Evaluation

Kerry Thomson, MPH, CHES
Program Evaluator
Colorado Department of Public Health and Environment
Presentation Goal, Objective, & Activity

Goal: Increase knowledge of public health program evaluation among members of Group 1

Objective: At the end of the MCH evaluation training on March 8, 2011 participants will be able to:
- List benefits of evaluation to local MCH programs
- Articulate SMART criteria for program objectives
- Describe four types of program evaluation

Activity: On March 8, 2011 deliver 1 hour presentation and interactive exercises on key evaluation concepts
Stand Up If....

- You made a New Year’s Resolution
  - Your New Year’s Resolution was to exercise more
- You have ever made chocolate chip cookies
  - You have tried different recipes for chocolate chip cookies
Program Evaluation -- Definition

The systematic collection of information about the activities, characteristics, and outcomes of programs to make judgments about programs, improve the program effectiveness, and/or inform decisions about future programming.

10 Essential Services of Public Health

1. **Monitor** health status to identify and solve community health problems.

2. **Diagnose and investigate** health problems and health hazards in the community.


4. **Mobilize** community partnerships and action to identify and solve health problems.

5. **Develop policies and plans** that support individual and community health efforts.

6. **Enforce** laws and regulations that protect health and ensure safety.

7. **Link** people to needed personal health services and assure the provision of health care when otherwise unavailable.

8. **Assure** competent public and personal health care workforce.

9. **Evaluate** effectiveness, accessibility, and quality of personal and population-based health services.

10. **Research** for new insights and innovative solutions to health problems.
Here we are!

😊

Source: CDC
Review from Yesterday: Steps in the Public Health Approach

The Public Health Approach to Prevention

- Define the problem: Surveillance
- Identify causes: Risk & protective factor research
- Develop and test interventions
- Implement interventions
- Evaluate interventions
Small Group Activity #1

Table Brainstorm:
Why do we do program evaluation?
What are the benefits?
Why Do Evaluation?

How can your program benefit from evaluation?
- Accountability
- Demonstrate effectiveness and success
  - Build an evidence base for “promising practice(s)”
- Continuous program improvement
  - Lessons learned

Data / Results:
- Garner support from stakeholders & decision makers
- Secure additional resources (e.g. grants)
- Make sound decisions

Evaluation =
- Sustainability & growth
- Not just good public health practice, but an opportunity!
Goals, Objectives, & Activities

The basis for good evaluation
Definition: Goal

- Global statement about **overall** aim, mission, or purpose of program that addresses **long-term** effects
- Goals do not include baseline data or targets
- Goal could be specific to County or State
- Goals should be succinct
- Goals sets the foundation for writing your objectives
  - Reduce rate of unintended pregnancy among women of reproductive age (15-44) in Colorado
  - Increase proportion of children with special health care needs in County X that have a medical home
  - Additional examples in your training binder
Definition: Objectives

- Specific and measurable steps or outcomes that lead to the goal
  - Help set program priorities
  - Monitor progress toward goal
  - Set targets for accountability
  - Provide framework for program evaluation
  - Sets the foundation for planning activities
Types of Objectives

- Outcome objectives
- Process objectives (aka MCH Activities)
  - Both can involve measurement!
  - Both should be S.M.A.R.T
Outcome Objectives (1)

Outcome objectives describe what tangible results will occur due to the program / project.

- Increase the proportion of children in Pueblo County who report wearing a bike helmet every time they ride a bike from 60% in 2009 to 75% in 2012.
- By December 31, 2011, 75% of adolescents participating in the Denver YMCA after school programs will consume five fruits and/or vegetables a day.
- By September 30, 2012 increase the number of high schools in Poudre School District that include the “Preconception Health 101” curriculum in freshman health class.
- Additional examples in your training binder
Outcome Objectives (2)

Common outcome objectives address:

- Knowledge gain
- Attitude change
- Skill development
- Behavior change
- Disease/Injury/Death rates
Setting the Foundation

- It’s important to consider how you are going to measure your objectives and activities when you are developing them.

- This forms the basis for your evaluation plan.

- Good evaluation starts with well-written objectives and activities.

- Evaluation is key to sustainability.
Writing S.M.A.R.T. Objectives

A well-written and clearly defined objective is a S.M.A.R.T. objective:

- Specific
- Measurable
- Achievable
- Relevant
- Time-bound
S.M.A.R.T. – Specific (1)

**Specific:** State specifically what you want to achieve.
- Describe the action, behavior or achievement that is desired in quantitative terms
- If change is desired, include both the current “level” and desired “level”
  - From X → Y
- State specific target audience
Example (New Year’s Resolution): Exercise more.
Better: Exercise more often than I do now.
Even Better: Exercise 3 days / week.
Best: Increase exercise from 1 day / week to 3 days / week.

