

# 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?

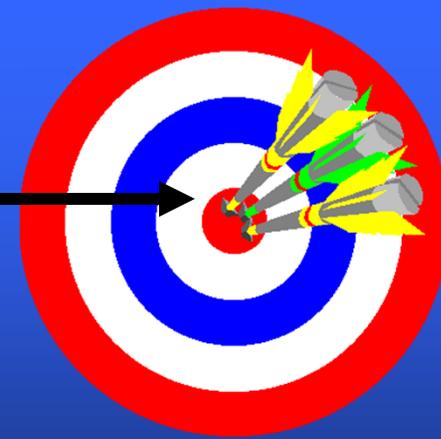
Did the program work?  
Were the program objectives achieved?



# Desired outcomes = efforts paid off

Program prevented childhood deaths and injuries

Program Effort



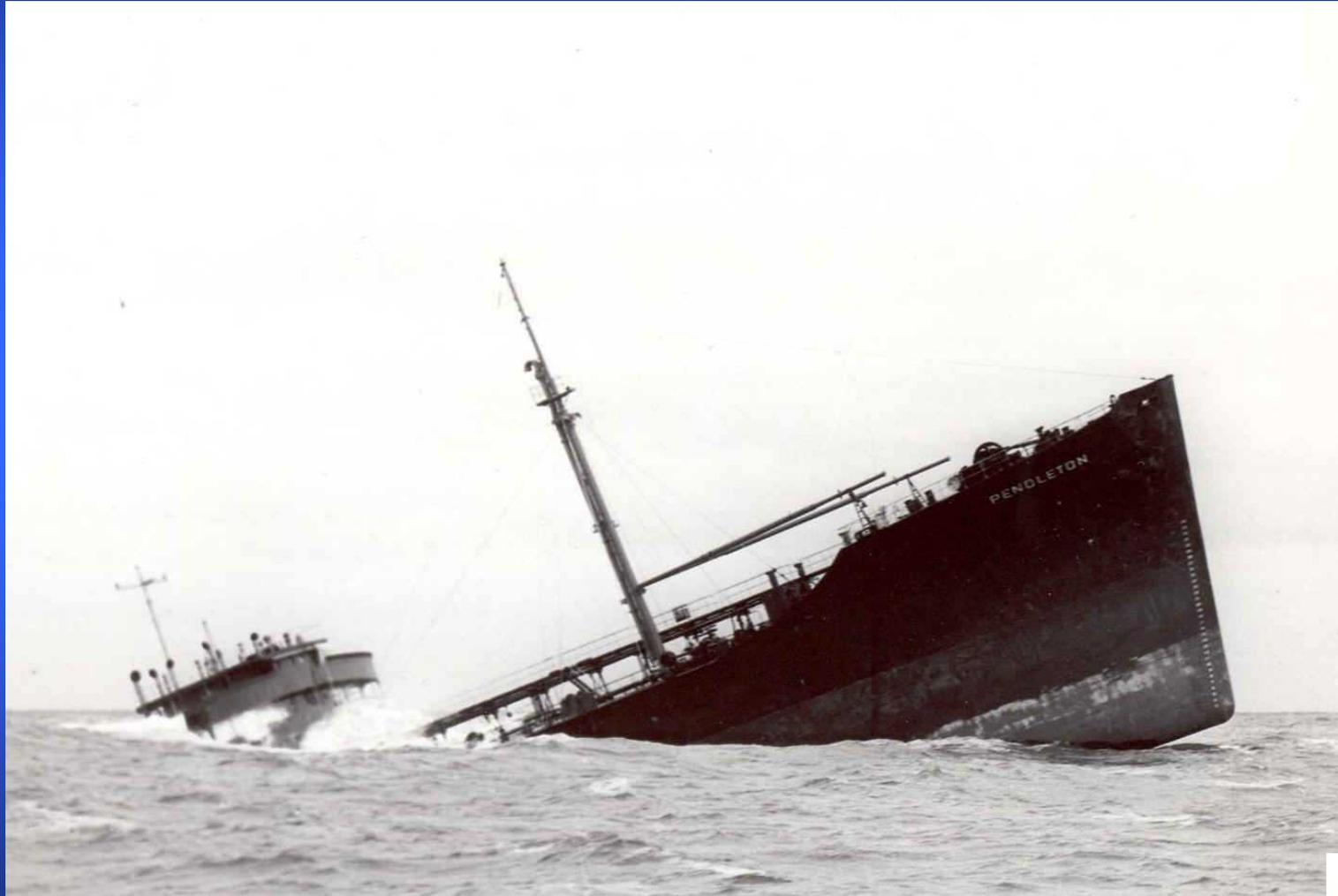
# Yet, programs struggle to achieve desired outcomes

*Half of evaluated public health programs  
may have no discernable effect  
(Guide to Community Preventive Services, 2000)*

