



COLLEGE OF PUBLIC HEALTH
The University of Georgia



Economic Evidence for Informing Policy Making

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Be Part of the Solution

What is Economic Evaluation (EE)?

Applied analytic methods to:

*Identify,
Measure,
Value, and
Compare*

the costs and consequences of
interventions, policies, strategies.



Why Care About Economics within the Context of Evaluating Interventions?

- Maximizing outcomes is important.
- Minimizing costs is important too.
- Resources are limited, so hard (resource allocation) decisions must be made.
- Demonstrates the value provided from the resources expended (return on investment).



Economic Evaluation \neq Economics

- Economics seeks to explain choices and behaviors by individuals
- Economic evaluation (EE) seeks to inform choices made by decision makers

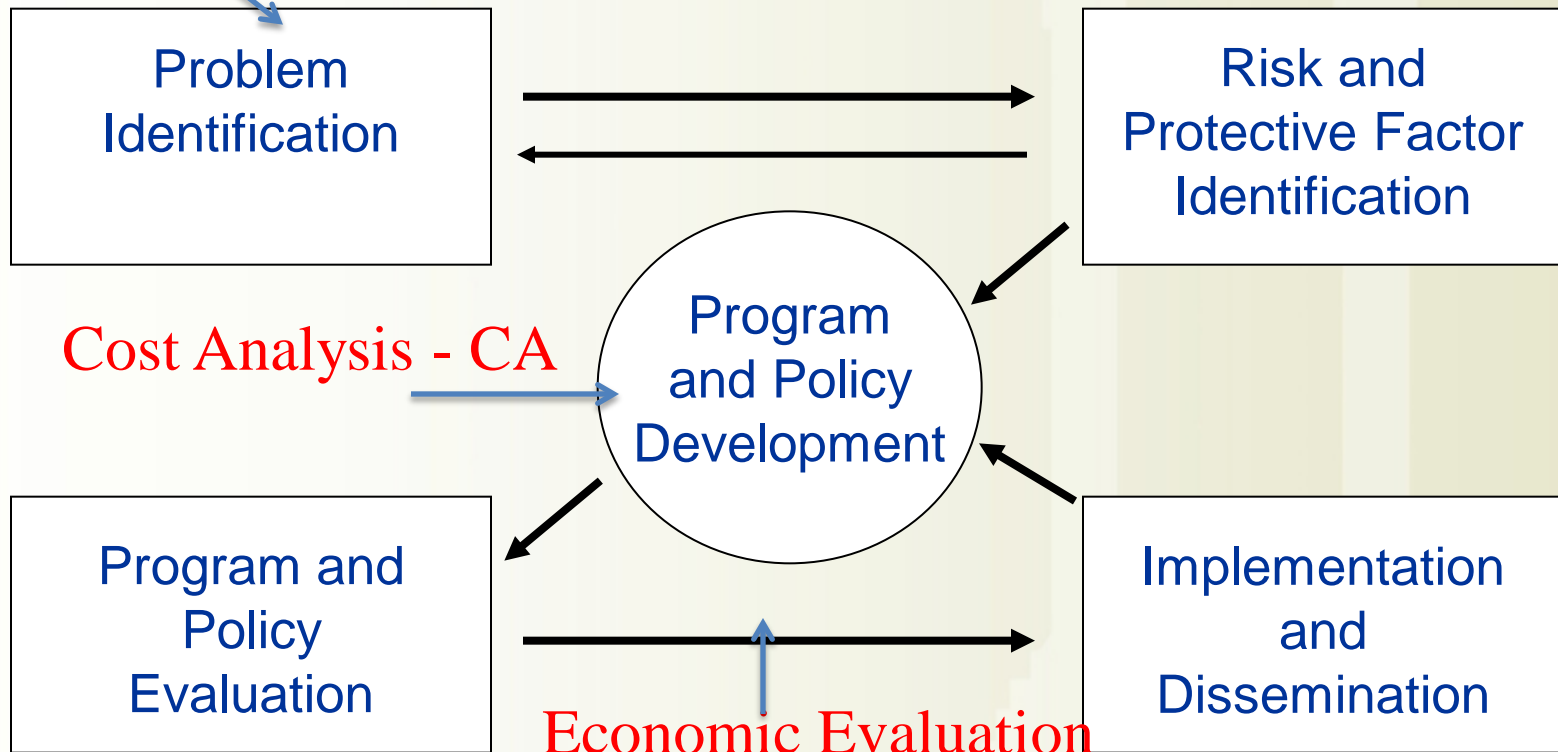


EE Methods

- **Partial evaluation – costs only**
 - Economic impact analyses or Economic burden estimates
 - Cost of illness (COI) analysis in health
 - Programmatic cost analysis (CA)
- **Full evaluation – costs and outcomes**
 - Cost-benefit analysis (CBA) or Benefit-cost analysis (BCA)
 - Return on investment (ROI) analysis
 - Budgetary impact analysis (BIA)
 - Cost-effectiveness analysis (CEA)
 - Cost-utility analysis (CUA) in health

