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Novel Approaches to Value Assessment, Beyond Cost-Effectiveness Framework

ISPOR Summit
Novel Approaches to Value Assessment, Beyond Cost-Effectiveness Framework

Nonmarket Valuation in Health Economics

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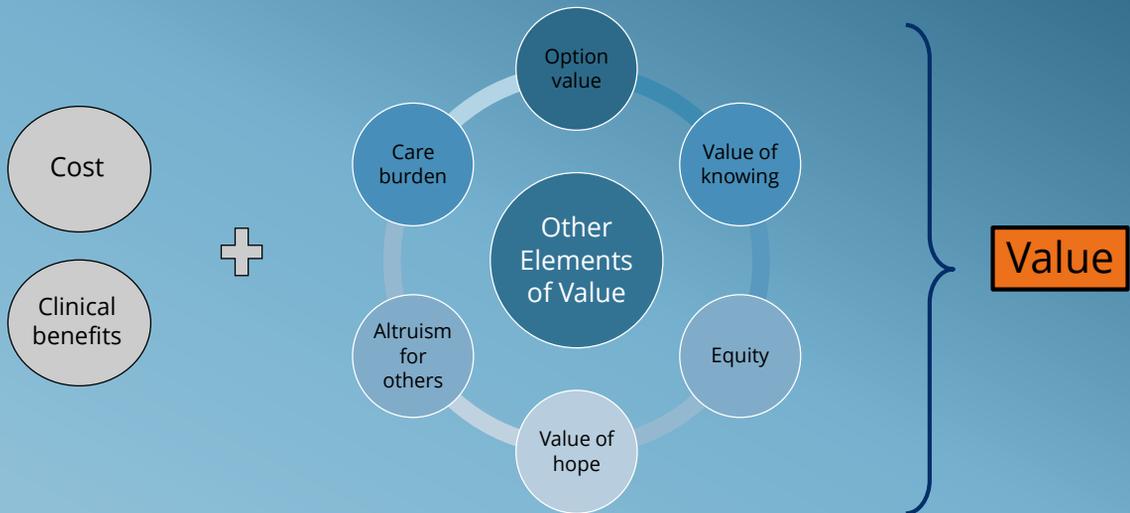
Preference Evaluation Research Group

Traditional Value Assessment



$$ICER = \frac{C_{ExpTrx} - C_{StdCare}}{QALYs_{ExpTrx} - QALYs_{StdCare}}$$

Other Dimensions of Value



Adapted from Garrison L, 2016 and Neumann PJ, 2016..

Non-Market Valuation Methods

- Conventional cost-benefit analysis traditionally based on values revealed in market transactions
- Many important decisions require information about values for which there are no markets or existing markets involve administered prices that do not represent actual values
- Development of nonmarket-valuation methods in environmental economics

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A Short History of CEA and CBA

HEALTH

- **1970**
Fanshel, Bush, and Torrance health indexes
- **1976**
Zeckhauser and Shepard use term QALYs
- **1977**
Weinstein and Stason CEA for health
- **1980**
Pliskin on QALY theory
- **1996**
Gold et al. standards for CEA

NON-HEALTH

- **1974**
Mäler theory of nonmarket valuation
- **1981**
Reagan Executive Order 12291
- **1989**
Mitchell and Carson on empirical methods
- **1992**
Exxon Valdez oil spill
- **1994**
Federal standards nonmarket valuation

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Mental-Health Community Values

Direct Costs

- Medical care
- Lost productivity
- Housing
- Social services
- Crime

Indirect Costs

- Family disruption
- Distress at seeing homeless people
- Spillover effects of drug abuse
- Personal concerns about crime

Opportunity Costs

- Diversion of public resources from other health and social priorities

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Research Strategy

- What is the value of related community benefits without reference to mental health?
- What is the value of a generic mental-health program relative to other budget priorities?
- What is the value of a program for treating the named mental-health condition?

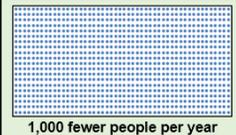
Which kinds of problems are most important?