Program  
Effort



# 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

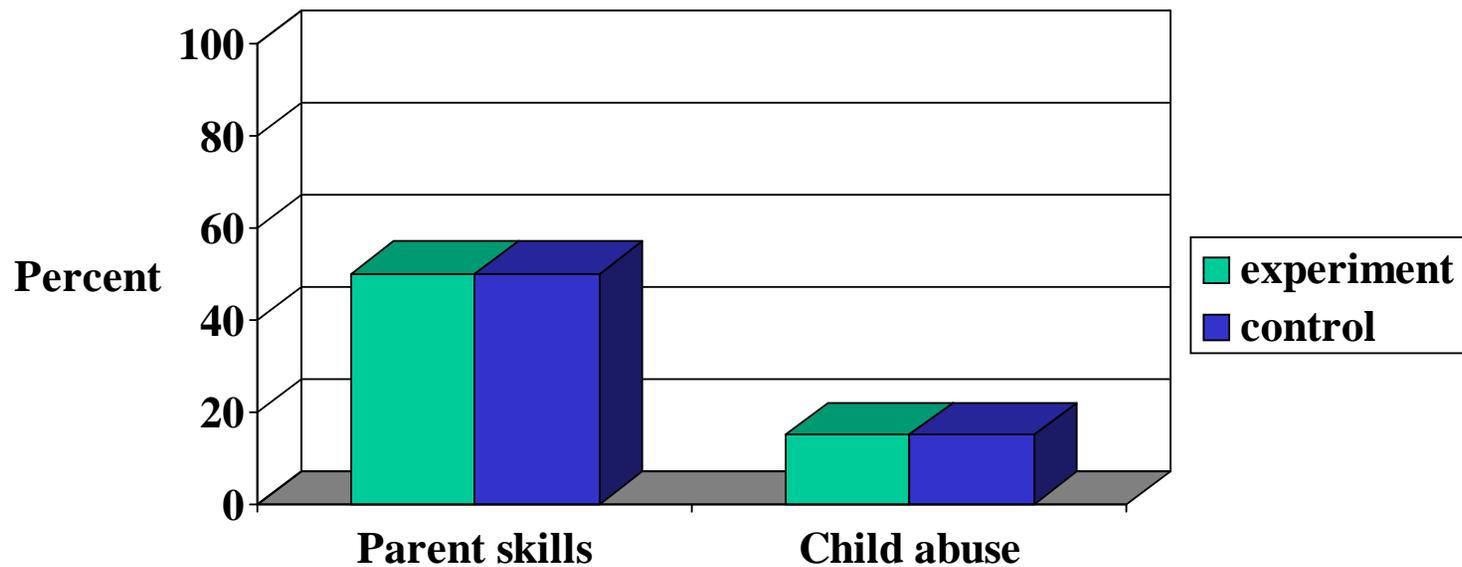
Improve parenting skills



# Did the program succeed?



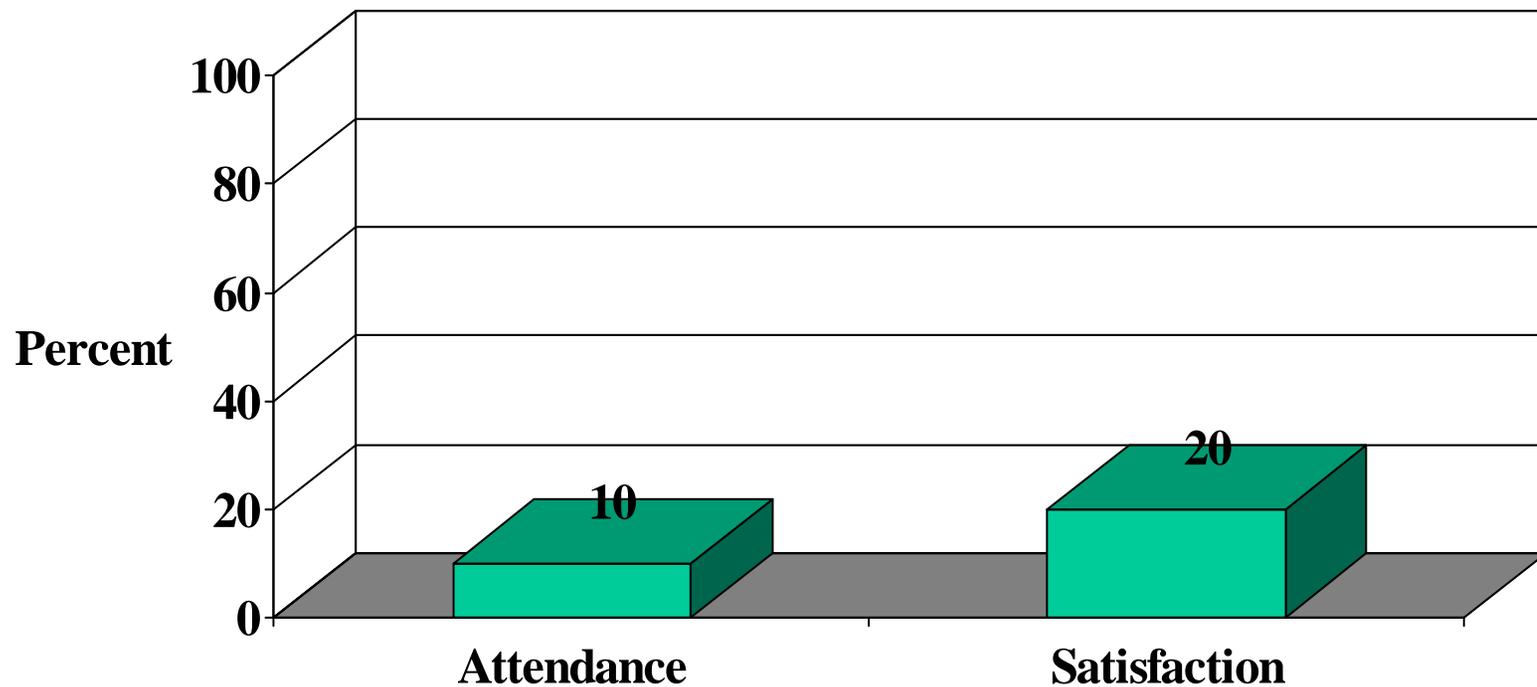
One Year Follow-up Comparison



# Why was the program unsuccessful?



Participant attendance & satisfaction