From X \rightarrow Y
Baseline = 1 day/week
Target = 3 days / week
Definition(s)
Exercise = 30 minutes of vigorous physical activity outside of work.
S.M.A.R.T. – Measurable

This is the EVALUATION part 😊

Measurable: Be able to determine the extent to which the action, behavior or achievement has been accomplished.

- Identify a system or method to track and record the action, behavior or achievement
- Use an existing data collection system or create one
- Needs to be reliable

Example: I will maintain a notebook that records the date and duration (minutes) each time I exercise.
S.M.A.R.T. – Achievable

**Achievable:** Can you actually accomplish it?
- Have a reasonable belief in your ability to accomplish the objective
- Consider resources and potential obstacles
- Challenge yourself / program, but also set up for success

**Example:** I currently exercise 1 day/week. I joined a gym and should be able to increase to 3 days/week. Eventually, I would like to exercise 4 days/week.
S.M.A.R.T. – Relevant

- **Relevant**: Achievement of the objective should be meaningful.
  - Important to your organization
  - Impact the program goal
  - 10 Essential Services of Public Health
  - Contribute toward
    - MCH Priorities
    - MCH Performance Measures

- Example: Exercise helps me maintain a healthy weight and reduces my risks for chronic diseases. Increasing my weekly exercise will contribute toward my weight loss goal.
S.M.A.R.T. – *Time-bound*

- **Time-bound:** By when should the objective be accomplished?
  - Clearly state the target date
  - Begin the objective with the target date

Example: By April 1, 2010 I will increase my frequency of exercise from 1 day / week to 3 days / week.
S.M.A.R.T Objective – All Together

Between December 31, 2009 and April 1, 2010 I will increase my frequency of exercise from 1 day / week to 3 days / week, as measured by a notebook with the date and duration (minutes) of exercise.
From X to Y: Very Important

X = Baseline data
- Population-based surveys (MCH County Data Sets)
- Program records
- Additional data analysis (your agency or CDPHE request)
- If you don’t have baseline data, acquiring it could be one of your activities for Year 1

Y = Target: The “number” you want to move toward and eventually reach / surpass
- Literature (HP 2020), content experts, other programs
- Size of the population / denominator
- “Reach-ability” of the populations
  - Sometimes a 1% increase takes tremendous effort and is a substantial improvement
  - Sometimes a 15% increase is relatively easy to accomplish
- Set your program up for success
Activities

Activities describe what a program intends to do in order to achieve the desired outcomes (objective).

- By December 31, 2011, conduct 200 home safety assessments for people over age 65 in Adams County.
- By August 31, 2012, engage 30 WIC families in a community garden in Aurora.
- Many of the SMART criteria still apply
How did I do? Presentation Goal, Objective, & Activity

Goal: Increase knowledge of public health program evaluation among members of Group 3
- Does this meet the definition of a goal?
- Could it be better?

Objective: At the end of the MCH evaluation training on March 3, 2010 participants will be able to:
- List benefits of evaluation to local MCH programs
- Articulate SMART criteria for program objectives
- Describe common types of program evaluation
- Does this meet S.M.A.R.T criteria?
- What could be better?
- How might I measure / evaluate success?

Activity: Deliver 1 hour presentation and interactive exercises on key evaluation concepts to members of Group 3
- Does this meet S.M.A.R.T criteria?
- What could be better?
- How might I measure / evaluate success?
Small Group Activity #2

Writing Goals, Objectives, & Activities

* Fill in White Boxes only *
Why Do Evaluation?

How can your program benefit from evaluation?
- Accountability
- Demonstrate effectiveness
  - Build an evidence base for “promising practice(s)"
- Continuous program improvement
  - Lessons learned

Data / Results:
- Garner support from stakeholders & decision makers
- Secure additional resources (e.g. grants)
- Make sound decisions

Evaluation =
- Sustainability & growth
- Not just a requirement, but an opportunity
4 Common Types of Public Health Evaluation

Formative Evaluation:
- Needs assessment:
  - What is the need? Who is in need?
  - What may work to meet this need?
- Process evaluation:
  - Assess and document implementation
  - Can take less time to measure and see results soon(er)

Summative Evaluation
- Outcome evaluation:
  - Did program accomplish specified objectives?
- Impact evaluation:
  - Did program achieve overall effect(s) / goal
  - Takes longer to measure and see results
Links & Logic

Link between Operational Plan and Evaluation
- Goal → Impact evaluation
- Outcome objectives → Outcome evaluation
- Activities → Process evaluation

Logic behind Operational Plan
- If program Activities are completed…
- program Objectives will be achieved…
- and impact will be made toward Goal
Levels of Program Evaluation

Robust Measurement Methods, Results

Impact Evaluation
Outcome Evaluation
Process Evaluation
Needs assessment

Goal
Objectives
Activities
Needs

Time, Energy, Resources
Evaluation sounds complicated… can I really do this?

