4.5 billion (2010\$) and real disposable income would be *lower* relative to the baseline by approximately \$3 billion (2010\$). The Arizona population would be *lower* relative to the baseline by 67 thousand and real disposable income per capita would be higher by approximately \$7 (2010\$).

Table 1: Economic Impact of Reduced Funding for the AHCCCS

Category	2011	2015	2020	2025	2030
Total Employment (Thousands of Jobs)	-42.15	-41.90	-39.80	-39.41	-39.48
Gross Domestic Product (Billions 2010\$)	-3.29	-3.62	-3.79	-4.13	-4.54
Real Disposable Personal Income (Billions 2010\$)	-1.74	-2.04	-2.35	-2.67	-3.03
Real Disposable Personal Income per Capita (Thousands of 2010\$)	-0.21	-0.11	-0.04	-0.01	0.007
Population (Thousands)	-9.99	-37.14	-55.11	-63.79	-67.44

¹¹ An example of an indirect effect is as follows: any workers who lose their job as a result of reduced health care expenditure will have reduced income to spend on retail goods and services which would mean the retail sector will shed some workers due to the reduction in overall retail spending.

¹² For instance, if GSP is estimated to be x dollars lower than the baseline case, this does not mean it is x dollars lower than what GSP is today but it is x dollars lower than what GSP is forecast to be in that given year if the AHCCCS does not receive reduced funding.

3.1. Disaggregated Employment Impact

Examining employment at a more disaggregated level (Table 2), the healthcare sector could suffer the majority of the reduction in employment due to the specific nature of AHCCCS expenditures. This amounts to approximately 19,600 jobs in 2011 (46 percent of the total reduction in employment).

Table 2: Disaggregated Employment Impact of Reduced Funding for the AHCCCS

Category	Thousands of Jobs		
	2011	2020	2030
Forestry, Fishing, Related Activities, and Other	-0.023	-0.012	-0.018
Mining	-0.009	-0.005	-0.008
Utilities	-0.069	-0.073	-0.077
Construction	-2.187	-2.317	-1.478
Manufacturing	-0.568	-0.468	-0.608
Wholesale Trade	-0.717	-0.612	-0.604
Retail Trade	-2.918	-2.958	-3.149
Transportation and Warehousing	-0.408	-0.381	-0.455
Information	-0.373	-0.333	-0.338
Finance and Insurance	-1.501	-0.871	-0.87
Real Estate and Rental and Leasing	-1.6	-2.139	-2.559
Professional and Technical Services	-1.719	-1.864	-2.211
Management of Companies and Enterprises	-0.207	-0.156	-0.176
Administrative and Waste Services	-2.426	-2.078	-2.06
Educational Services	-0.702	-0.859	-1.017
Health Care and Social Assistance	-19.556	-17.254	-16.04
Arts, Entertainment, and Recreation	-0.462	-0.57	-0.744
Accommodation and Food Services	-1.42	-1.923	-2.069
Other Services, except Public Administration	-1.738	-1.555	-1.741
Private Non-Farm Employment (TOTAL) ¹³	-38.603	-36.428	-36.222

Other sectors, such as construction, administrative and waste services and retail trades¹⁴ could also suffer significant reductions in employment; combined these 3 sectors account for 31

¹³ The difference between these figures and the ones reported above are because of rounding and the employment figures mentioned previous include public sector job losses.

¹⁴ Both construction and retail trade have suffered significant employment losses already due to the recent recession.

percent of the total reduction in employment.¹⁵ By 2030 the healthcare sector could still have an employment level 16,000 jobs below baseline levels. Overall private sector non-farm employment could be 36,000 below the baseline case.

3.2. Aggregate Economic Impact

Table 3 describes the potential aggregate economic impact of reduced funding for the Arizona Health Care Cost Containment System in Arizona over the study period 2011-2030.

