A Variety of Rigorous Methods to Assess Effectiveness

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Congressional Request to Examine Approach to Identifying Effective Interventions

- Concerns about the credibility of some effectiveness evaluations led to calls for more rigorous evaluation
- Senate Homeland Security and Government Affairs requested GAO to examine:
  - Private sector Top Tier Evidence initiative
  - Types of interventions best suited for randomized experiments, and alternative methods when randomization is not suitable (*today's focus*)
- GAO reviewed methods literature and consulted evaluation experts

Where Random Assignment is Well Suited

- First, when intervention is important, clearly defined and well implemented, and study is adequately resourced
- Second, when needed to control for influence of external factors on observed results
- Third, when random assignment is possible, practical and ethical
  - Evaluation controls exposure to the intervention
  - Limited coverage of eligible population
  - Comparison groups' experiences remain separate, intact, and distinct throughout the study
  - Outcomes are observable within a reasonable time frame

Where Random Assignment Is Not Well Suited

- Random assignment is not possible
  - Entitlement programs; laws
  - Broadcast media
  - Comprehensive social reforms
  - Negative events
- Random assignment is not practical
  - Staff refuse to use random assignment
  - Rare events or long time lags
  - Broad, flexible policies

Rigorous Alternative Methods

- Quasi-experimental designs
    - Non-randomized comparison groups
    - Regression discontinuity analysis
- Statistical analyses of observational data
    - Panel survey analysis
    - Interrupted time series analyses
- In-depth case studies of comprehensive social reforms

Other Rigorous Methods

- Additional measurement and design features to help rule out alternative causal explanations
  - Collect additional baseline or context data
  - Target comparisons to test alternative explanations
  - Gather a diverse body of evidence – different methods, different settings and populations – to more accurately assess when and for whom an intervention is effective

Observations

- Requiring evidence from randomized experiments as sole proof of effectiveness is likely to exclude many potentially effective practices

- Deciding to adopt an intervention involves considerations beyond effectiveness alone

- Identifying effective interventions would benefit from better designed evaluations, better reporting, and more comparative effectiveness evaluations

For more information

- *Program Evaluation: A Variety of Rigorous Methods Can Help Identify Effective Interventions*, GAO-10-30 http://www.gao.gov/new.items/d1030.pdf

- American Evaluation Association, *An Evaluation Roadmap for a More Effective Government,* September 2010. http://www.eval.org/eptf.asp

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