Formative Evaluation: An Essential Tool for MCH Programs

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Today’s agenda

Why are many programs unsuccessful?

How can formative evaluation improve a program’s chance of success?

How can formation evaluation be integrated into the program development process?
  – Case study: Booster seats
Got Outcomes?

Did the program work?
Were the program objectives achieved?
Desired outcomes = efforts paid off

Program prevented childhood deaths and injuries
Yet, programs struggle to achieve desired outcomes

*Half of evaluated public health programs may have no discernable effect*  
(Guide to Community Preventive Services, 2000)
Why do programs fail?
Poorly designed, ill-conceived programs fail

US Public Housing “Projects”
Some characteristics of poorly designed programs

• Based on faulty logic
  – Selected strategy or activities cannot make intended changes

• Fail to connect with the target population (s)
  – Do not reach them
  – Do not resonate with them
  – Not understood by them

• Fail to be well implemented
  – Settings inappropriate
  – Incompatibility between program and delivery setting
  – Unrealistic (untested) expectations
Why poorly designed programs experience low chance of success

**Goal:** Child abuse prevention

**Target:** At risk families – young, single mothers

**Program:** Parenting class for first time mothers of infants
- Weekly group sessions at hospital
- Didactic presentations by older nurse

**Objective**
Improve parenting skills
Did the program succeed?

One Year Follow-up Comparison

Percent

Parent skills  Child abuse

experiment  control
Why was the program unsuccessful?

Participant attendance & satisfaction

Percent

100
80
60
40
20
0

Attendance: 10
Satisfaction: 20
Why did participants stop coming?

• Hospital setting unwelcoming and inconvenient
• Group format awkward
• Workshops too didactic
• Teacher (nurse) too condescending and authoritative
• Not personalized: not enough time for “me”; few appropriate examples to “my situation”
Futility... there’s nothing more frustrating

“The gods condemned Sisyphus to endlessly roll a rock up a hill, whence it would return each time to its starting place. They thought with some reasons…. there was no punishment more severe than eternally futile labor…”

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“Sisyphus,” by Titan (1549)
Avoid Futility!
Well-designed programs increase chances of success

![Graph showing the relationship between program design and program success. The x-axis represents low to high program success, and the y-axis represents poor to excellent program design. The graph shows a positive correlation between the two variables.]
Planning Challenge

How can well-designed programs be created before implementation to increase chances of success?

Integrate formative evaluation into the program development phase
Program lifecycle

Program Development
- Assess/analyze problem
- Identify target population
- Define goals & objectives
- Select program strategy
- Diagram program logic model
- Develop or adopt program activities
- Refine program activities

Program Implementation
- Develop implementation plan
- Implement activities
- Monitor activities
- Refine activity implementation

Outcome Evaluation
- Monitor outcomes
- Revise program

Effect Evaluation
- Program Development

Process Evaluation
- Formative Evaluation
Evaluation purposes

- **Formative Evaluation**
  Assists in creating well-designed programs

- **Process Evaluation**
  Assists in implementing well-executed programs

- **Outcome Evaluation**
  Assists in determining whether program worked

Program Development Phase
Program Implementation Phase
Program Effect Phase
## Formative evaluation

<table>
<thead>
<tr>
<th>Questions it answers</th>
<th>Why it’s useful</th>
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<tbody>
<tr>
<td>What is the best way to influence the target population?</td>
<td>Helps develop ideas for program activities</td>
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<tr>
<td>How can activities be reached, understood or accepted by target population?</td>
<td>Refines program activities (pre-test) prior to implementation</td>
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<td>How can activities be easily and efficiently implemented in delivery setting?</td>
<td>Pilot-test “new” activities prior to full-scale implementation</td>
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<td>Tailors “existing” programs to new target population</td>
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Modified from Thompson & McClintock, 2000
Formative Evaluation

Why has Sesame Street improved children’s academic performance?
The “Detractor”

Sesame Street Scene

Animal, landscape Scene
Formative evaluation as “upstream” primary prevention strategy

How is it that we can find time to do it over, but not the time to do it right initially?

- Proverb
Case Study
Application of formative evaluation into the program development stage
Child Passenger Safety: Booster Seat Promotion Program
Booster seats background

- NHTSA recommends booster seats for children 8 years and younger or 4’9” tall
- Boosters reduce injury risk by 59% for 4-7 year olds (Durbin, et al., 2003)
- 98% infants restrained, yet only 73% of 4-7 year olds restrained (NHTSA, 2005)
- 72% of CPS seats misused that could increase risk of injury during a crash (NHTSA, 2006)
- Booster distribution and education effective for increasing use and proper use (CDC, 2001; Ehiri, et al., 2005)
- Several distribution options: free giveaways, loans, vouchers
Program context

• A state MCH department received a three year grant to implement a booster seat promotion program