# 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



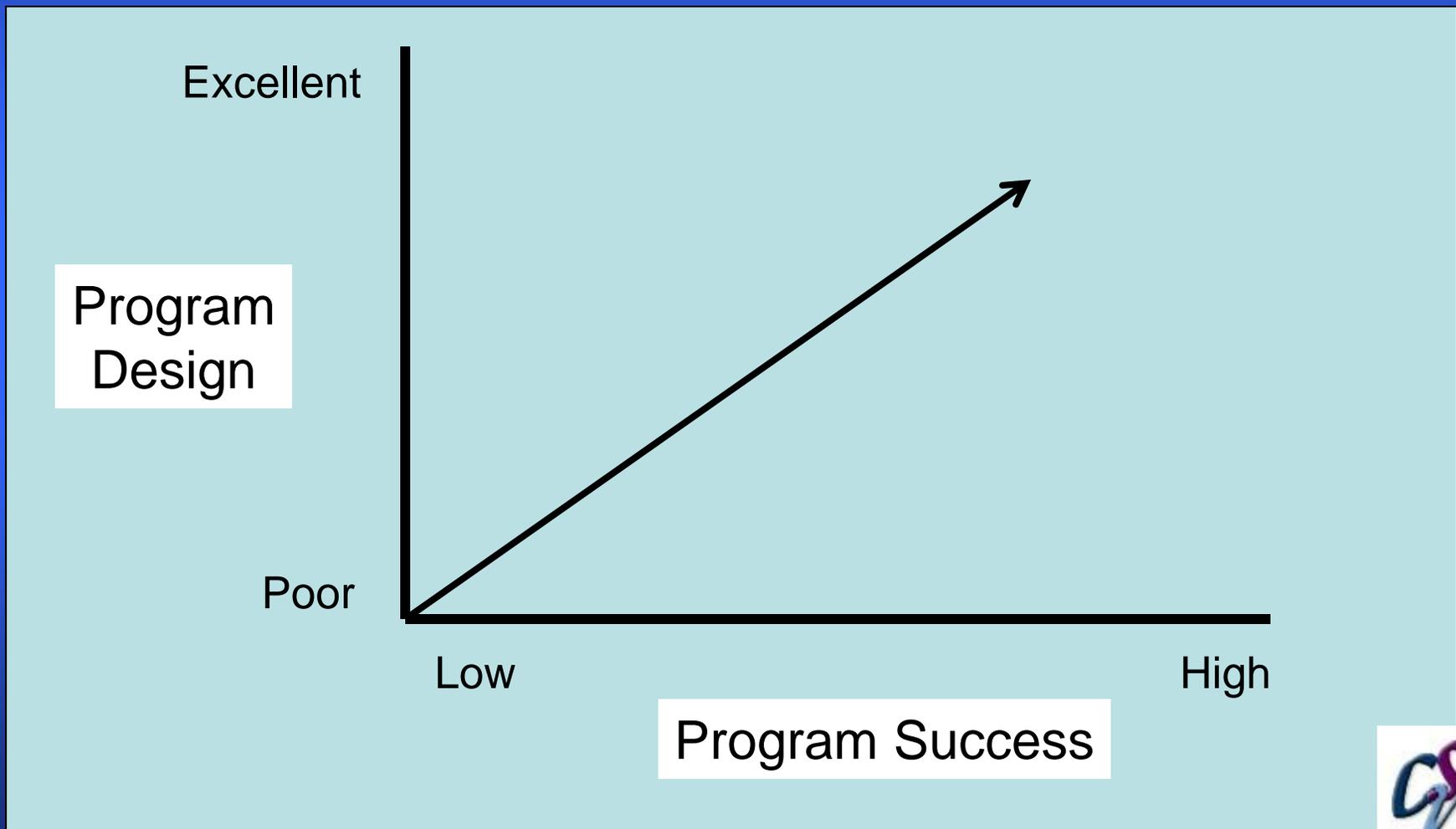
"Sisyphus," by Titan (1549)

“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...”



# Avoid Futility!

## Well-designed programs increase chances of success



## Planning Challenge

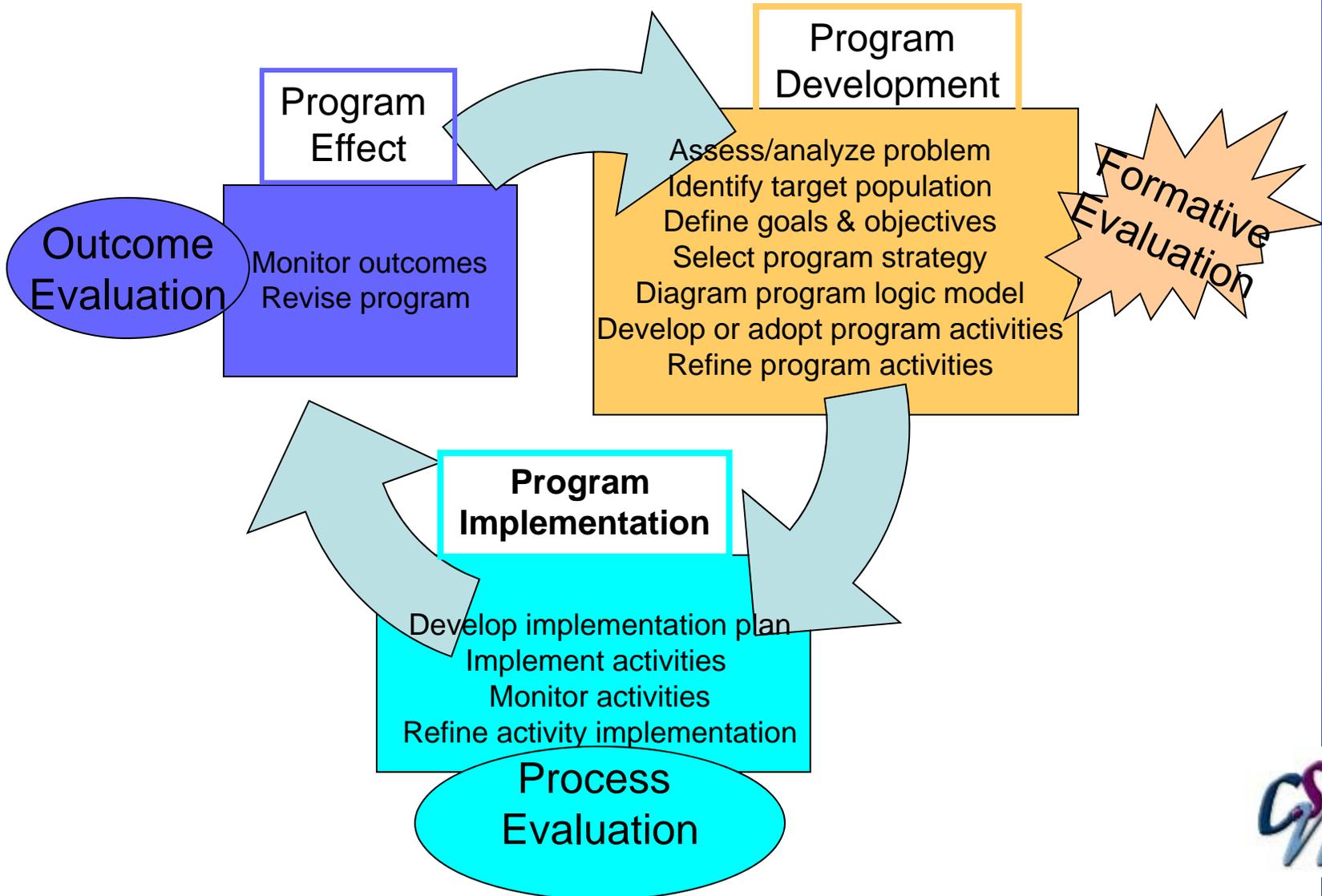
How can well-designed programs be created before implementation to increase chances of success?