Table 3: Aggregate Economic Impact of Reduced Funding for the AHCCCS

Category	Aggregate Impact: 2011-2030
Employment (Thousands of Job Years) ¹⁶	-808.1
Gross State Product (Billions 2010\$)	\$77.7
Real Disposable Personal Income (Billions 2010\$)	\$47.6

Over the study period, in aggregate terms, approximately 808,000 total job years, \$78 billion (2010\$) in total real GSP as well as \$47.7 billion (2010\$) in real disposable personal income could be lost, all as a result of reduced AHCCCS funding.

4. Conclusions

The goal of this study is to provide an assessment of how reduced funding for AHCCCS could impact economic activity in Arizona assessed by macroeconomic measures such as real gross state product, employment, population and real disposable personal income.

A reduction in healthcare-related expenditures of approximately \$2.7 billion created by reduced state support, which indirectly reduces federal support, of the AHCCCS could lead to a significant decrease in economic activity within Arizona.

¹⁵ Much of this reduction is caused by the reduced level of economic activity associated with the initial reduced spending levels. However, some of the reduction will be caused by the population falling relative to the baseline case – thus there is a smaller market to serve (again relative to the baseline).

¹⁶ This is job *years* and not actual jobs. A job year is equivalent to one person having a job for one year.

Given the specific nature of the reduced expenditures, the healthcare sector will suffer a significant reduction in employment levels relative to the base. In fact, all sectors, especially construction and retail trades could face varying reductions in employment levels.

The reduction in state-wide employment is caused by the reduction in economic activity associated with reduced health care expenditures. For instance, healthcare workers who would lose their jobs, thus suffering a reduction in income, would spend less money in the Arizona economy. Also the reduction in economic activity is further dampened by the reduction in population growth as some Arizonans seek employment and a higher quality of life elsewhere and/or individuals who previously would have migrated to Arizona decide not to.

References

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Appendix

A.1. The REMI Model

REMI is an economic-demographic forecasting and simulation model developed by Regional Economic Models, Inc. REMI is designed to forecast the impact of public policies and external events on an economy and its population. The REMI model is recognized by the business and academic community as the leading regional forecast/simulation tool available.

Unlike most other regional economic impact models, REMI is a dynamic model that produces integrated multiyear forecasts and accounts for dynamic feedbacks among its economic and demographic variables. The REMI model is also an "open" model in that it explicitly accounts for trade and migration flows in and out of the state. A complete explanation of the model and discussion of the empirical estimation of the parameters/equations can be found at www.remi.com.

The operation of the REMI model has been developed to facilitate the simulation of policy changes, such as a tax increase for example, or many other types of events – anything from the opening of a new business to closure of a military base to a natural disaster. The model's construction includes a large set of policy variables that are under the control of the model's operators. To simulate the impact of a policy change or other event, a change in one or more of the policy variables is entered into the model and a new forecast is generated. The REMI model then automatically produces a detailed set of simulation results showing the differences in the values of each economic variable between the control and the alternative forecast.

The specific REMI model used for this analysis was Policy Insight Model Version PI+ version 1.0 of the Arizona economy leased from Regional Economic Models Inc. by a consortium of State agencies, including Arizona State University, for economic forecasting and policy analysis. The PI+ version 1.0 version was delivered with national and local datasets with data through 2005 and also with national and local baseline forecasts prepared by Regional Economic Models Inc. The REMI model incorporates procedures for updating the datasets and the baseline forecasts

with more recent data. The research team performed these procedures to prepare an updated baseline forecast for the Arizona economy, updating the REMI model with data up to 2007 and comparable estimates for 2008 from national and state sources.

A.2. Policy Effects Incorporated into the Analysis

The model used for the analysis is the REMI model which is based on assessing policy shocks to industries that occur in a particular calendar year. At the request of the Arizona Hospital and Healthcare Association (AzHHA) we assumed a reduction of \$2.7 billion dollars in reduced spending in the Arizona healthcare sector from 2011 thereafter.

It is important to note that this particular policy shock may not necessarily align with the provisions (in terms of precise timing and magnitude) of the rollback of proposition 204 contained in OSPB's January proposal, but that it is of an order of magnitude that is comparable.