• MCH staff member assigned to coordinate program
  – Convene planning committee comprised of traffic safety stakeholders
  – Charged with developing program
Goals, objectives, and target population

Program goal
– Reduce rate of MVC deaths and injuries among 4 to 8 year olds

Target population
– Low income families with children 4 to 8

Program Objectives
– Increase booster seat use among 4 to 8 year olds
– Increase correct booster seat use for 4 to 8 year olds
Program strategy

MCH department will fund and provide technical assistance to community health clinics to deliver the program to low income families

– Booster seat distribution to improve access
– Parent education to increase knowledge on important of use and proper use
The Planning Committee Challenge:

How can booster seat distribution and parent education activities be developed to increase likelihood that clinics will implement them and target population families will actually use them?
Formative evaluation can “bridge the gap” between program developers, the delivery context, and target population.
Useful formative evaluation tasks when developing activities

- Gather information about target population and delivery setting
- Pre-test activity materials
- Pilot-test implementation of activities
- Search for existing programs for possible modification
Gather information

**Purpose**

**Target population**
Determine what booster seat distribution and parent education activities would mostly likely reach, resonate with, and be understood by the target population.

**Delivery setting**
Determine best ways to distribute booster seats and educate parents within the context of community health clinics. Identify partners who can collaborate with program implementation.
Would Nike develop a new shoe without conducting market research on the intended user?
Formative Questions

**Target population**

- What are the demographic characteristics of low income families that use community health clinics?
- What is their awareness about recommendations for and importance of using booster seats?
- What are the barriers for not using booster seats?
- What are their preferred languages and literacy levels?
- What is the preferred method to receive boosters and education about how to use them?
Formative Questions

Delivery setting

• What is the community health clinic capacity for implementing program?
  – Time, resources, interest

• What is the preferred education method?
  – Who should do it? What is the knowledge/interest of providers?
  – When and for how long?

• What is the preferred distribution method?

• Who can partner with implementing the program?
  – Booster manufacturers & retailers
  – Certified CPS trainer
Data sources to answer formative questions

**Target population**
- Demographic data
- One-on-one interviews
- Focus groups

**Delivery setting**
- Interviews with CHC staff
- Observations of CHC waiting room and visits
- Review of CHC scheduling records
Example formative findings

**Target population**

**Barriers to use**

- Unaware of importance/recommendations
- “Booster is like infant seat” – difficult to install & adjust, hard to move in and out, cumbersome
- Too restraining for child – will not want to use it
- Cost (mostly likely won’t pay over $15)

**Preferred distribution/education**

- Free give-a-way at clinic
- One-on-one training with nurse on how to use
- If voucher used, variation in preferred retailers and may be reluctant to redeem without additional incentive
Gather information

Example findings: Delivery setting

Barriers to implement

– No space, time, or interest (liability) in distributing boosters at clinic
– Providers overwhelmed with current tasks; extremely limited time for education
– Limited provider knowledge on correct use

Preferred distribution/education

– Vouchers
– Written materials
Formative challenge

Using formative data to develop programs that meet both target population and delivery setting

Target population prefers free giveaways at clinic and one-on-one instruction by nurse

Clinics lack capacity to house or distribute boosters on sites or dedicate much time to instruction
Formative evaluation data can be used to brainstorm possible program activities.
“Possible” activities based on formative evaluation

Booster distribution

Use voucher system
- Written as Rx and given by nurse
- $15 max
- Work with retailers to offer $5 “gift” for child when redeemed

Work with several retailers
- Secure at least two retailers in close proximity frequented by target population

Pick up options
- Offer anytime with “gift”
- Co-sponsor with Safe Kids monthly family fun fairs with food, children games, and certified CPS trainers
“Possible” activities based on formative evaluation

Parent education

Pre visit: Waiting room
- Create booster seat display
- Receptionist distributes flyer promoting importance, booster display, and asking nurse about program

Nurse visit
- Educational brochure for parents with voucher that demonstrates usability, portability, and correct use through mostly graphics, pictures
- Coloring book and crayons for children that models “cool kids use boosters”
- Script 30 second “pitch” by nurse
Formative evaluation tasks when developing activities

- Gather information about target population and setting
- Pre-test activity materials
- Pilot-test implementation of activities
- Search for existing programs for possible modification
Search for existing programs

*Don’t reinvent the wheel!*

Identify whether any existing materials can be modified or your program use

Search Internet
Call colleagues
Contact professional associations
Contact Children’s Safety Network
Booster seat programs

**Google search**

Drive Smart Colorado Springs
http://www.drivesmartcoloradosprings.com/BoosterSeatGrant.aspx

Buckle Up Boston! Child Passenger Safety Program

Delaware: Give Your Child A Boost—Booster Seats for Booster Shots

New York: "Gimmee a Boost!" A Multi-Faceted Community and School Intervention to Increase Booster Seat Use in Rural Communities