Integrate formative evaluation into the program development phase



# Program lifecycle



# Evaluation purposes

Program  
Development  
Phase

## **Formative Evaluation**

Assists in creating well-designed programs

Program  
Implementation  
Phase

## **Process Evaluation**

Assists in implementing well-executed programs

Program  
Effect  
Phase

## **Outcome Evaluation**

Assists in determining whether program worked



# Formative evaluation

## Questions it answers

- What is the best way to influence the target population?
- How can activities be reached, understood or accepted by target population?
- How can activities be easily and efficiently implemented in delivery setting?

## Why it's useful

- Helps develop ideas for program activities
- Refines program activities (pre-test) prior to implementation
- Pilot-test “new” activities prior to full-scale implementation
- Tailors “existing” programs to new target population



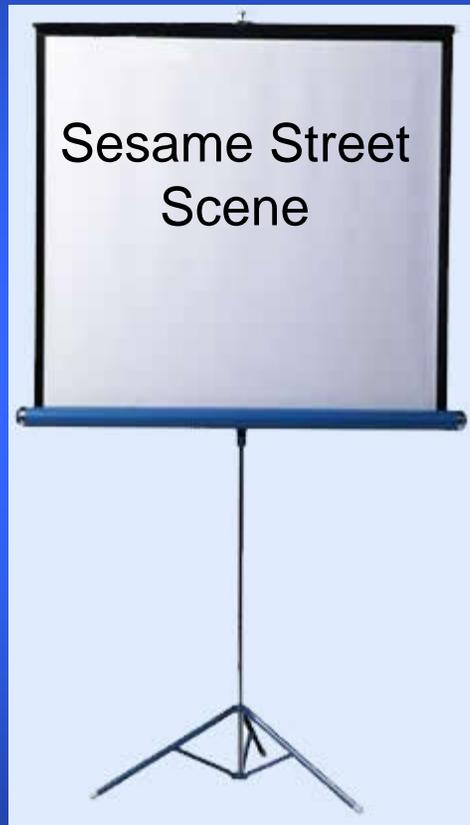
# Formative Evaluation



*Why has Sesame Street improved children's academic performance?*



# The “Detractor”



# 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

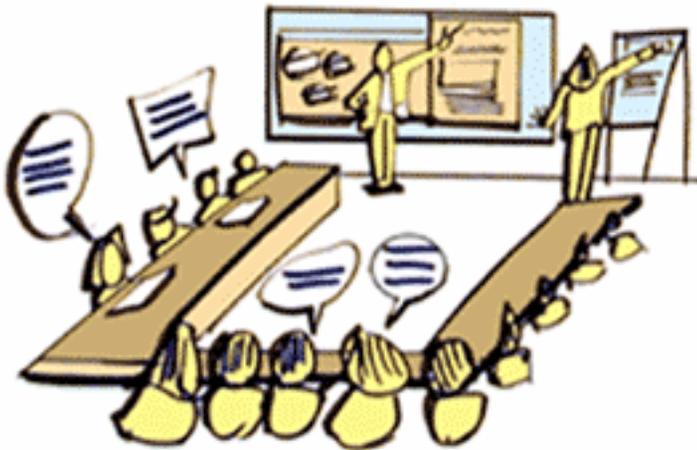


# The Planning Committee Challenge:

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

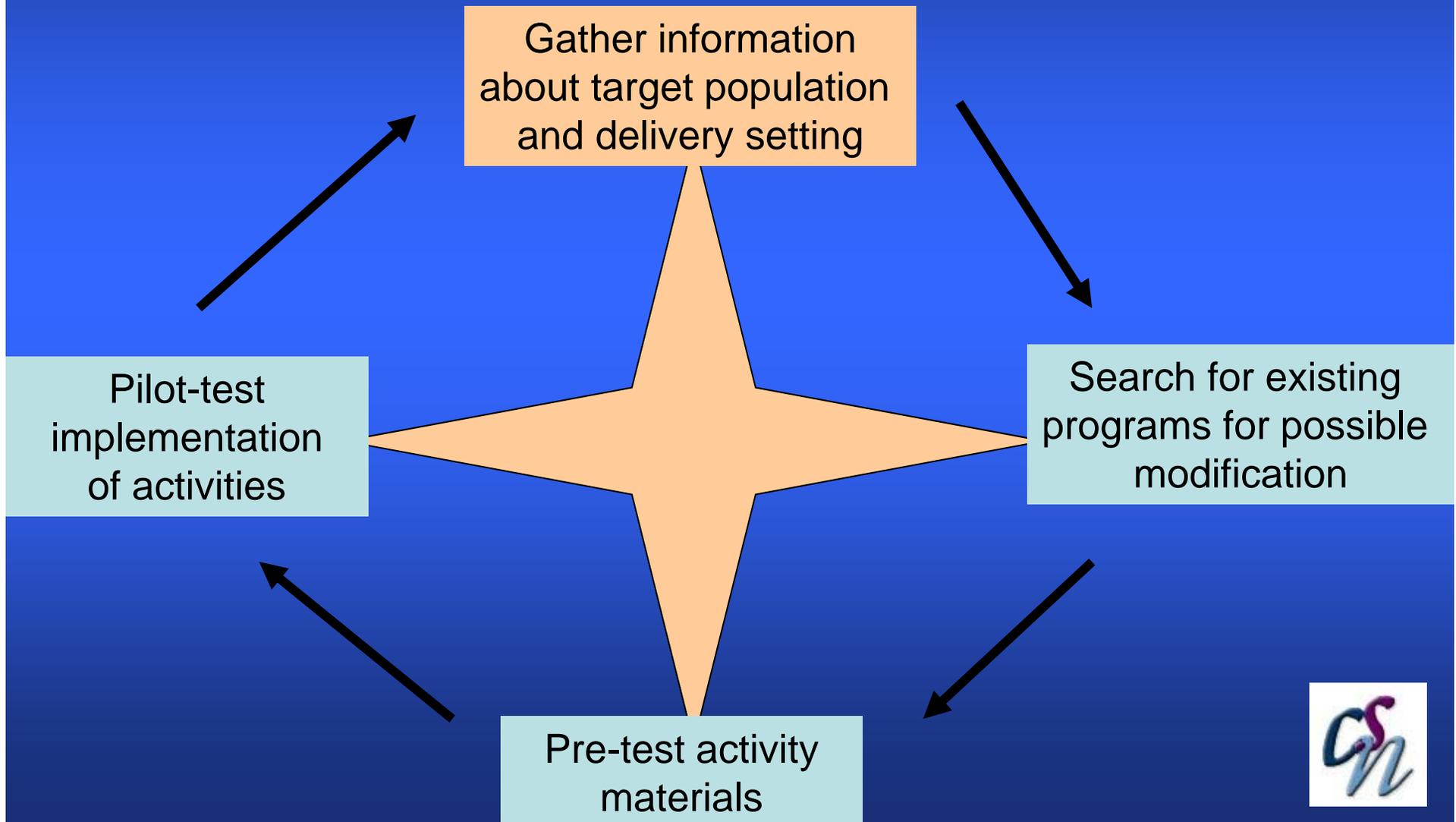


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OK, NOW LET'S BE CAREFUL OUT THERE.

# Useful formative evaluation tasks when developing activities



# 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?**



Nike Air  
Foamposite



# 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

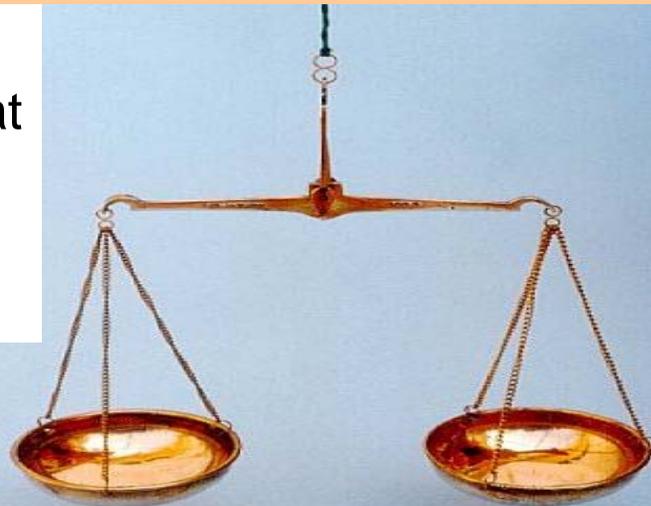
- Vouchers
- Written materials



# Formative challenge

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

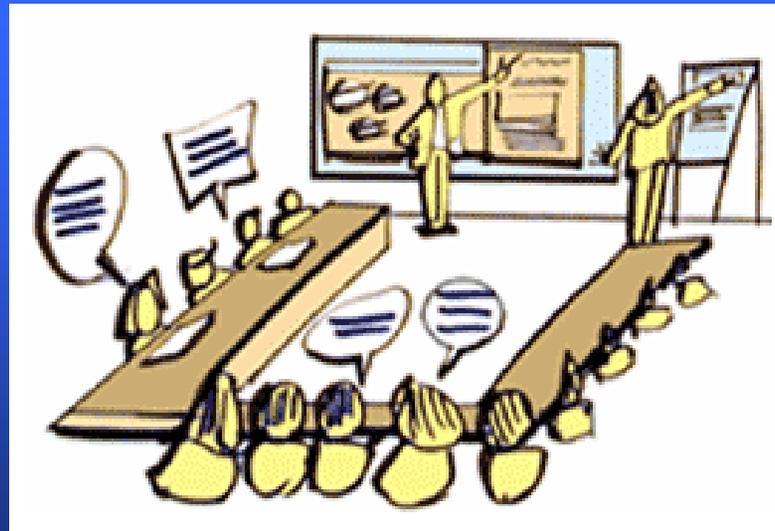
Target population prefers free giveaways at clinic and one-on-one instruction by nurse



