

## From Efficacy to Effectiveness to Community and Back

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### Efficacy vs. Effectiveness

- *Efficacy*. The tested impact of an intervention under highly controlled circumstances.
- *Effectiveness*. The tested impact of an intervention under more normal circumstances (relatively less controlled, real-time, “typical” setting, population, and conditions).
- *Community program evaluation*. The tested impact of a blended set of interventions on larger systems and populations.



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### The Trade-offs

- *Efficacy*. Maximizes internal validity, i.e., the degree to which one can conclude with confidence that the intervention caused the result.
- *Effectiveness*. Maximizes external validity, i.e., the degree to which one can generalize from the test to other times, places, or populations.
- *Program Evaluation*. Maximizes reality testing within a particular setting, & with the combination of interventions required for public health effect.



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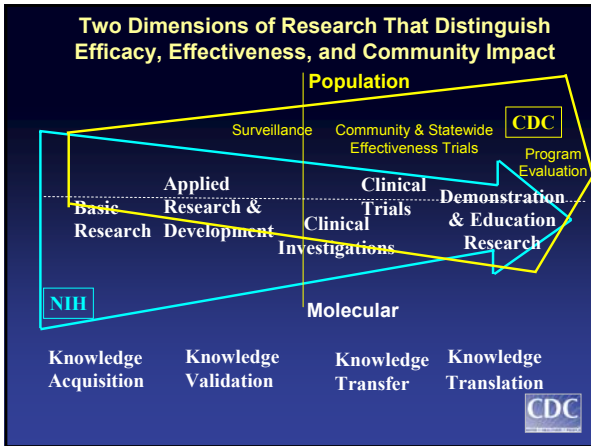
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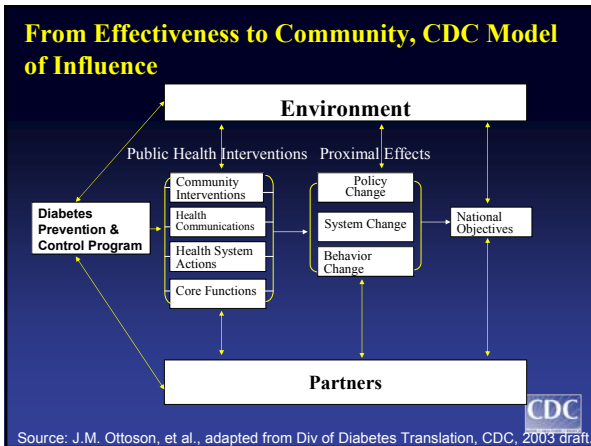
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### Caveats on Best Practices from Efficacy and Even Effectiveness Trials\*

- Problems in translating “best practices” from efficacy to practitioner/patient behavior, and to public health
- ...in generalizing from research in one place, with one population, to other places, people and circumstances
- ...in imposing experimental controls to generate “best practices” for community and population efforts
- Recommend “best practices” with “best processes” of locally-specific, diagnostic-planning procedures to address moderating variables

\*Green LW. From research to ‘best practices’... *Am J H Behav* 2001; 25 <http://www.ajhb.org/25-3-2.htm>

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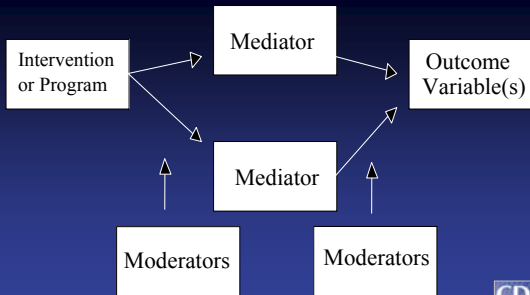
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## Mediating and Moderating Variables



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## Problems Perceived by Practitioners in Translating Research from Efficacy Trials\*

- An accessibility gap
  - “Do I have the same resources as the experimenters?”
- A credibility gap
  - “How different is their situation of practice from mine?”
- An expectation gap
  - “Is it really necessary and realistic for me to strive for such lofty goals in my practice?”

\*Lancaster B. Closing the gap between research and practice. *Health Educ Q.* 1992; 19:408-411.



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## From Efficacy to Effectiveness to Community: The Need to Bridge...

