

## Using ROI Forecasting to Maximize the Value of Medicaid Investments

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By Allison Hamblin, MSPH, Center for Health Care Strategies, Inc.

Today many Medicaid stakeholders are challenged to identify health care programs that have both quality improvement and cost savings potential. To assist in these efforts, the Center for Health Care Strategies (CHCS) developed the **ROI Forecasting Calculator for Quality Initiatives** (the *ROI Calculator*), a tool for estimating the financial implications of quality improvement initiatives. With support from The Commonwealth Fund and the Robert Wood Johnson Foundation (RWJF), CHCS worked with eight states through the **ROI Purchasing Institute** to test the value of this tool, improve its functionality, and incorporate its use into the planning and analysis of proposed initiatives to improve care for Medicaid beneficiaries. Through these efforts, participating states demonstrated how return on investment (ROI) forecasting can be used to maximize the value of investments in quality improvement.

This issue brief outlines how ROI forecasting can help Medicaid stakeholders identify initiatives that improve health care quality while also controlling growth in costs.

### ROI Forecasting Calculator for Quality Initiatives

The *ROI Calculator*, made possible through RWJF funding, is a web-based tool designed for use by state Medicaid agencies, health plans, and other stakeholders interested in assessing the cost-savings potential of quality improvement initiatives. Cost savings, and thus positive ROI, may potentially occur if resulting changes in health care utilization (e.g., reductions in emergency room visits) are sufficient to offset program costs. Users of the *ROI Calculator* enter detailed assumptions about their proposed initiatives, including target population characteristics, program costs, and the magnitude and timing of expected changes in utilization. To help estimate utilization changes, the *ROI Calculator* includes an “Evidence Base” component that allows users to select from results of published studies to generate forecast assumptions. Studies in the Evidence Base cover high-priority areas for Medicaid populations including asthma, diabetes, congestive heart failure, and high-risk pregnancy. Based on all of the assumptions entered, the *ROI Calculator* examines the impact on costs and ROI that may result from the program, including a range of estimates based on sensitivity analysis.

### Uses of the Calculator

The *ROI Calculator* is designed to generate realistic expectations for the potential financial impact of initiatives to improve health care quality, and can be used by Medicaid stakeholders for an array of purposes throughout the course of program development and implementation. In particular, the *ROI Calculator* can help answer questions around resource allocation, program design, program funding, and monitoring and evaluation of quality initiatives.

### **Resource Allocation**

The *ROI Calculator* is intended to support program development by allowing users to analyze and compare the financial impacts of various options for resource allocation. Specifically, the *ROI Calculator* can help policymakers and other stakeholders determine how to prioritize quality improvement efforts – such as deciding which clinical conditions or eligible population groups to target through a new initiative, or which of a set of initiatives to pursue first. For example, a state may be considering whether to focus a new care management program on diabetes versus congestive heart failure, or may be trying to prioritize between launching a new medical home initiative or a pay-for-performance program. The *ROI Calculator* can contribute to this analysis by helping users evaluate the relative ROI associated with various program alternatives.

### **Program Design**

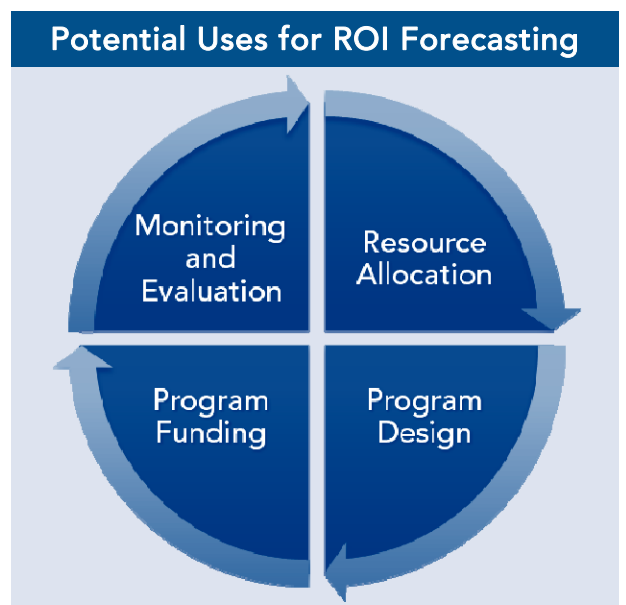
Once the area of focus has been established for a new quality improvement initiative, the *ROI Calculator* is also useful for weighing trade-offs between specific program design options. For example, given limited resources, a state may need to choose between “going broad” and “going deep” in terms of targeting populations for inclusion and allowing for intensity of an intervention. With the same level of program funding, the state may either target a broad population in a low-intensity intervention (e.g., all children with asthma in a telephonic care management program) or a stratified population in a high-intensity intervention (e.g., high-risk children with asthma in a community-based program). With the *ROI Calculator*, the state could analyze which alternative would have the maximum impact in terms of ROI.

### **Program Funding**

By providing a transparent methodology for estimating program costs and ROI, the *ROI Calculator* can be used to communicate expected outcomes and support funding requests. In cases where cost-savings are expected to result from quality improvement initiatives, the *ROI Calculator* can be used to help justify the upfront investments required to generate these savings over time. In this way, the *ROI Calculator* can facilitate conversations between quality improvement personnel and budget staff or financial analysts, thereby complementing other budget analyses that may not include longer-term financial impacts.

