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Hands-on-Training: Potential uses of the Asthma Care ROI calculator

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Tools You Can Use to Make a Difference



Examples

- Planning
- Evaluation


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Planning Example: Use calculator to estimate impact of program on Medicaid budget

- **Objective:** forecast budget impact of proposed asthma care program
- **Data available**
 - Obtained from Medicaid claims
 - Asthma prevalence rates (from Medicaid claims)
 - Utilization of medical care services (from Medicaid claims)
 - Obtained from pilot study
 - Change in utilization rates, but impact on medications and ancillary services not available
 - Other info
 - 10 year planning horizon
 - Program costs \$100 a year for each person that participates
- **Missing information**
 - Cost of Medical care services
 - Impact of program on medical costs and ancillary services

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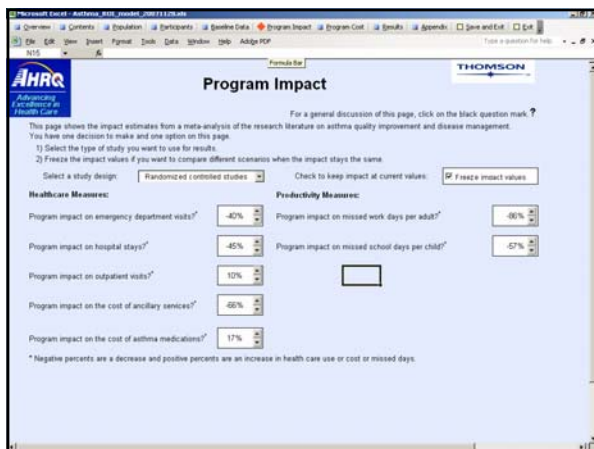


Planning Example

Changes to each page of the calculator

- **Population**
 - Medicaid
 - State (Arizona this example)
 - No need to adjust age, gender and race since using own prevalence rates
- **Participants**
 - Adults and Children
 - Severity – persistent asthma
 - Change number eligible based on own data (10,000)
 - Participation rate (60%)
- **Baseline**
 - Change cost perspective to program /plan (exclude patient payments)
 - ED visits for asthma: 0.5 per year per patient
 - Hospital stays for asthma: 0.1 per year per patient
 - Outpatient (office visits) for asthma: .9
- **Program Impact from pilot study (used a control group)**

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Program Impact

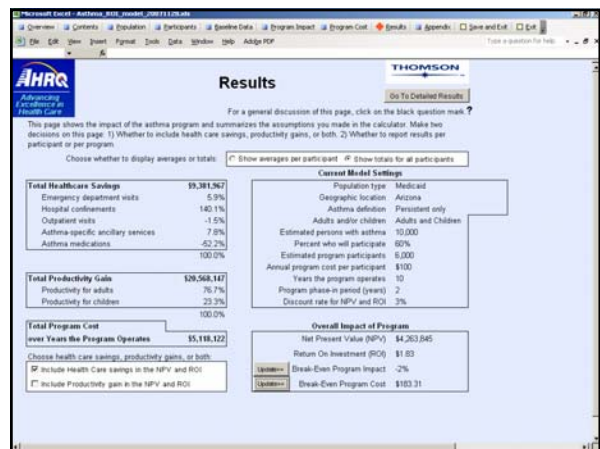
This page shows the impact estimates from a meta-analysis of the research literature on asthma quality improvement and disease management. You have one decision to make and one option on this page.

1) Select the type of study you want to use for results.
2) Freeze the impact values if you want to compare different scenarios when the impact stays the same.

Select a study design: Randomized controlled studies Check to keep impact of current values: Freeze impact values

Healthcare Measures:	Productivity Measures:
Program impact on emergency department visits? <input type="text" value="-40%"/>	Program impact on missed work days per adult? <input type="text" value="-60%"/>
Program impact on hospital stays? <input type="text" value="-45%"/>	Program impact on missed school days per child? <input type="text" value="57%"/>
Program impact on outpatient visits? <input type="text" value="10%"/>	
Program impact on the cost of ancillary services? <input type="text" value="-80%"/>	
Program impact on the cost of asthma medications? <input type="text" value="17%"/>	

* Negative percents are a decrease and positive percents are an increase in health care use or cost or missed days.



Results

This page shows the impact of the asthma program and summarizes the assumptions you made in the calculator. Make two decisions on this page: 1) Whether to include health care savings, productivity gains, or both; 2) Whether to report results per participant or per program.

Choose whether to display averages or totals: Show averages per participant Show totals for all participants

Category	Value
Total Healthcare Savings	\$9,381,967
Emergency department visits	5.9%
Hospital confinements	140.1%
Outpatient visits	-1.5%
Asthma-specific ancillary services	7.8%
Asthma medications	-62.2%
	100.0%
Total Productivity Gains	\$29,568,147
Productivity for adults	76.7%
Productivity for children	23.3%
	100.0%
Total Program Cost	\$5,119,122

Choose health care savings, productivity gains, or both:
 Include Health Care savings in the NPV and ROI
 Include Productivity gain in the NPV and ROI

Category	Value
Current Market Settings:	
Population type	Medicaid
Geographic location	Arizona
Asthma definition	Persistent only
Adults and/or children:	Adults and Children
Estimated persons with asthma	10,000
Percent who will participate	60%
Estimated program participants	6,000
Annual program cost per participant	\$100
Years the program operates	10
Program phase-in period (years)	2
Discount rate for NPV and ROI	3%
Overall Impact of Program	
Net Present Value (NPV)	\$4,263,845
Return On Investment (ROI)	81.83
Break-Even Program Impact	-2%
Break-Even Program Cost	\$183.31



Evaluation Example: Use calculator to guide or compare

- **Objective:** Plan evaluation of asthma intervention and monitor impact before and after evaluation finished
- **Plan comprehensive evaluation:**
 - Are all components captured? (Inpatient, emergency, outpatient, medication, ancillary tests)
 - What is time horizon of expected program costs and returns?
 - Are future benefits and costs evaluated on a discounted (equalized) time horizon?
 - Are productivity gains assigned financial returns?
- **Monitor impact of intervention**
 - Early results without a control group – compare to studies without a control group
 - Controlled results in – compare to controlled studies
 - Find studies that evaluated same type of intervention

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