Suppose the [STATE] legislature were considering expanding current programs to reduce the numbers of people who are unemployed, commit serious crimes, or are homeless. Expanding these programs would help more people to live, work, learn, and participate more fully in their communities.

Suppose also that your state representative sent you a letter asking whether he or she should vote for or against expansions of existing programs.

Example Question-Related Community Benefits

Please check which program benefit is most important and which program benefit is least important.

Type of Program Benefit	Size of Program Benefit	<u>Most</u> Important Benefit (check ONE)	<u>Least</u> Important Benefit (check ONE)
Homelessness	 1,000 fewer people per year	<input type="checkbox"/>	<input type="checkbox"/>
Unemployment	 500 fewer people per year	<input type="checkbox"/>	<input type="checkbox"/>
Number who commit serious crimes	 250 fewer people per year	<input type="checkbox"/>	<input type="checkbox"/>

If paying for the program would require increasing your taxes by [\$600 per year (\$50 per month)], would you want your representative in the state legislature to vote for the program expansion?

→ Yes
 → No
 → Don't know or not sure

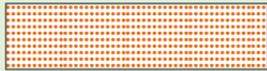
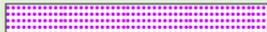
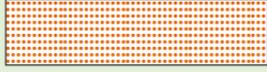
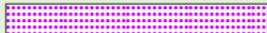
What kinds of programs would you prefer?

Suppose the [STATE] legislature were considering two budgets for expanding three programs. Suppose also that your representative sent you a letter asking which budget he or she should vote for if any.

Mental health program plus 2 of:

- Disaster Relief
- Motor-Vehicle Safety
- Food Safety
- Unemployment

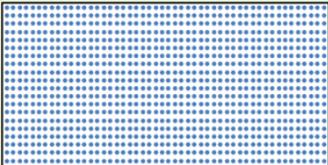
Example Question-Budget Priorities

Program	No Budget Change	Budget A	Budget B
Disaster-relief program	No change	 500 more people helped per year	 250 more people helped per year
Mental-health program	No change	 1,000 more people helped per year	 500 more people helped per year
Motor-vehicle-safety program	No change	 250 fewer serious injuries per year	 150 fewer serious injuries per year
Increase in your taxes	No increase	\$240 per year (\$20 per month)	\$480 per year (\$40 per month)
Which option would you want your representative to vote for?	<input type="checkbox"/> No Budget Change	<input type="checkbox"/> Budget A	<input type="checkbox"/> Budget B

What is the value to you of a program to treat [named condition]?

Suppose the [STATE] legislature were considering expanding an existing mental-health program to make a new effective medicine available specifically to people with [named condition] whose current treatment is not working for them. We would like you to think about the program expansion shown here.

Example question-Named condition

Program	Current Budget	New Budget
Increased number of people with [named condition] <u>successfully treated</u>	No change	 1,000 more people per year
Increase in your taxes	No increase	\$480 per year (\$40 per month)

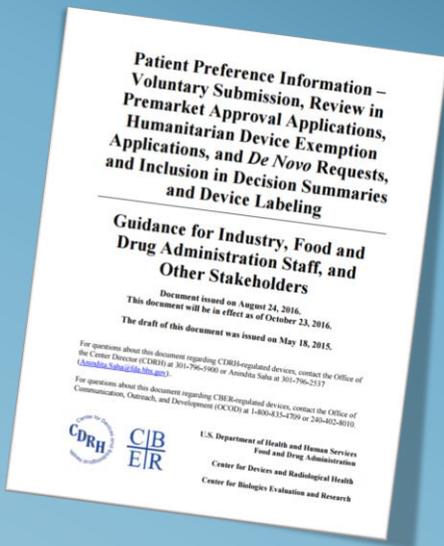
Would you want your state representative to vote for the new budget?

- Yes → ➔ Double cost
- No → ➔ Halve cost
- Not sure → ➔ Halve cost

Challenges to Nonmarket Valuation Validity

- Hypothetical bias
- Use values versus existence values
- Anchoring
- Yea-saying
- Incentive-compatibility
- Payment-vehicle effects

Stated-Preference Data as Evidence



Center for Devices Guidance



FDA-sponsored study on validity