



The Need for Standards: Lessons from Benefit-Cost Analysis of Communities That Care



Workshop on Standards for Benefit-Cost Analysis of Preventive Interventions for Children, Youth, and Families

Session 1:

Overview of Benefit-Cost Analysis of Preventive Interventions for Children



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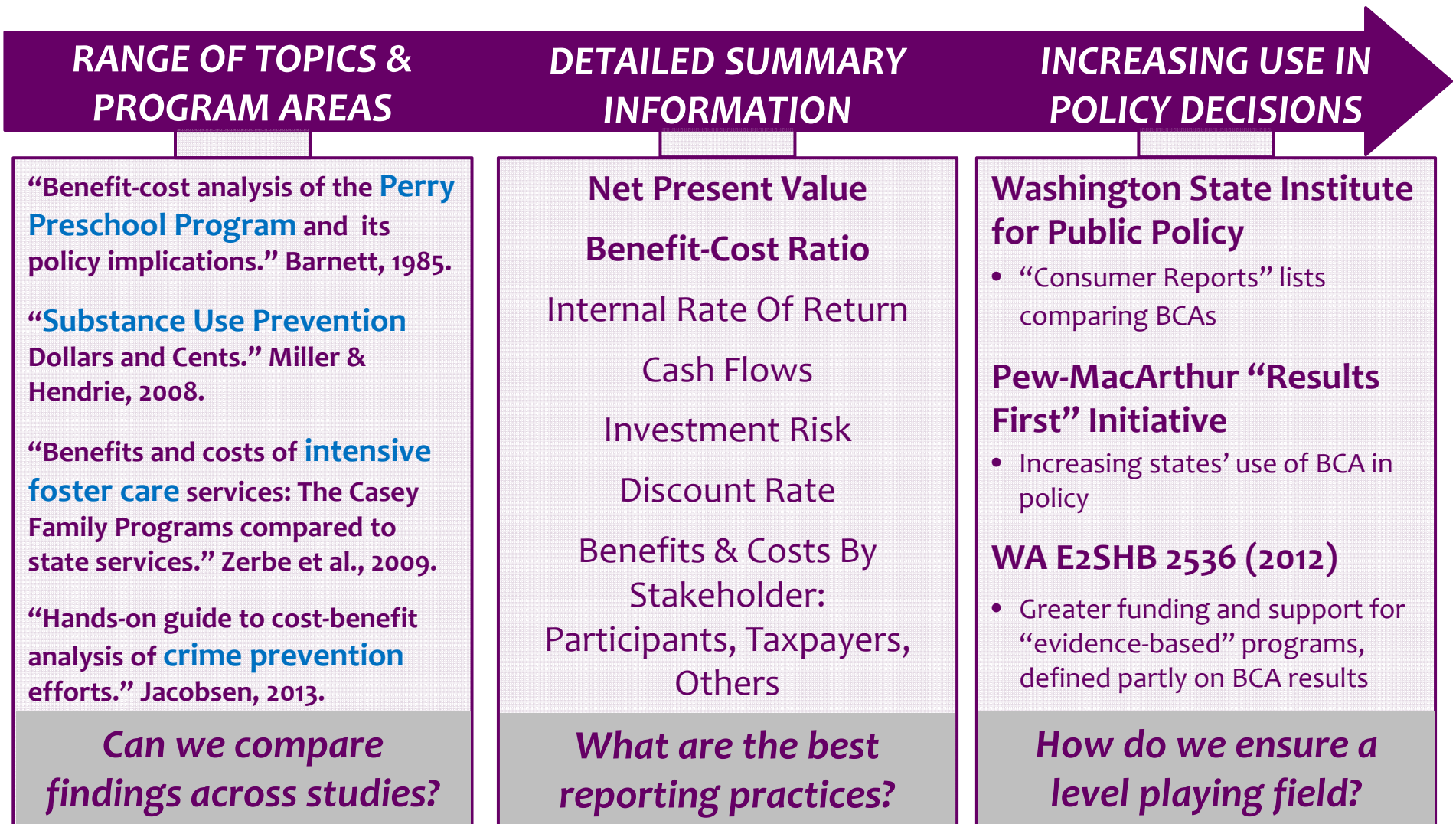
Social Development Research Group: *“Improving Lives Through Research”*

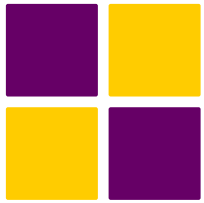
- **Develop, Implement, Test Preventive Interventions**
- **Promote Positive Youth Development**
 - Reduce Risk & Enhance Protection
 - Community, School, Family, Individual
- ***What are the economic implications of better youth outcomes?***



As Studies & Applications Increase...