(Public Health) Model for Prevention

Cost of Illness - COI

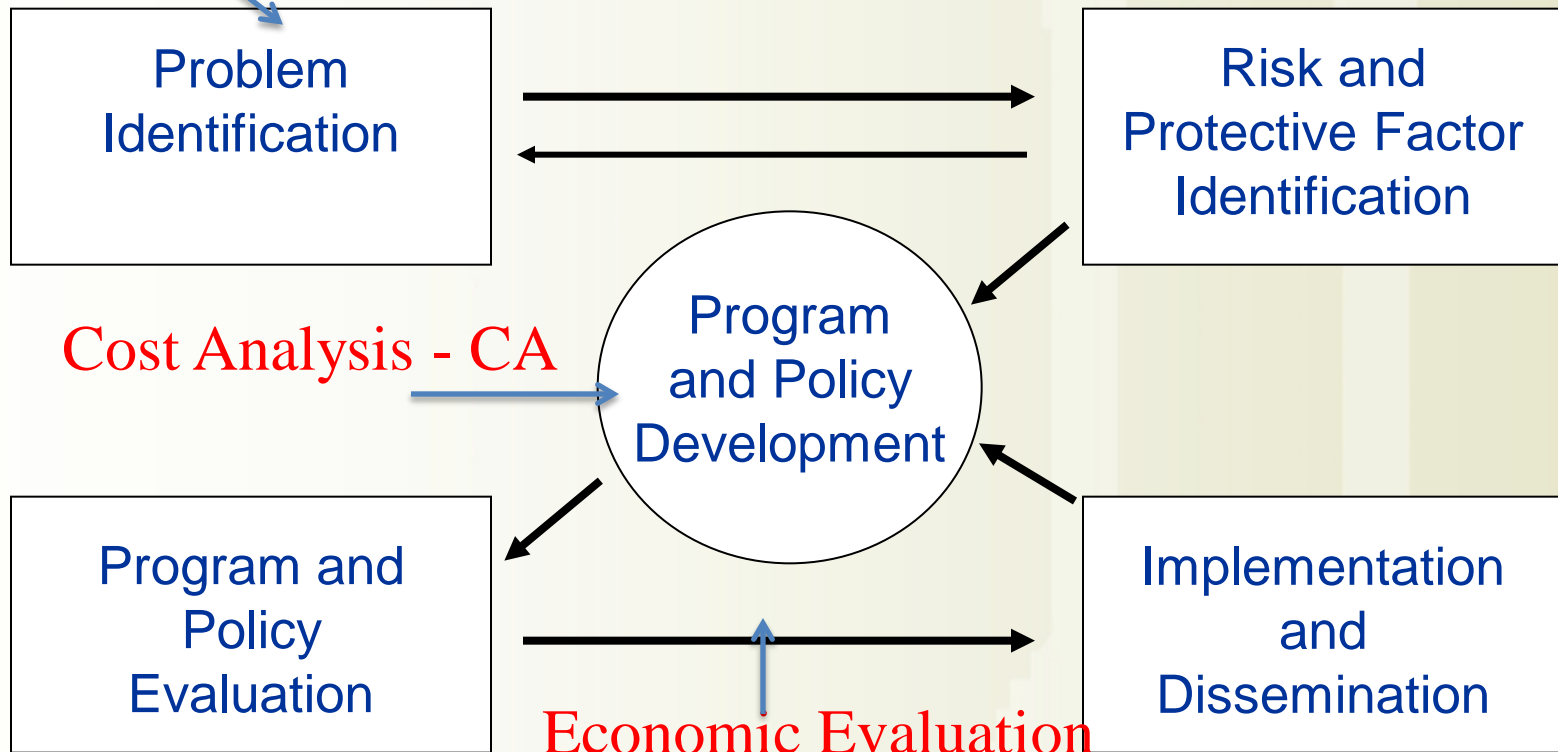


Cost Analysis - CA

Economic Evaluation
- BCA and CEA

(Public Health) Model for Prevention

Cost of Illness - COI



Economic Evaluation
- BCA and CEA

EE to Inform Policy

US Congress/OMB

Allocation decision between health, defense, and education.
Outcome comparator: \$