### **Monitoring and Evaluation**

The *ROI Calculator* can also be used to monitor the ongoing cost-effectiveness of programs relative to initial expectations. For example, the *ROI Calculator* can be used to help determine whether to continue or expand pilot initiatives, or to evaluate the performance of contracted service providers. Ongoing monitoring and evaluation of financial outcomes also improves the accuracy of future forecasting efforts, as it provides refined data from which to build assumptions around the key drivers of ROI, such as ramp-up time, implementation costs and, perhaps most critically, the magnitude and timing of expected changes in health care utilization. Accordingly, these ongoing analyses serve to better inform future decisions around resource allocation and program design, and provide more robust support for requests to fund similar initiatives down the road.



## Examples from the Field

Over the past year, Medicaid officials from eight states participated in the *ROI Purchasing Institute*, supported by The Commonwealth Fund and RWJF. Through this initiative, participants gained early access to the *ROI Calculator* and received technical assistance on incorporating ROI forecasting into the planning and monitoring of quality initiatives. The experiences of these states demonstrate the various ways the *ROI Calculator* can be used to support quality improvement efforts, as summarized in the examples below.

- **Allocate resources and support budget requests for proposed quality initiatives.**  
Arizona used the *ROI Calculator* to help determine the clinical focus for a proposed pay-for-performance initiative. With the *ROI Calculator*, Arizona identified that a planned focus on asthma would not have yielded a sufficient ROI due to previous improvements that had already been achieved in asthma care. With the program redefined to include diabetes, immunizations and nursing home care, the state was able to use estimated cost-savings to develop a request for budget appropriation to fund the incentive program.
- **Evaluate trade-offs associated with various program implementation options.**  
Colorado used the *ROI Calculator* to examine options for expanding a pilot initiative to enroll children in a medical home. With the *ROI Calculator*, the state evaluated the pilot's ROI and estimated the cost savings that could be generated by expanding the program statewide. Based on the anticipated savings, Colorado was able to consider enhanced provider reimbursement in the expansion, as well as targeting additional populations such as aged and disabled beneficiaries.
- **Establish realistic cost-savings expectations for programs in various stages of implementation.**  
Oklahoma used the *ROI Calculator* to project the savings that may be achieved among people with diabetes included in the state's newly launched Health Management Program. The projected savings helped gain support of stakeholders during the program development phase. Now that the program has rolled out, Oklahoma intends to use the *ROI Calculator* to evaluate whether its initial savings estimates were on target.
- **Inform conversations with contracted providers of care management services.**  
Washington used the *ROI Calculator* to develop internal projections of financial outcomes associated with the state's Chronic Care Management Program. The process of comparing internal analyses with those provided by its contracted partner has led to increased transparency in these discussions, and has improved the ability of state officials to ask the right questions and interpret program data provided by the contractor.
- **Identify where opportunities exist to better manage current resources and improve quality of care.**  
Pennsylvania used the *ROI Calculator* to examine the impact of an established disease management program on specific population subsets. In doing so, the state identified high-cost sub-populations for whom the program appears to have a disproportionate beneficial effect (e.g., diabetics with numerous comorbidities). This analysis may enable the state to more efficiently target resources to meet the needs of specific population subsets in future initiatives.

## A Tool for Value-Based Purchasing

Faced with rising health care costs, a growing burden of chronic illness, and increasing recognition of gaps in health care quality, purchasers of health care services are increasingly focused on maximizing the value of dollars invested in health care programs. The *ROI Calculator* is designed to assist Medicaid stakeholders in their efforts to link purchasing decisions to value, and to help identify opportunities where quality improvement can be used as a means of controlling health care cost increases over time.

As the above examples highlight, the *ROI Calculator* can facilitate value-based purchasing in a wide range of ways – from aiding resource allocation decisions to monitoring financial impacts during program implementation. By including ROI forecasting as a component of broader program planning activities, purchasers may be better positioned to maximize the impact of their investments in quality.

## For More Information

Sign up to use the **ROI Forecasting Calculator for Quality Initiatives** at [www.chcsroi.org](http://www.chcsroi.org). For more information, please contact Allison Hamblin at (609) 528-8400 or [ahamblin@chcs.org](mailto:ahamblin@chcs.org).

## About the Center for Health Care Strategies

The Center for Health Care Strategies is a nonprofit health policy resource center dedicated to improving the quality and cost effectiveness of health care services for low-income populations and people with chronic illnesses and disabilities. CHCS works with state and federal agencies, health plans, and providers to develop innovative programs that better serve people with complex and high-cost health care needs.

## Additional Resources

Additional ROI resources from CHCS include:

- *ROI Calculator Fact Sheet*: This fact sheet provides a brief overview of the ROI Forecasting Calculator for Quality Initiatives.
- *ROI Evidence Base*: This technical assistance tool provides a compilation of published quality improvement studies that reported cost or utilization outcomes, and includes studies on asthma, congestive heart failure, depression, diabetes, and high-risk pregnancy.

To download, visit [www.chcs.org](http://www.chcs.org).

**CHCS** Center for  
Health Care Strategies, Inc.

200 American Metro Blvd. Ste. 119  
Hamilton, NJ 08619-2311  
Phone: (609) 528-8400  
Fax: (609) 586-3679  
[www.chcs.org](http://www.chcs.org)