So Does the Need for Standards





Where Are Standards Needed?

Research Design Quality

Well-designed

Assessing Costs

Cost estimate in multisite trial?

Opportunity costs: teachers, volunteers, board members?

Estimating Benefits

Significant effects or all effects?

What discount rate?



Shadow Prices

Projection Period

Potential for Double Counting Benefits

Marginal v. Average Costs

Monte Carlo Methods

Outcomes to Measure

Deadweight Cost of Taxation

Uncertainty

Point Estimates & Confidence Intervals

CTC Reduced Delinquency & Substance Use Initiation Through Grade 12

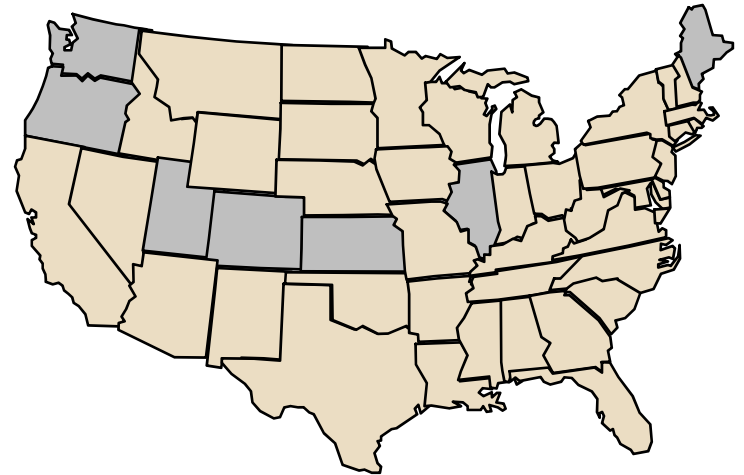
- **Randomized controlled trial**

- 24 communities, 7 states
- Longitudinal panel: 4,407 students

- **10 Year Study: Grade 5 to Age 19**

- **Grade 12 Results: Lower rates of initiation community wide**

- Significantly lower initiation:
Delinquency, Alcohol use, Cigarette smoking
- Non-significant but in expected direction:
High school graduation, marijuana use, other drug use



