Evaluating

Innovations in Childhood Obesity (*ICO*)

Carolyn Berry, PhD
Maggie Paul, MS
New York University School of Medicine

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Potential Evaluation Activities

- Needs Assessment
- Program Theory Explication and Assessment
- Process Evaluation (Implementation Assessment/Formative Evaluation)
- Outcome Evaluation/Impact Assessment
- Cost Analyses

The Many Faces of Needs Assessment (NA)

- Needs identification
- Needs assessment
- Assessment of demand or preference
- Feasibility assessment

NA Questions in ICO Context

- What intervention are most acceptable to our target population(s)?
- Are schools/clinics interested in participating?
- Are parents willing to allow their children to participate?
- What do health care providers need in the way of training to implement our strategy?
- What are the best points of contact for the target population we want to serve?

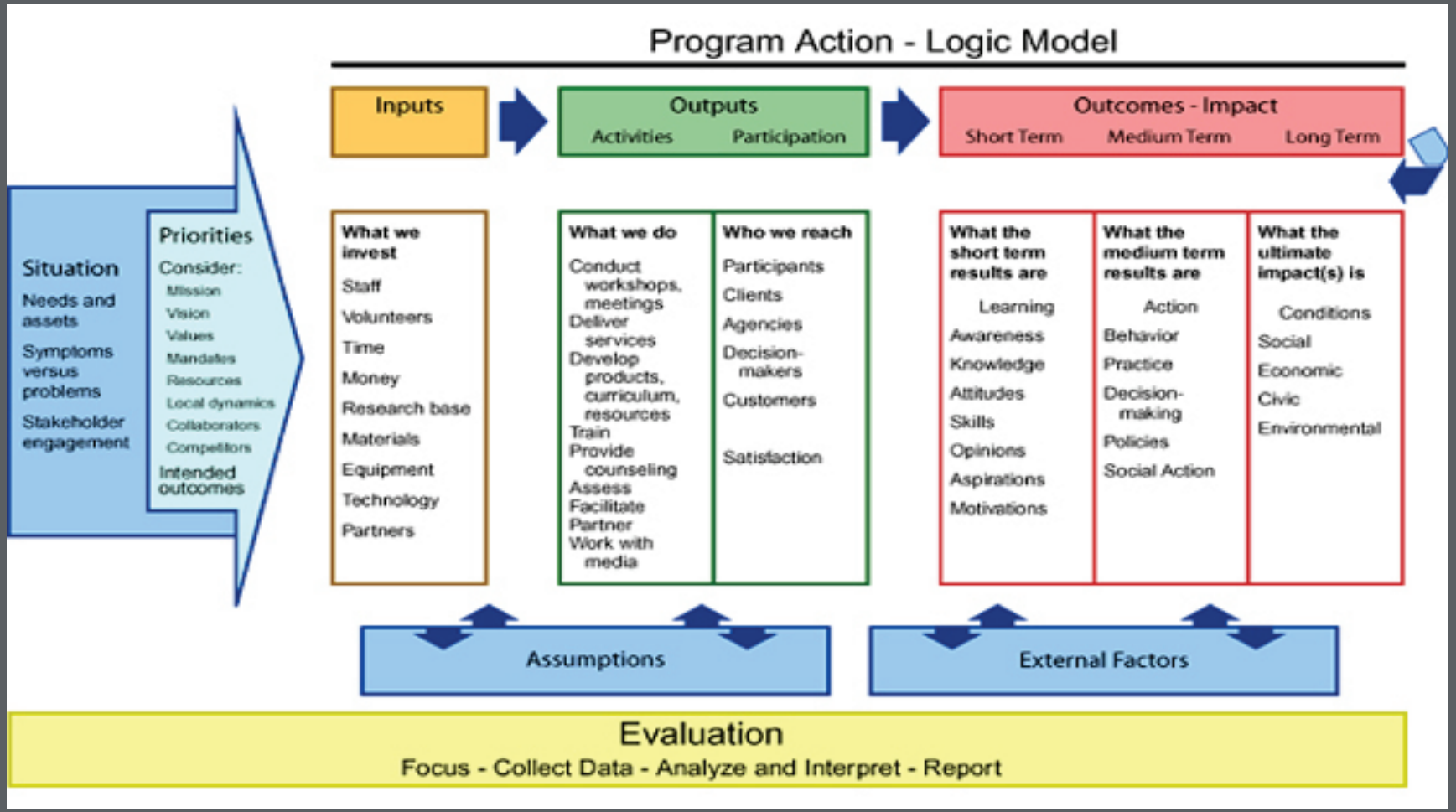
What is Program Theory?