- “best practices” indicated by research to their application in practice in underserved areas
- “best practices” from research to the most appropriate adaptations for special populations
- The success of individual behavior changes of the affluent to the system changes needed to reach the less affluent, less educated...
- University-based research to practitioner- & community-centered research



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## A Vision for Future Effectiveness- and Community-based “Best Practices”

- Emphasize control by practitioner, patient, client, community or population
- Emphasize local evaluation and self-monitoring
- Synthesizing research other than randomized trials
- Research on tailoring and new informatics technologies
- More systematic study of place, setting, and culture
- “Best practice” as processes to combine and adapt packaged interventions: population-based diagnostic planning & evaluation cycle



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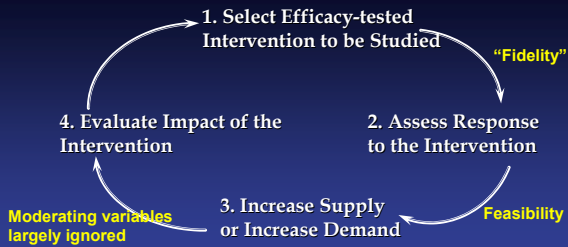
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## The Intervention-Based “Best Practices” Efficacy-to-Effectiveness Cycle



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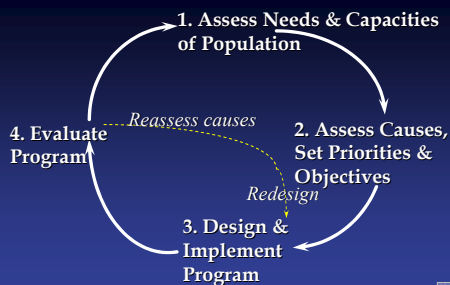
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## Population-based, Diagnostic Program Planning and Evaluation Approaches\*



\*Procedural models, such as PRECEDE, PATCH, Intervention Mapping. See \*Green & Kreuter, *Health Promotion Planning*, 3rd ed., Mayfield, 1999.

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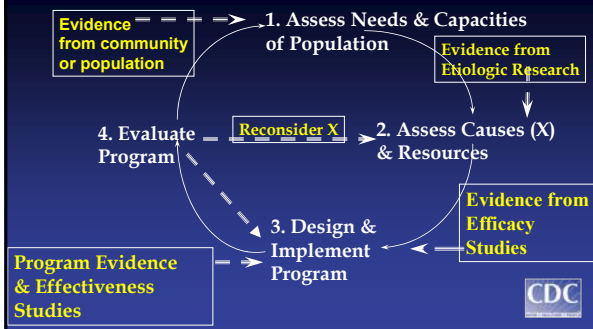
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## Uses of Evidence in Population-Based Diagnostic Planning & Evaluation Models




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## Getting from Efficacy to Effectiveness

- Shift attention to the most important determinants
- Make the research more participatory with intended end-users
- Engage community resources through partnerships or coalitions
- Tailor the efficacy-tested intervention to the moderating variables of the setting and population
  - Debate re “fidelity” vs. “reinvention”




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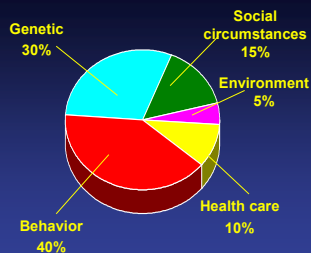
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## Determinants of Health

## Proportions (Premature Mortality)

- Genetic predisposition
- Behavioral patterns
- Environmental exposures
- Social circumstances
- Health care



Source: McGinnis JM, Russo PG, Knickman, JR. Health Affairs, April 2002.

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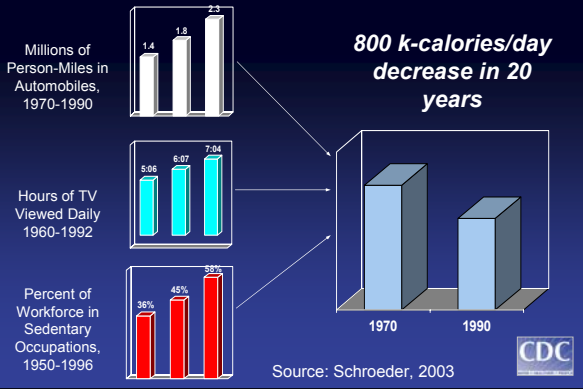
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## Emergence of a Sedentary Society




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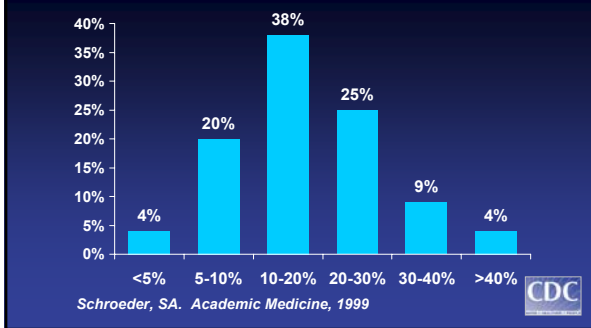
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## What Proportion of NIH Budget Should Go To Behavioral Research? (Response by 69 Medical School Deans)