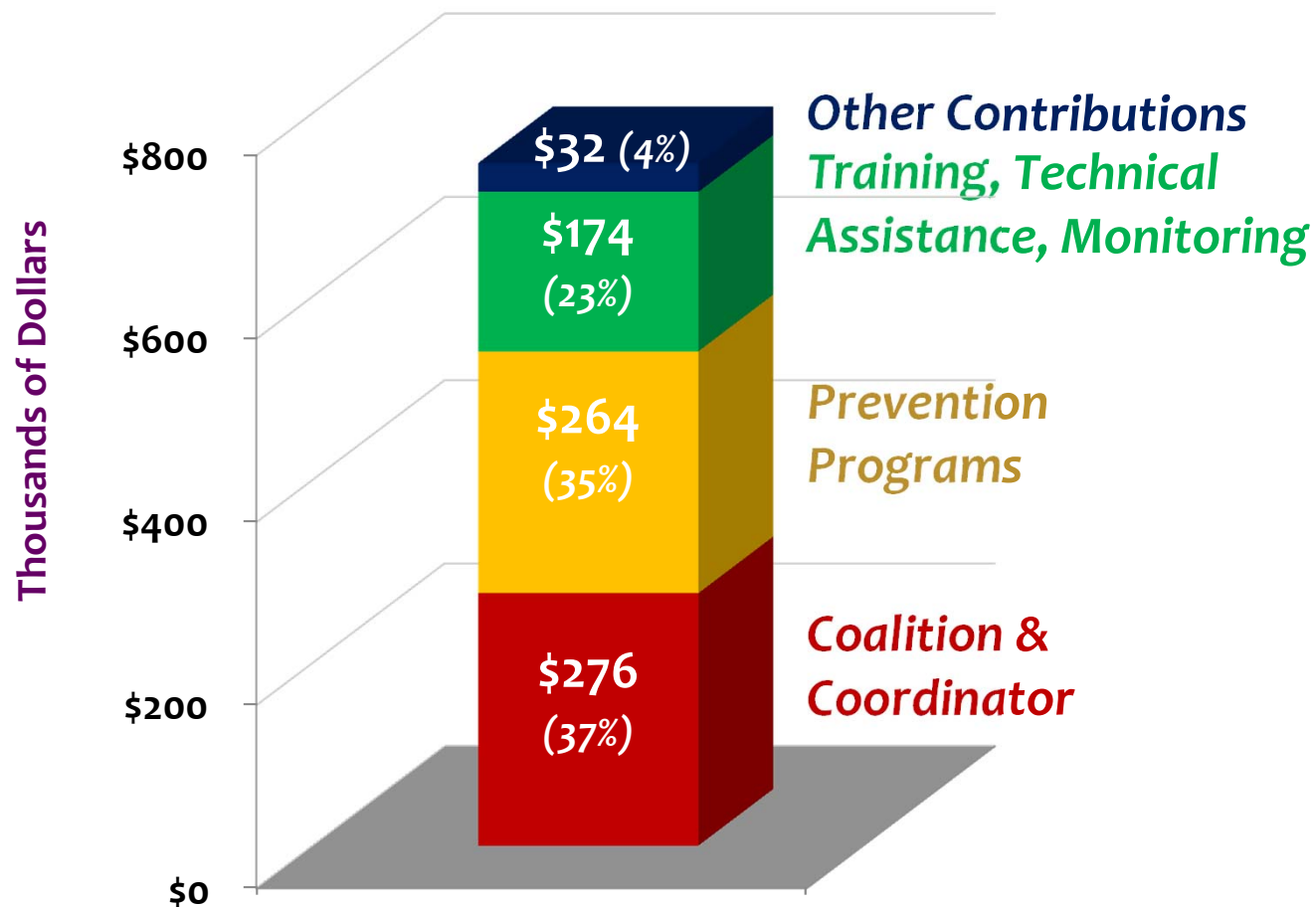
Investments in CTC Promote Positive Youth Development



- **Coalition** of diverse stakeholders “owns and operates” CTC.
- **Survey youth:**
 - Identify epidemiological levels of risk and protection.
 - Target most widespread risks for intervention.
- **Implement** evidence-based programs to address prioritized risk factors.
- **Monitor** fidelity, assess efficacy, make course corrections.
- **Coordinator** oversees everything.