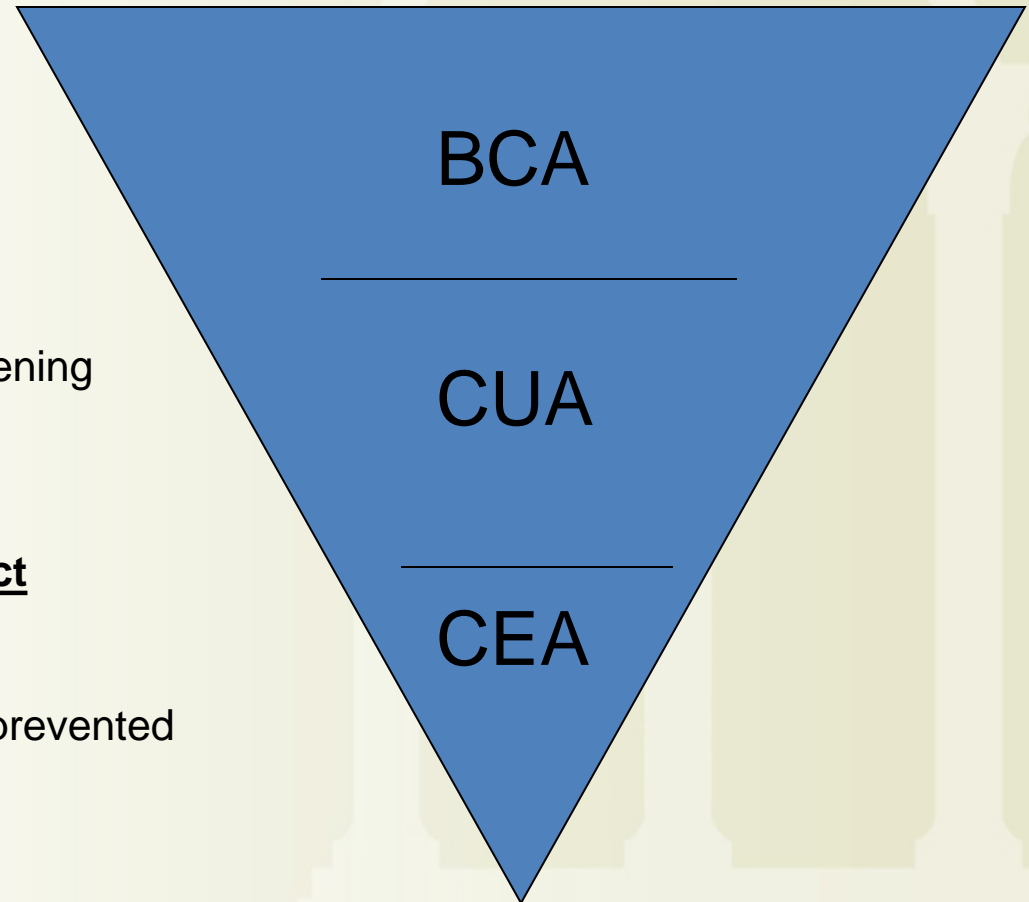
Director of HHS/UK's NHS

Coverage decision between cancer screening and diabetes treatment
Outcome comparator: QALYs

Local health department/school district

Decision between 2 interventions designed to reduce child neglect
Outcome comparator: Cases of neglect prevented

Tier of Decision Making



Autism: Societal ROI in Health Insurance Coverage

- January 2012
- State legislation being drafted to consider mandating HI coverage for autism therapy
- Supporters:
 - Children’s Healthcare of Atlanta (CHOA)
 - Marcus Institute



Overview

- Policy under consideration in 2012: a mandate requiring therapy for autism spectrum disorder (ASD) be covered by the insurer
- Goal: estimate the expected costs to the Georgia State Employee Health Benefits Plan (GAHBP)
 - Primary costs for Applied Behavior Analysis (ABA), an **evidence-based** therapy for ASD
- Considered three ASD insurance benefit scenarios
 - Minimum: annual cap = \$36,000 for those 0-10 years
 - Middle: annual cap = \$43,000 for those 0-21 years
 - Maximum: annual cap = \$50,000 for those 0-21 years