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

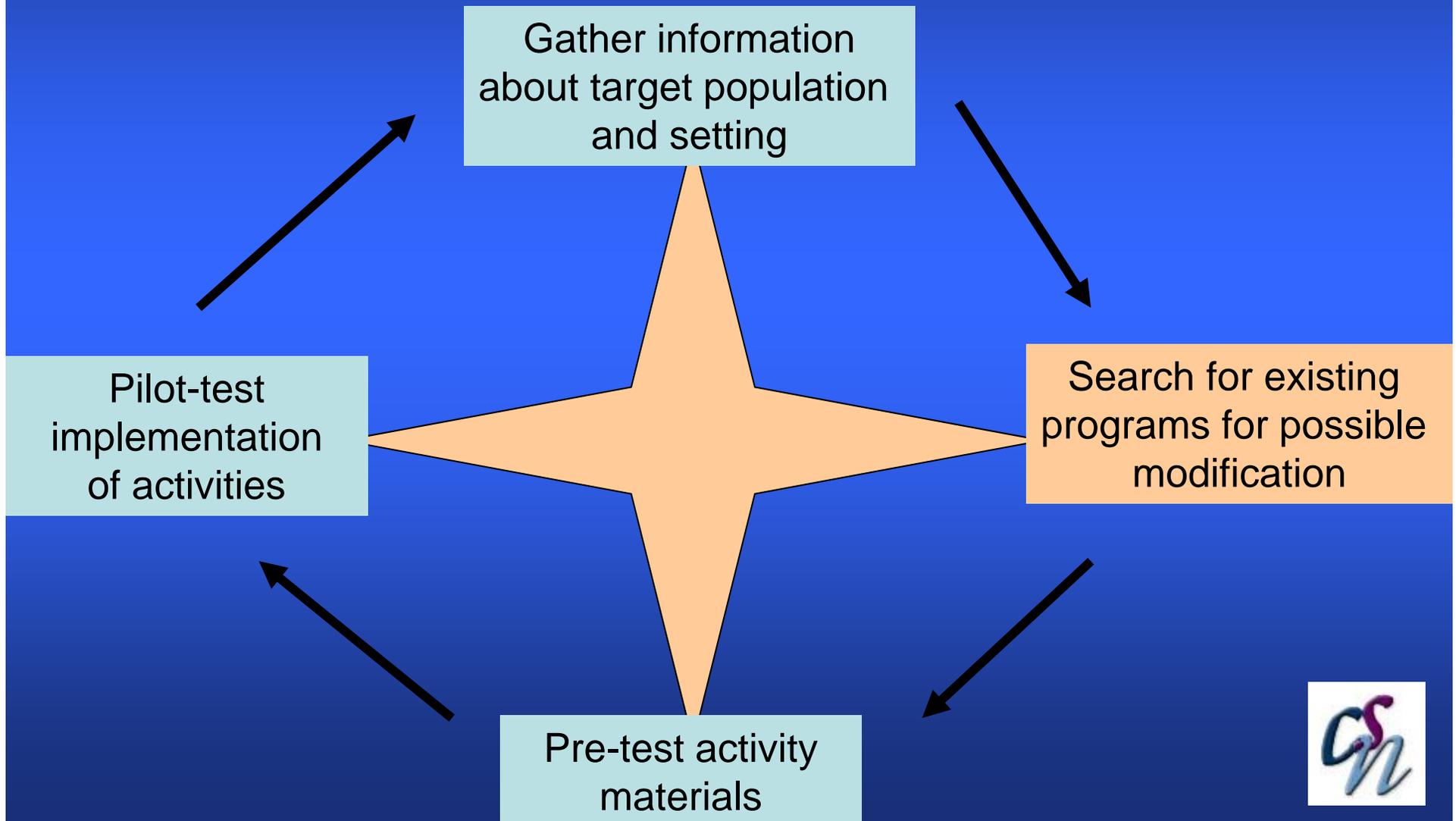
- Create booster seat display
- Receptionist distributes flyer promoting importance, booster display, and asking nurse about program