- "a plausible and sensible model of how a program is supposed to work" Bickman, 1987
- Program theory identifies "program resources, program activities, and intended program outcomes, and specifies a chain of causal assumptions linking program resources, activities, intermediate outcomes, and ultimate goals" Wholey, 1987
- Theory of change, logic models, log frames, theory based evaluation

Why Bother with Program Theory?

- Program perspective
  - Guides program development
  - Guides proposal development
  - Fine-tunes programs
  - Gets multiple stakeholders on the same page
  - Uncovers unstated or implicit assumptions
- Evaluation perspective
  - Helps develop/refine evaluation questions
  - Makes evaluation relevant to program, science

A Popular Logic Model (LM) Figure



What ICO Teams Can Learn from Developing a LM?

- What resources do we need to undertake our strategy(ies)?
- What assumptions are we making about the willingness of teachers/health care providers/parents/children to participate?
- Are we taking external realities, like food costs, into account?
- What links our many planned programmatic activities to our desired outcomes and impacts?

What is Process Evaluation?

- "An evaluation study that answers questions about program operations, implementation, and service delivery."

  Rossi, Freeman & Lipsey (1999), Evaluation: A systematic approach, 6th ed. Sage Publications.

- Assesses program implementation rather than program effectiveness

- Focuses on program resources, activities and outputs

Purposes of Process Evaluation

- Provide rich and systematic documentation of program implementation
- Unlock the “black box”
- Identify places to “fine tune” the program
- Compare implementation across sites
- Provide “blueprint” for replication
- Test components of process theory
- Demonstrate feasibility

Purposes of Process Evaluation

- Establish that program even exists and is “ready” for outcome evaluation
  - Strong vs. weak test
  - “Fair” test of program model
- Guide development of impact questions
- Establish that non-findings in outcome evaluation are not due to flawed implementation
- Provide context for outcome evaluation results

Process Evaluation Questions

- What is the participation level of health care providers?
- How many children are we touching?
- How many health care providers have been trained?
- How many organizations are partnering with us? Is their level of participation what we expected?
- What are the barriers to implementation we are experiencing?
- What changes have we made to our original plans?

What is an Outcome/ Impact Evaluation?

- An *outcome evaluation* investigates whether the program or technology caused demonstrable effects on specifically defined target outcomes.

- An *impact evaluation* is broader and assesses the overall or net effects -- intended or unintended -- of the program or technology as a whole.
  http://www.socialresearchmethods.net/kb/intreval.htm

- Assesses *program effectiveness*

- Focuses on program outcomes and/or impacts

Three “Pillars” of Outcome Evaluation

- Research Design
  - Overall structure
  - Use of a counterfactual
  - Internal validity
- Sampling
  - Who ends up in the study?
  - May differ for program and comparison groups
  - External validity
- Measures

Approaches to Design

- *Informal* designs:
  - Storytelling
  - Self-evaluation
  - Expert judgment
  - Descriptive (includes after-only single group designs)

- *Formal* designs based on social science:
  - Based on the scientific method
  - Requires a counterfactual (pre-test or comparison/control group)

Possible Outcomes & Metrics

- Individual level outcomes
  - BMI, BP, LDL, fasting lipid profiles, fasting plasma glucose, HbA1c
  - Physical activity (FitnessGram)
  - Co-morbidities
  - Eating habits, nutrition
  - Knowledge and attitudes about eating, exercise, obesity
- Health care providers/system
  - Nutrition and physical activity counseling
  - Obesity screening
  - Assessment of readiness to change
  - Self management support
  - Referrals/utilization nutritionist
- School/community level
  - County sugary drink sales

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Data Collection

- What you do depends on time-frame, money, approach, complexity of program, need for detail
- Types of data
  - Secondary vs. primary data
  - Quantitative vs. qualitative data
- Typically combine two or techniques; triangulation
  - Learn different things from different methods; can be a mistake to rely on a single method

Cost Analyses

- Cost-Benefit
  - Return on investment (ROI)
- Cost-Effectiveness
  - Inputs only monetized
- Cost Only
  - What does it cost?
  - Is that cost acceptable?
  - Are other options less/more expensive?

What We Can Do For You!

The NYU team is able to help you develop and/or review:

- Logic models
- Interview/focus group protocols
- Research questions/hypotheses
- Tracking mechanisms
- Survey instruments & fielding methods
- Analysis plans (and analytic support)