Data Sources

- Georgia Department of Community Health. (2010). 2010 Annual Report. Atlanta, GA.
 - # covered lives in GAHBP, breakdown of covered lives by age group, administrative expenses
- Centers for Disease Control and Prevention. (2009). Prevalence of autism spectrum disorders – autism and developmental disabilities monitoring network, United States, 2006. Atlanta, GA: Centers for Disease Control.
 - % with ASD by age in GA
- Lambricht, M. (2009). Actuarial cost estimate: Georgia Senate Bill 161. An act relating to insurance coverage for autism. Philadelphia, PA: Oliver Wyman.
 - % with ASD by age, % with ASD receiving ABA by age group, average # hours of ABA by age group, ABA hourly rate
- Lambricht, M. (2011). Actuarial cost estimate: Michigan Senate Bills 414 and 415. Bills related to the coverage and treatment of autism spectrum disorders. Philadelphia, PA: Oliver Wyman.
 - direct medical costs (non-therapy) related to expanded ABA services
- AutismVotes. (2012). Cost estimates of state autism insurance reform bills.
 - comparison to other states



Methodology

1. Begin with total # covered lives under GAHBP and breakdown by number of lives in each age
2. Multiply by prevalence estimates of ASD in GA at each age
3. Multiply by expected % with ASD that would receive therapy
4. Multiply by average number of annual therapy hours and average hourly rate for therapy
 - if (hours*hourly rate) is greater than annual cap, set at annual cap
5. Sum costs of ABA across ages
6. Add appropriate insurance administrative costs
7. Compare increase in costs to current total premiums paid by all covered individuals to estimate increase in premium



Results

- Minimum Scenario: \$4.2 million (\$2.8 - \$9.7 million)
 - 0.17% increase in premiums (0.16% - 0.35%)
- Middle Scenario: \$5.2 million (\$2.8 – \$14.4 million)
 - 0.21% increase in premiums (0.16% - 0.58%)
- Maximum Scenario: \$5.9 million (\$2.8 - \$15.7 million)
 - 0.24% increase in premiums (0.25% - 0.58%)

- Premium increase in context: \$3600 is average premium, therefore \$7.50 expected increase for middle scenario



In Comparison to Benefits

- Most kids with ASD require special education services (source: Jacobson et al., 1998)
 - Special education is designed for children with a variety of issues, but it is generally NOT effective for children with autism
 - Special education is expensive
 - \$11,000 per child per year
- Special education savings for ASD children that receive therapy *before* entering school is estimated to be \$200,000-\$300,000



Benefits of Early Autism Therapy

- Lifetime savings for therapy have been estimated at \$656,000 to over \$1 million (Source: Jacobson et al., 1998)
- Reductions in...
 - special education costs
 - home and community based services
 - institutional services
 - supplemental security income
 - Medicaid waiver or equivalent services
 - supported work services



Costs Compared to Benefits

- Costs of therapy relative to educational benefits
 - 4 years of therapy at \$35,000 per year for a total of \$140,000 for each child that receives therapy (maximums under Ava's law)
 - 72% of children receiving therapy mainstream into regular education
 - **Costs** \$194,000 for therapy per student that mainstreams
 - **Savings** to the state in special education are estimated at \$200,000-\$300,000 per student that mainstreams into regular education
- Overall
 - The savings to special education are likely to be greater than the costs of therapy
 - But, ***more importantly, the increase in premium per member is estimated at less than \$10 for the potential to save over a million dollars per ASD child successfully mainstreamed into regular education.***

Ava's Law

- Effort led by Anna Bullard, a mother who struggled to pay for therapy for her daughter Ava
- Senate voted March 31, 2015
 - 54 yeas & 0 nays
- House voted April 2, 2015
 - 161 yeas & 0 nays
- Governor Deal signed into law
April 29, 2015



- Became 41st state to enact autism insurance reform
- “...so as to provide for certain insurance coverage of autism spectrum disorders; to provide for definitions; to provide for limitations; to provide for premium cap and other conditions...”
- Would apply to **ALL** insurers in the state
- \$30,000 or \$35,000 annual cap for 0-6 years of age



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Thank You!

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Be Part of the Solution



EERG

- Current Funding
 - Contract with MDRC – cross-site (economic) evaluation of the national home visiting program
 - Contract with Ga Charitable Care Network – ROI in hypertension management in free community clinics
 - Contract with Shephard Spinal Center – ROI in rehabilitation services for severe TBI and SCI patients
 - Grant with the University of South Carolina (Prinz) – EE of CM prevention intervention
 - Grant with Boston University (Rothman) – EE of intervention to prevent partner violence
 - Grants with UGA colleagues
 - EE of substance abuse prevention programs with rural African American youth (Brody, Kogan, Beech)
 - EE of workplace health promotion interventions (Wilson, Smith)