A primary difference between the estimates used and the numbers produced in the OSPB summary is that the estimates used focus on *calendar* 2011 and OSPB focuses on *FY 2011* and *FY 2012*. However, OSPB does note that there will be significant increases in the size of the cuts in FY2012 (which spans half of calendar 2011) as Federal stimulus money expires.

Table A1 below provides information on the budget proposals and the assumed expenditures foregone via state and federal sources for a given calendar year that were examined in the analysis. The details and estimates by category have been provided by the AzHHA. But we believe the numbers are reasonable given that OSPB projects an expenditure reduction of \$2.9 billion dollars in FY2012 based on the 204 rollback alone.

Table A1: Budget Proposals Examined in Analysis

Budget Proposal	General Fund	Federal Dollars ¹⁷	Total	Impact to Hospitals
Prop. 204 Rollback ¹⁸	\$765 M	\$1.5 B	\$2.3 B	\$1.035 B
Eliminate KidsCare	\$22.9 M	\$96.5 M	\$119 M	\$53.5 M
Optional Benefits Elimination	\$8.4 M	\$16.8 M	\$25.2 M	unknown
Eliminate Graduate Medical Education	\$13.3 M	\$24 M	\$37.3 M	\$37.3 M
Eliminate Disproportionate Share Hospital Payments	\$7.8 M	\$15.1 M	\$22.9 M	\$22.9 M
Limit Capitation Growth; Freeze and Reduce Provider Rates	\$57.1 M	\$110 M	\$167.1 M	unknown
Behavioral Health Services	\$35.9 M	N/A	\$35.9 M	unknown
Total	\$910.4 M	\$1.8 B	\$2.7 B	\$1.149 B

Source: Arizona Hospital and Healthcare Association

A.3. Effects Not Incorporated into the Analysis

It was assumed that no other change in public policy would occur. Thus, no account of the economic impact associated with reductions in expenditure and/or increases in revenue collection, elsewhere in the economy to solve the state’s budget problem instead of reducing AHCCCS funding were included. Thus, we do not include in the discussion any measures of the benefits that invariably would accrue to other government sectors or to Arizona taxpayers of not spending approximately \$1 billion in general fund money on healthcare.

A complete assessment of the economic impact of this policy action would require knowledge of what additional budget reductions and/or tax increases would be required should the proposal be rejected. A \$1 billion per annum in reallocated expenditures and or absolution of \$1 billion per annum from obligations of Arizona taxpayers has its own benefits which are not

¹⁷ Assumptions based on a 2:1 federal matching rate except KidsCare which is based in a 3:1 federal matching rate.

¹⁸ Annualized figures.

measured in this study simply because we don't have the specific information on how the money would be allocated should the proposal be rejected.

It was also assumed that the majority of the reduced expenditure via AHCCCS would not be absorbed by private sector expenditure. Given the characteristics of the population that the AHCCCS serves - many of them being income constrained - it is highly unlikely that this group will have sufficient disposable income to finance some of the reduced state and federal health care expenditures themselves.

Also not included in the analysis is any estimates of how changes in Federal legislation might influence how healthcare is funded in future years nor do we conduct any analysis about whether the healthcare sector is more or less efficient in its expenditure of public dollars. All of these issues are well beyond the scope of this study.

Finally, there is no discussion in this report regarding the economic consequences that may stem from the elimination of health care coverage to large numbers of Arizonans in terms of impact of lost worker productivity, sick days, ability to perform when injured, etc.

Glossary

Real Gross State Product (GSP): The real (constant) dollar value of all goods and services produced in Arizona for final demand/consumption.

Job Year: A job year is equivalent to one person having a job for exactly one year.

Real Disposable Personal Income: The household income that is available to be spent after taxes have been paid. Technically speaking, real disposable personal income is the sum of wage and salary disbursements, supplements to wages and salaries, proprietors' income, rental income of persons, personal dividend income, personal interest income, and personal current transfer receipts, less personal taxes and contributions for government social insurance.