Stages of Evaluation

FERSI Training Seminar on Evaluation, 19-21 May 2010, Bern

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Source:

Demonstrating your Program‘s Worth

A Primer on Evaluation for Programs to Prevent Unintentional Injuries

By Nancy Thompson and Helen McClintock

Download at the CDC at

http://www.cdc.gov/ncipc/pub-res/demonstr.htm

Evaluation

Why evaluate?

- Learn whether proposed materials are suitable for the people who are to receive them
- Learn whether program plans are feasible before they are put into effect
- To have an early warning system for problems that could become serious if unattended
- To monitor whether programs are producing the desired results
- To learn whether programs have any unexpected benefits or problems

Evaluation

Why evaluate (Continued)?

- To enable managers to improve service
- To monitor programs progress towards the program‘s goals
- To produce data on which to base future programs
- To demonstrate the **effectiveness** of the program to the target population, to the public, to others who want to conduct similar programs, and to those who fund the program

The three Effs ...

Clarification of terms:

- Efficacy: How does it work under experimental conditions?
- Effectiveness: How does it work in reality?
- Efficiency: What is the relationship between costs and benefits in reality?

Components of an evaluation

- Clear and definite objective
- Description of the target population
- Description of what is to be evaluated
- Specific methods
- Instruments to collect data
- Raw information
- Process information
- Analyses
- Evaluation report

The Evaluator

- Who should conduct the evaluation?
- Somebody participating in the project or somebody external?
- Discussion ...
- Solution: External to the project
  (but not necessarily outside the organisation)

Obstacles

- Evaluation can show what goes wrong
- But it can also help to improve
- It ´ s expensive: 10 – 15% of project‘s budget
- Well spent money!

4 Types of Evaluation

- Formative evaluation
- Process evaluation
- Impact evaluation
- Outcome evaluation

- Each evaluation serves different purposes
- Best if all 4 types of evaluation are conducted
- NOT TYPICAL

Formative evaluation

What: Make sure that program plans, procedures, activities, (evaluation) materials and modifications will work as planned

When: conducted during the development of the new program, when an existing program is modified or adopted to new circumstances

Results: Shows if messages are likely to reach, be accepted any understood by target audience (SES!)
What media the target audience uses
Who is accepted as spokesperson
Find material that was overlooked

Why: Can make revisions before the full program starts
Improves chances for success

Formative evaluation: Story Board

TV-Spot-Konzept „Garage“

Film: Garage

Ein junger Mann frühmorgens in seiner Wohnung. Er ist gestresst, hetzt und will alles gleichzeitig machen.

Auf dem Weg zu seinem Auto, versucht er verbrenne Zeit aufzuholen, um doch noch rechtzeitig zur Arbeit zu kommen.

Als er in die Garage stürzt, kann er nicht glauben, was er sieht. Da spielt eine Band coole entspannende Musik und ein Schutzengel singt: **«Slow down. Take it easy.»**

Dann hilft ihm der Schutzengel auch noch die Autotür auf und macht mit der Hand eine beruhigende Geste dazu. Der junge Mann steigt langsam ein.

Jetzt, wo er im Auto sitzt, ist er ganz ruhig und geniesst die entspannende Musik.

Langsam fährt der junge Mann den Wagen aus der Garage und reiht sich dann, nicht mehr gehetzt, sondern ganz entspannt, in den Morgenverkehr ein.

Neben dem Bremslicht vom Auto des jungen Mannes klebt jetzt ein Sticker, der daran erinnert, im Verkehr nicht zu rasen.

TV-Spot: Final version

- Link: http://www.slow-n-easy.ch/de/fundownloads/playspot/movie/spot1

Process evaluation

What: Testing whether the program is reaching the target population as planned
- Direct contacts
- Indirect contacts
- Items distributed or collected

When: Once the program has begun until the end

Results: Have the materials been distributed as planned?
Have the materials reached the target population as planned?

Why: Show level of activity to funding agency
Shows unexpected problems
Calculating program effects (with information from impact and outcome evaluation)

Process evaluation (Example)

Colleague made a study with the title

„Process-evaluation of the bfu-model speed 50/30 for urban areas“

What did he do?

Find out, which agency is responsible within the cantons

Find out if the changes were documented

Find out if and how many zones with maximum speed of 30 km/h were implemented

Find out if the bfu-recommended design elements have been introduced

Find out if roads with a maximum speed of 50 km/h were redesigned according to bfu-recommendations

Process evaluation (Example)

Is this a process evaluation according to these criteria?

- Direct contacts
- Indirect contacts
- Items distributed or collected

Discussion ...

Impact evaluation

What: Objectives of the program:
- Knowledge, attitudes, beliefs
- Mostly surveys
- Use behavior models: Health Belief Model, Protection Motivation Theory, Theory of Planned Behavior etc.

When: Baseline measurement before first contact with program, measure changes after contact with program

Results: Changes that will eventually lead to behavior change
- Make sure that the changes come about through the program
- Behavior is usually considered part of the outcome evaluation

Why: Justifying continuation of program
- Justify modification or stopping of program

Outcome evaluation

What: Goals of the programs
- Change in behavior, change in mortality, morbidity,
- Summary measures of population health (DALY)
- Monetary units

When: before and after measurement (like impact evaluation, often done together)
- Additional measurements some time after the end of the program (long term effects, decay)

Results: Shows if the program has reached its goals

Why: Prove that the program has been worth the effort
- Deliver information for meta-analyses

Outcome evaluation (continued)

Problem: injuries are relatively rare

Possible shortcut: Convert behavior change into estimates of changes in morbidity and mortality

What is needed?

- Data on the effectiveness of behavior change in reducing morbidity and mortality
- Data on prevalence of behavior before
- Data on prevalence of behavior after

Outcome evaluation (Example)

What is the outcome of a 20% increase in seatbelt use in a county with 125 fatalities?

- Risk of death without seatbelt: 2.3
- Risk of death with seatbelt: 1.0
- Difference in risk ratio: 2.3 – 1.0 = 1.3
- Divide risk difference by risk ratio for not using seatbelt:
  1.3 / 2.3 = 0.565
- Express it as percentage: 0.565 * 100 = 56.5 %
- Multiply the decreased risk by the increased prevalence:
  56.5% * .20 = 11.3%
- Multiply by the number of fatalities in the county:
  125 * 11.3 = 14 persons less killed

Experimental vs. Quasi-experimental design

- Experimental design: random assignment of subjects to groups
  not typical for evaluation
- Quasi-experimental design: no random assignment of subjects to groups
  internal validity is worse (history, maturation)
  several quasi-experimental designs
- X = Intervention
- O = Observation, O_1 = Observation Nr. 1 etc.
- R = Randomized
- N = Non-Randomized or non-equivalent

Experimental vs. Quasi-experimental design

X O (One group posttest-only)

N X O (Posttest-only with non-quivalent groups)

N O

O_1 X O_2 (One group pretest-posttest design)

O1 O2 O3 X O4 O5 O6 (Time series)

Experimental vs. Quasi-experimental design

R	O	X	O	
R	O		O	(Solomon four-group design)
R		X	O	
R			O	

Controls perfectly for threats to internal validity