### 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



# 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

<http://archive.naccho.org/ModelPractices/Result.asp?PracticeID=129>

<http://www.bphc.org/programs/initiative.asp?i=247&p=212&b=2&d=>

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

<http://www.nhtsa.dot.gov/people/outreach/safedige/fall2000/fal00-7.html>

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

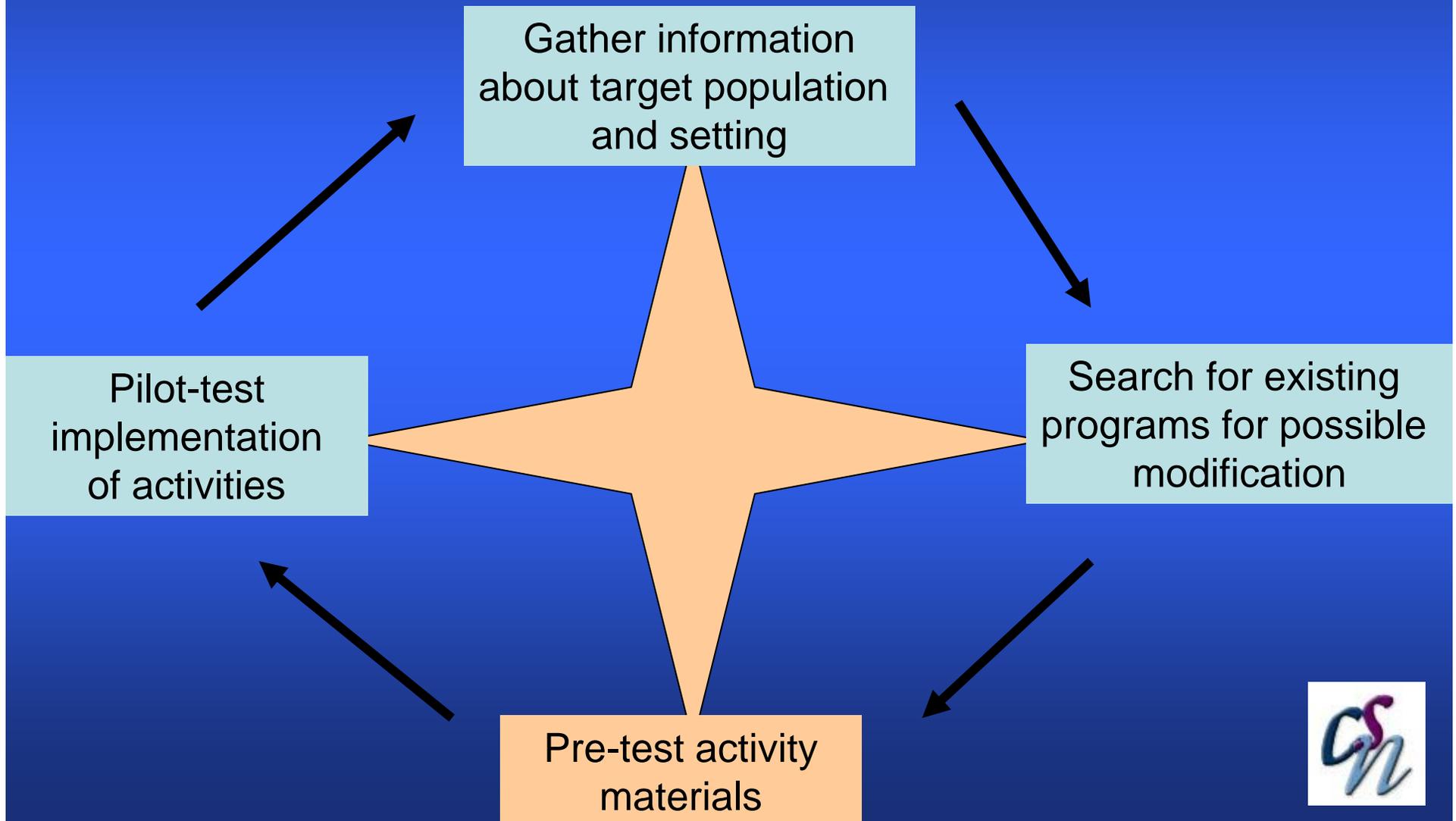
[http://www.nhtsa.dot.gov/people/outreach/safedige/Volume-1-2005/OP05\\_Gimmee%20a%20Boost\\_NYS.htm](http://www.nhtsa.dot.gov/people/outreach/safedige/Volume-1-2005/OP05_Gimmee%20a%20Boost_NYS.htm)

Washington: Booster Seat Program

<http://www.nhtsa.dot.gov/people/outreach/safedige/summer2000/sum00-10.html>



# Formative evaluation tasks when developing activities



# 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?**

# Pre-test activity materials

## *Questions and data sources*

Area	Key Questions	Data source
Target population – low income families	Culturally appropriate? Language appropriate? Reading level? Appeal? Visuals? Cue to action?	Focus group and interviews
Child passenger safety & educational design experts	Content? Format/layout?	Expert panel review



# 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

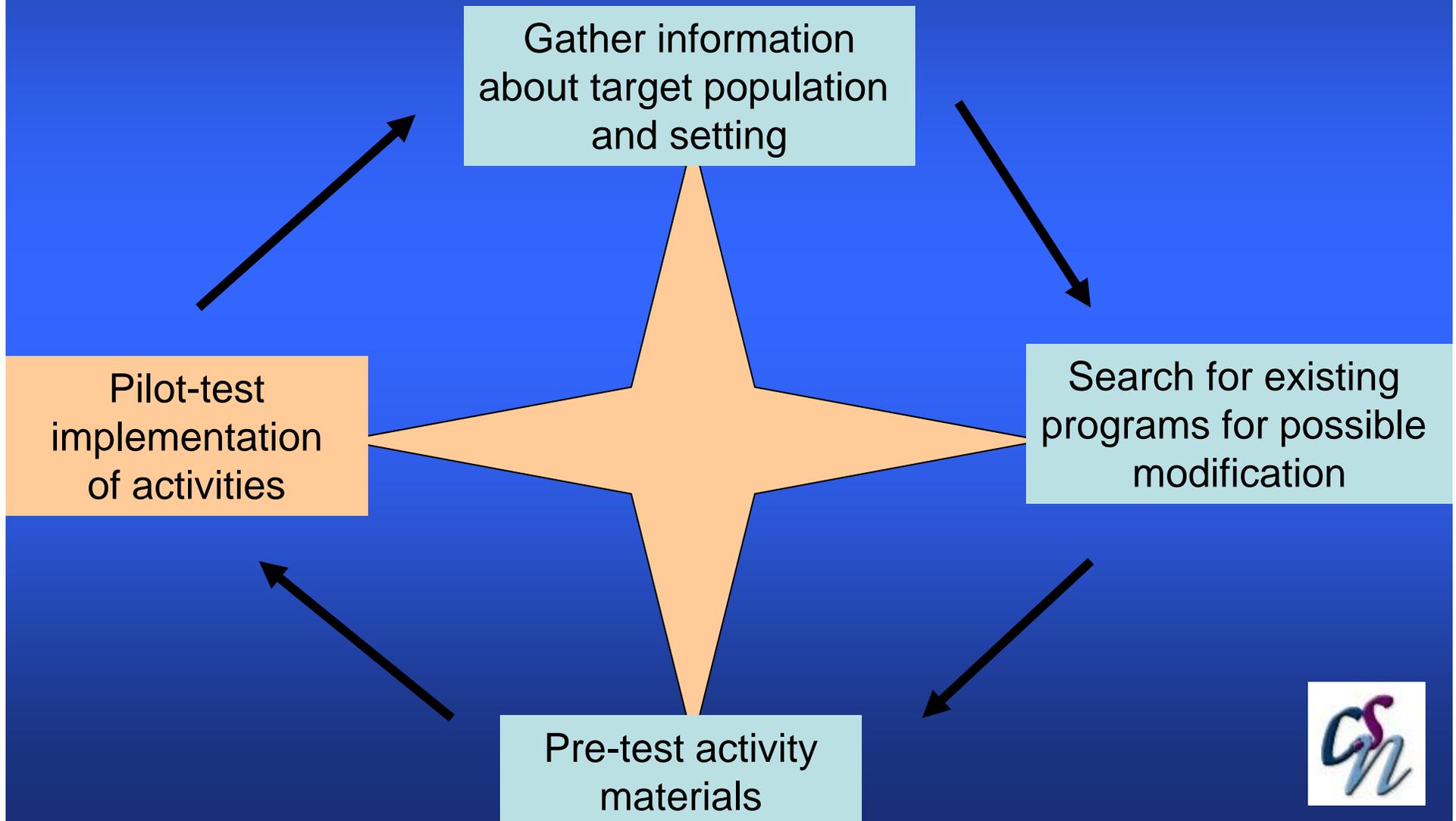
- Portrayed cool character (Barney the Purple Dinosaur) did not resonate with children 4-7. Made fun of him.
- Girls prefer princess theme, while boys Power Rangers

