

Evidence for Policy Decisions

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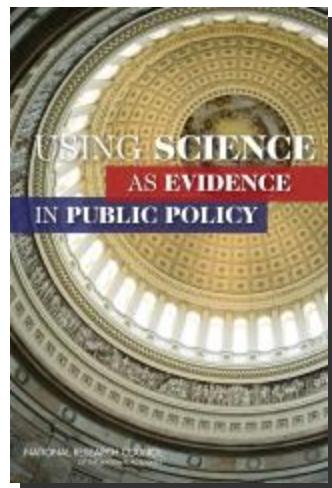
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Evidence-Based Policymaking

- What does it mean to use evidence in public policy making?
- What is evidence in this context?
- Why should research knowledge be used as evidence in policy making?



Themes from the Academies Report

- Policy arguments

Definition of Evidence

Scientific knowledge is evidence when it is used in an argument for the societal consequences of a policy action.

Two Implications of this Definition

- Evidence is not an intrinsic characteristic of scientific knowledge, but rather a characteristic of its use in policy argument.
- Use of research as evidence is not determined by whether or not a policy is adopted that comports with the research findings. Use is not advocacy.

Themes from the Academies Report

- Policy arguments
- Mental models and psychological processes

Some Heuristics used in Policy Decision Making

- Availability heuristic
- Attribute substitution
- Representativeness heuristic
- Affect heuristic

Themes from the Academies Report

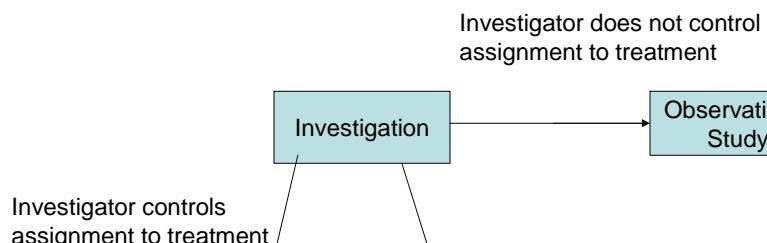
- Policy arguments
- Mental models and psychological processes
- A systems perspective

Developments in the Obama Administration

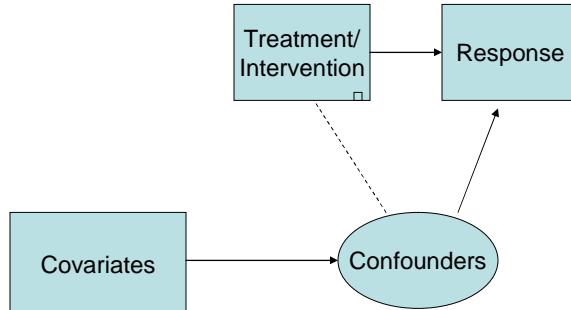
- OSTP social and behavioral sciences team
- OMB articulated an evidence and innovation agenda
- Ryan-Murray bill to create an Evidence-Based Policymaking Commission becomes law.

Recent Works on Evidence-Based Policy

- *Fighting for Reliable Evidence*, by Judy Gueron and Howard Rolston
- *Show me the Evidence*, by Ron Haskins and Greg Margolis
- *Moneyball for Government*, edited by Jim Nussle and Peter Orszag



Covariate Adjustment for Selection Bias (- - - indicates independence given covariates)



Conclusion

With conditional independence (such as with randomization), selection bias is avoided.

But, without conditional independence, a treatment effect may not be consistently defined to be useful.

Evaluation	Experimentation
Studies the effects of an intervention (The effects of a cause)	Studies interventions to produce a desired effect (The causes of an effect)
Analyzes experimental data in controlled settings	Analyzes observational data in realistic contexts
Seeks a measure to represent the underlying concept	Seeks a measure to determine whether something is working
Proves a program has an effect	Measures performance
Prospective studies	Retrospective studies
Confirmatory analysis	Exploratory and explanatory analyses
Credible to scientists	Convincing to policymakers
Getting the science right	Getting the right science

Limitations of RCTs

- Results of an RCT may not generalize to other populations or settings.
- RCTs establish an effect, but, in a complex, dynamic system, there is no one dependent variable.
- An RCT is not necessarily superior to a well-conducted observational study.

Limitations of RCTs (cont.)

- RCTs do not explain the mechanisms that produced the effect.
- Reliance on RCTs to validate policymaking can obscure the social values at stake.
- RCTs stifle innovation obtained from departures to the experimental protocol.

Paradigm of Continuous Improvement

Not just one social program to address a societal condition but systems of programs that take into account myriad individual, societal, and contextual factors.

Co-evolution of Policy and Research

Research and policy must evolve in tandem through a feedback process, in which the adoption of an intervention generates new theories that can be tested with experiments.

Evidence for Policy Decision Making

The goal of the course is to equip future policymakers and those who may advise them with the knowledge to promote the responsible use of scientific research as evidence in public policy.

Content of the Course

- The Academies report
- Origins of evidence-based policy
- Recent initiatives (e.g., the Evidence Commission) and major published works
- Major research designs used in evidence

Content of the Course (cont.)

- Problems and pitfalls of implementation
- Cognitive biases in policy design and argumentation
- Communication, including framing and knowledge brokering)

Content of the Course (cont.)

- Roles of policy analysis and evaluation units
- Systems thinking in the design and evaluation of social interventions
- Classic (e.g., Bayesian) methods to weigh evidence in making decisions

Content of the Course (cont.)

- Organizational issues that affect how evidence is used
- How research evidence is used and weighed by the courts
- Needed research on using evidence in public policymaking