Washington: Booster Seat Program
http://www.nhtsa.dot.gov/people/outreach/safedige/summer2000/sum00-10.html
Formative evaluation tasks when developing activities

1. Gather information about target population and setting
2. Pre-test activity materials
3. Pilot-test implementation of activities
4. Search for existing programs for possible modification

Pre-test activity materials
Pre-test activity materials

Purpose

– Assess how materials resonate with target population and others
– Revise materials before final production

Materials to pre-test

– Waiting room promotional flyer
– Voucher
– Educational handout
– Coloring book

Would Philip Morris execute a new marketing campaign without testing slogans and ads with intended users?
<table>
<thead>
<tr>
<th>Area</th>
<th>Key Questions</th>
<th>Data source</th>
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<tbody>
<tr>
<td>Target population – low income families</td>
<td>Culturally appropriate? Language appropriate?</td>
<td>Focus group and interviews</td>
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<tr>
<td></td>
<td>Reading level? Appeal? Visuals? Cue to action?</td>
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</tr>
<tr>
<td>Child passenger safety &amp; educational</td>
<td>Content? Format/layout?</td>
<td>Expert panel review</td>
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<tr>
<td>design experts</td>
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</table>
Pre-test activity materials

*Example findings*

**Waiting room promotional flyer**
- Lack of guidance on how parents should ask nurse about boosters, if not mentioned

**Coloring book**
- Portrayed cool character (Barney the Purple Dinosaur) did not resonate with children 4-7. Made fun of him.
- Girls prefer princess theme, while boys Power Rangers

**Educational handout**
- Low appeal; not personalized, too few pictures/visuals
- Too high reading level
- Spanish version – several words in appropriate
- Not enough detail on how to redeem voucher
Formative evaluation tasks when developing activities

Gather information about target population and setting

Pre-test activity materials

Search for existing programs for possible modification

Pilot-test implementation of activities
Pilot-test program

Purpose

Implement distribution and education activities on a small scale to identify problems prior to full-scale implementation.

Would Nathan Lane or Matthew Broderick perform *The Producers* on stage without numerous dress rehearsals?
Pilot test program

Example methods

• Select one CHC for pilot-test
• Implement distribution & material procedures over a limited time period
• Collect data on small sample of target population (n=20) and CHC nurses
• Analyze findings
Pilot test program

Formative evaluation questions

**Target population**
- Did families receive promotional flyers while checking in?
- Did they view the booster seat display?
- Did they read voucher educational materials?
- Did children use coloring books?
- Did they redeem vouchers?
- Did they install seats?
- What were barriers were experienced?

**Health Clinic**
- Did receptionists give out promotional flyer?
- Was the booster seat display maintained?
- Did nurses give out educational materials and 30 second script?
- What were the barriers?
Pilot test program

Example findings

• Receptionists did not routinely distribute promotional flyer during check in
  – too busy
  – multiple staff

• Nurses distributed written materials, but did not routinely give 30 second pitch

• Families re-deemed few booster seats
  – Lost vouchers – unclear how to replace
  – When attempted to redeem, one retailer did not have booster seats in stock and was unfriendly
Pilot test program

Possible changes

Receptionists
- Hold lunch time workshop about program, importance of flyers, and brainstorm how to integrate flyer into check in procedure

Nurses
- Create a “pocket guide” with 30 second script
- Host lunch time workshop where nurses who use script model how to perform it for others

Families
- Establish hot line number in conjunction with Safe Kids to call for replacement vouchers or questions about program
- Hold meeting with retailer management to identify problems and change retailer if necessary
Formative evaluation: a tool for helping teams brainstorm & test program ideas

Gather information about target population and setting

Pilot-test implementation of activities

Pre-test activity materials

Search for existing programs for possible modification
Why don’t we use formative evaluation?

Too little time

Too few resources

No or limited in-house expertise
How can we overcome these barriers?

- Build into timeline or budget
- Advocate for resources
- Hire staff with expertise in planning and evaluation
- Collaborate with college
  - class project
  - internship
- Partner with others
- Solicit input from national & state technical assistance groups
“The biggest mistake is doing nothing because you can only do so little.”

Anonymous
Evaluation Resources

General Evaluation “How To” Handbooks


KU Work Group on Health Promotion and Community Development. The Community ToolBox, Part J. Evaluating the Initiative. Lawrence, Kansas: University of Kansas, Group on Health Promotion and Community Development.

http://ctb.lsi.ukans.edu/tools/EN/part_1010.htm


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


Evaluation resources

Formative evaluation


Program Logic Models

FRIENDS Evaluation (electronic). Toolkit contains the Logic Model Builder, which was developed in partnership with the National Clearinghouse on Child Abuse and Neglect Information.  
http://www.friendsnrc.org/outcome/toolkit