Investments Were Made in 4 Major Cost Categories

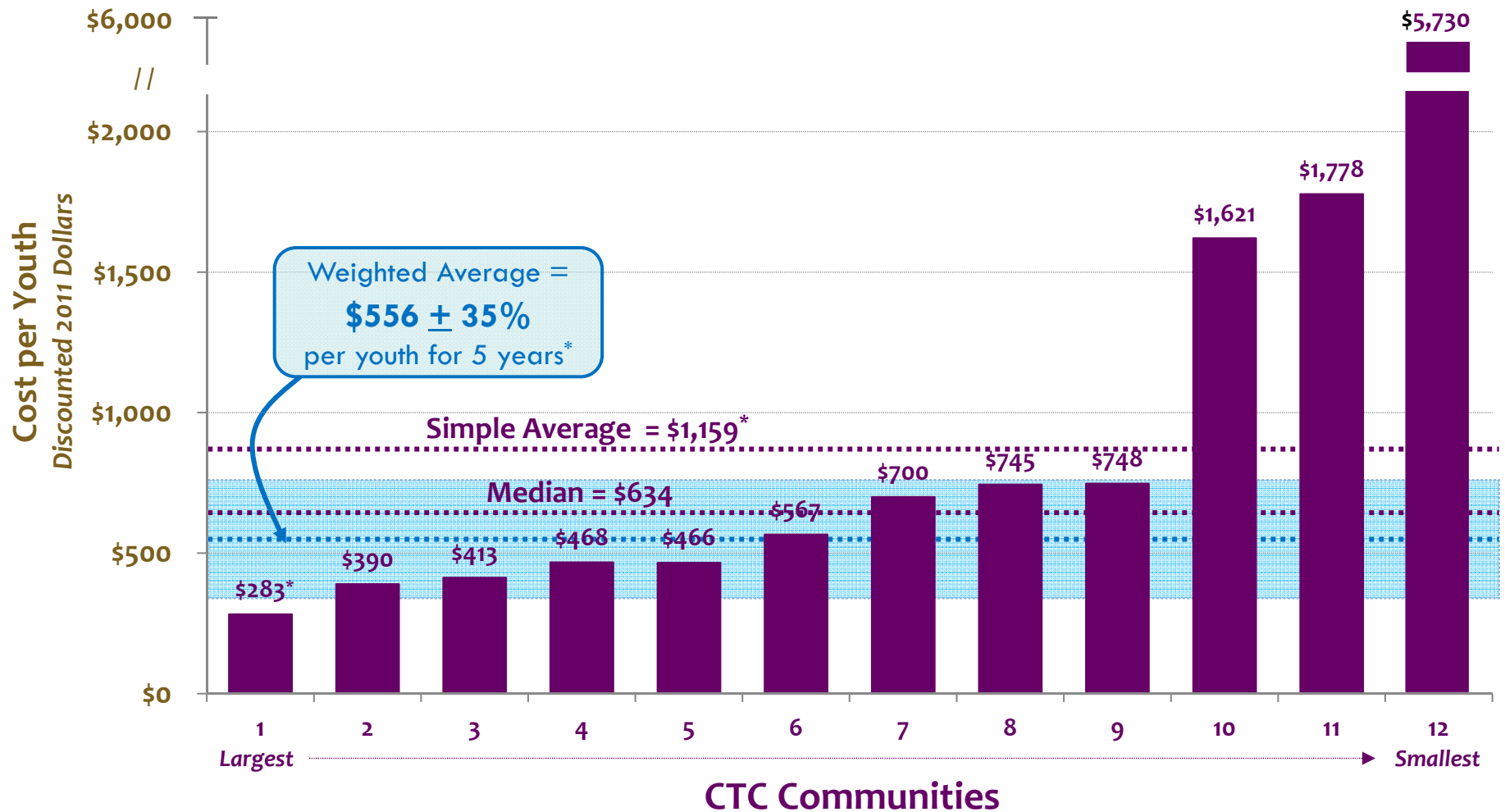
CTC Investments per Community: \$745,000* for 5 Years



* Discounted 2011 Dollars

How Do We Estimate Costs Per Youth

When Costs Per Youth Vary Across Sites?



* Discounted 2011 Dollars

How Do We Value Non-budgetary Economic Resources?



Option 1:

Time cost is fully offset by benefits volunteers & teachers receive.

Option 2:

Value time at appropriate wage plus fringe rate for the volunteer position.

Option 3:

Value time at volunteer's own wage plus fringe rate.