### 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



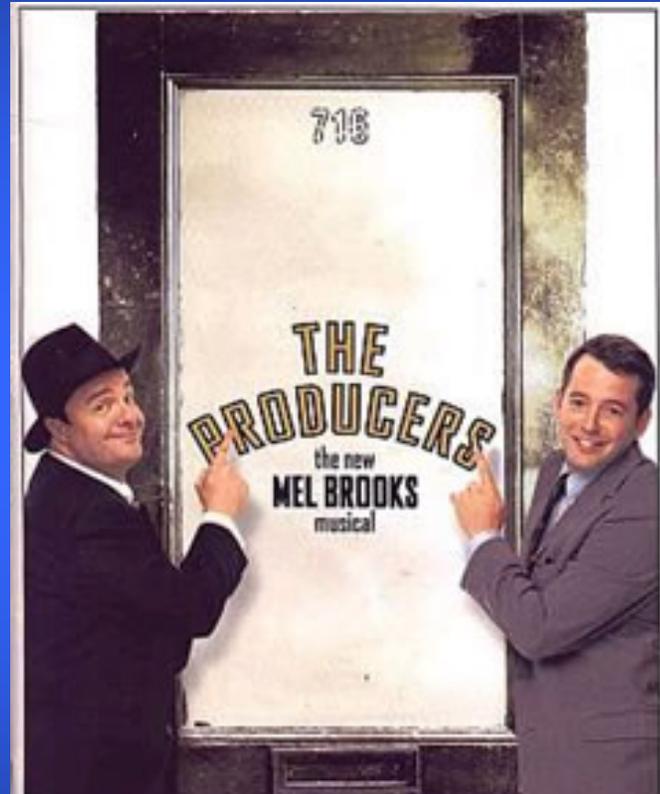
# Formative evaluation tasks when developing activities



# 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

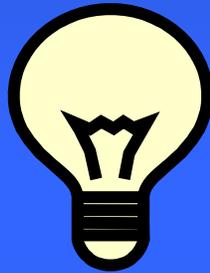
### Families

- 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



Search for existing programs for possible modification



Pilot-test implementation of activities



Pre-test activity materials



# 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

Hatry, H; Houten, TV; Plantz, MC; and Taylor, M. (1996) *Measuring program outcomes: A practical approach*. Alexandria, VA: United Way of America.

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

Thompson NJ; McClintock HO. (2000) *Demonstrating Your Program’s Worth: A Primer on Evaluation for Programs to Prevent Unintentional Injury*. Atlanta, GA: Centers for Disease Control and Prevention, National Center for Injury Prevention and Control.

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

W.K. Kellogg Foundation (1998) *The W.K. Foundation Evaluation Handbook*. Battle Creek, MI: WK Kellogg Foundation.

<http://www.wkkf.org/documents/WKKF/EvaluationHandbook/EvalHandbook.pdf>



# Evaluation resources

## Formative evaluation

Thompson, NJ; McClintock H) (1998) *Demonstrating Your Program's Worth: A Primer on Evaluation for Programs to Prevent Unintentional Injury*. Atlanta, GA: National Center for Injury Prevention and Control. Pg. 21-27. <http://www.cdc.gov/ncipc/pub-res/demonstr.htm>

Dehar, MA, et al., (1993) Formative and process evaluation of health promotion and disease prevention programs. *Evaluation Review*, 17:204-220.

Chen, HT (2005) *Practical Program Evaluation*. Thousand Oaks, CA: Sage Publications. Chapter Five: How Evaluators Assist Stakeholders in Developing Program Plans (pp. 93-128).



# Evaluation Resources

## 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>

United Way of America (1996) *Measuring Program Outcomes: A Practical Approach*. Alexandria, VA: United Way of America.

W.K. Kellogg Foundation (2003) *Logic Model Development Guide*. Battle Creek, MI.