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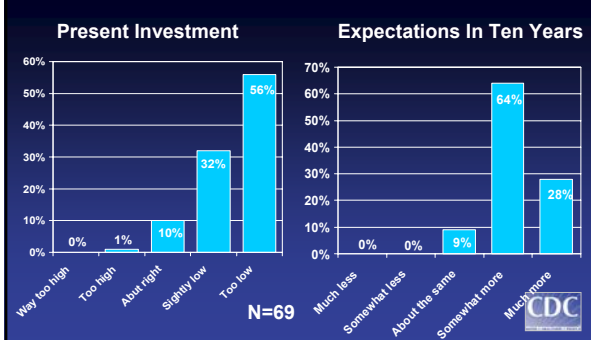
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## How Appropriate is the Size of Research Investment Into Behavioral Aspects of Health (Response by Medical School Deans)




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## Some Benefits of Participatory Research as a Community-sensitive Effectiveness Testing Strategy

- Results are relevant to interests, circumstances, and needs of those who would apply them
- Results are more immediately actionable in local situations for people and/or practitioners
- Generalizable findings more credible to people, practitioners and policy makers elsewhere because they were generated in partnership with people like themselves



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## Definition and Standards of Participatory Research or Evaluation for Health ([www.lgreen.net/guidelines.html](http://www.lgreen.net/guidelines.html))

Systematic investigation...

Actively involving people in a co-learning process...

For the purpose of action conducive to health

--not just involving people more intensively as *subjects* of research or evaluation



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## Closing the Gaps Between Workers & Practitioners' Perception of Needs, and Employers' Assessments



\*Green & Kreuter, *Health Promotion Planning*, 3rd ed., Mayfield, 1999.




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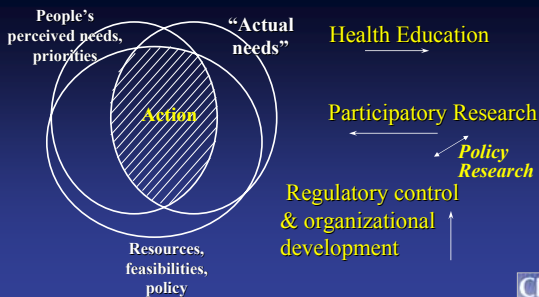
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## Reconciling Perceived Needs, "Actual Needs," & Resources



Green LW & Kreuter MW. *Health Program Planning*, 4th edition, 2004.




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## Caveats on Participatory Research

- Problems of trust and time for planning
- Problems of multiple levels of mobilization and intervention
- Problems of academic reward systems
- Problems of taking research results to scale and sustaining effects
  - Internal vs. external validity
  - Best practices vs. locally appropriate and affordable practices

Green LW, Mercer SL. *Amer J Public Health* Dec. 2001.




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## Caveats on Coalitions\*

- Most organizations will resist giving up resources, credit, visibility or autonomy.
- Not everyone insists on being the coordinator, but nobody wishes to be the coordinatee.
- So much goes into maintaining the coalition that little is left for program.
- Who comes to the coalition meetings?
- Those who were good at initiating not necessarily those best at implementing



\*Green LW & Ottoson JM. *Community & Population Health* 8th ed. McGraw-Hill, 1999.

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## Noah's Ark Principle of Coalitions\*

- Go forth two-by-two
  - After the initial consensus on vision and goals that a larger coalition of multiple partners can usefully forge, the best implementing strategy is to assign tasks to single or pairs of organizations that can work effectively and efficiently toward accomplishing those tasks.



\*Green LW. Caveats on Coalitions: In Praise of Partnerships... *Jour Health Promotion Practice*. 1(1), 2000.

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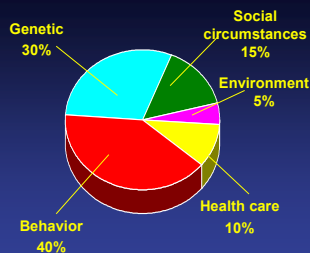
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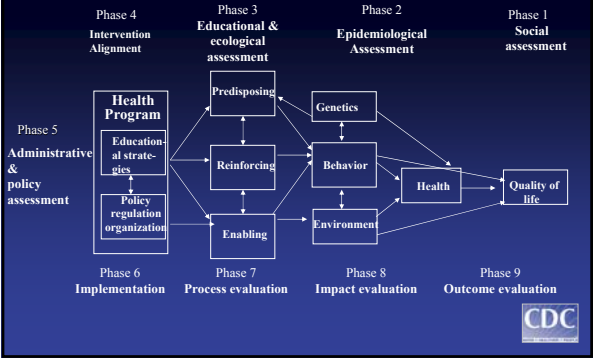
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# A Diagnostic-Planning-Evaluation Approach




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