\$556 + \$89 per youth

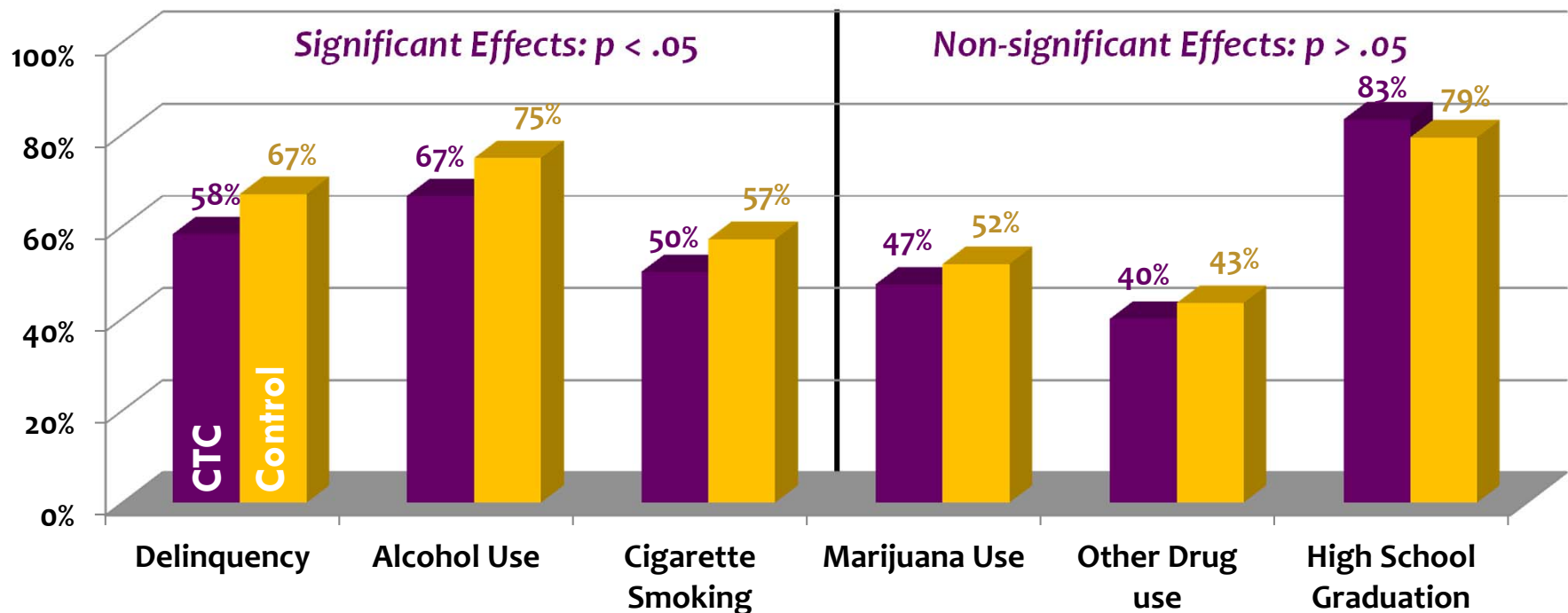
Discounted 2011 Dollars

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Should We Monetize Significant Effects or All Effects? What Discount Rate?

Through Grade 12: CTC youth reported lower initiation of delinquency and substance use, and more graduated high school.



Total Benefits * - Significant Effects Only		Total Benefits * - All Effects	
3.5% Discount Rate:	\$4,477	3.5% Discount Rate:	\$8,123
7.0% Discount Rate:	\$2,312	7.0% Discount Rate:	\$4,070

* Discounted 2011 Dollars

Different Viable Assumptions Lead to a Range of BCA Conclusions

	Range of Estimates*		SDRG Analysis
	Low	High	
Assumptions	Significant Effects, Opportunity Costs = \$89, 7% Discount Rate	All Effects, Opportunity Costs = \$0, 3.5% Discount Rate	Significant Effects, Opportunity Costs = \$0, 3.5% Discount Rate
Benefits	\$2,312	\$8,123	\$4,477
Costs	(635)	(556)	(556)
Net Present Value	\$1,667	\$7,617	\$3,920
Benefit-Cost Ratio	3.58	14.70	8.22

* Discounted 2011 Dollars



Summary

- **Benefit-cost analysis in prevention has come a long way**
 - More publications, diverse topics and programs
 - Wealth of useful summary statistics and information
 - Increasing policy application
- **With this growth, the need for standards and methodological guidance has increased**
 - We need to be able to compare findings across studies
 - Policy, funding, uptake implications of comparative BCAs underscore the need for standards



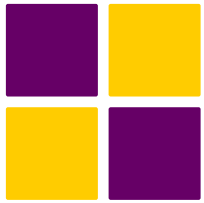
Summary

- **Different viable assumptions lead to different “bottom lines”**
 - Today’s focus: 3 dimensions related to cost and benefits estimates
 - Many other decision points where standards would be helpful: Monte Carlo methods, shadow prices, which outcomes to measure, relevant projection period



Conclusion

- **Challenge for the field and for a possible IOM panel:**
 - Identify areas and assumptions where there is common ground
 - Where consensus is less clear, delineate the major alternatives
- **Researchers, policy makers, and practitioners would benefit from guidance that increases methodological consistency and capacity to compare results across studies.**



Thank you

Please contact Margaret Kuklinski, PhD, with any questions or comments:

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