- Yes!
- Many of you have conducted an evaluation of chocolate chip cookies
Everyday Example: Chocolate Chip Cookies

**Situation: My friend is having a party**

<table>
<thead>
<tr>
<th>Step</th>
<th>Evaluation Question(s)</th>
<th>Action / Process</th>
<th>Evaluation</th>
</tr>
</thead>
</table>
| 1    | What will guests need?  
      What could I bring to meet this need?                                               | Gather data and describe need.                                                  | Needs Assessment      |
| 2    | Choose a “Recipe” from the Betty Crocker Cookbook  
      (Evidence-base for Objectives, Activities / Strategies)  
      Start Baking!                                                      |                                                                                |                       |
| 3    | Did I make the cookies?  
      How many cookies did I make?  
      Did I follow the “recipe”?  
      What lessons were learned implementing this particular recipe?          | Document cookie production  
      Document the number of cookies  
      Evaluate implementation and fidelity                                     | Process Evaluation        |
| 4    | Was a great tasting cookie produced?                                                   | Define standards for “great”.  
      Evaluate cookie with a taste test.                                         | Outcome Evaluation     |
| 5    | Did the cookie satisfy dessert cravings?                                               | Evaluate satisfaction of guests                                                 | Impact Evaluation     |
## Impact / Outcome Evaluation: Purpose & Methods

<table>
<thead>
<tr>
<th>Type of Evaluation</th>
<th>What might you evaluate?</th>
<th>Possible methods (Data sources)</th>
<th>MCH Operational Plan (Language)</th>
</tr>
</thead>
</table>
| Impact Evaluation  | **Goal:** Overall changes in health and well-being County or state level | • Population-based surveys  
• Surveillance systems  
• Vital statistics | • Measurement toward progress of Goal  
• Specify data source in advance |
| Outcome Evaluation  | **Objectives:**  
• Knowledge gain  
• Attitude change  
• Skill development  
• Behavior change  
• Rates / proportions:  
  Pregnancy  
  LBW  
  Medical home  
Usually County level or target/sub population only | • Surveys:  
  Population-based  
  Target population Pre / Post  
  • Enrollment records  
  • Graduation records  
  • New Policies | • Evaluation of Program Objective  
• Specify data source in advance, if possible |
## Process Evaluation: Purpose & Methods

<table>
<thead>
<tr>
<th>Type of Evaluation</th>
<th>What might you evaluate?</th>
<th>Possible methods (Data sources)</th>
<th>MCH Operational Plan (Language)</th>
<th>Per Year:</th>
</tr>
</thead>
</table>
| Process Evaluation | Activities: • Progress toward achieving objectives  
• Monitoring  
• Documentation | • Record keeping  
• Materials tracking  
• Services provided  
• Count: meetings, trainings, participants etc. | Per Year:  
• Plan for Evaluation  
• Evaluation of Activities (results) | Likely have more than one activity. Use numbering system.                                        |
|                    | Assess: • Implementation  
• Feasibility  
• Satisfaction | Qualitative methods:  
• Focus group  
• Key informant interviews  
• Satisfaction survey | Per Year:  
• Plan for Evaluation  
• Evaluation of Activities (results) | Likely have more than one activity. Use numbering system.                                        |

Think critically….take the next step in process evaluation

- Is participating in this coalition meeting worthwhile?
- What results came out of the training?
- Do teenagers like our health education materials?
- What could be done?
MCH Operation Plan: What to do? Where to start?

1. Establish Goal
2. Write SMART Objectives
   - Identify baseline data
3. Plan outcome evaluation of objectives
   - Purpose of evaluation
   - Evaluation question(s) / objectives
   - Determine methods / data collection
4. Write Activities
5. Plan process evaluation of activities
   - Purpose of evaluation
   - Evaluation question(s) / objectives
   - Determine methods / data collection
6. Conduct evaluation(s)
7. Make modifications if needed
8. Repeat evaluation if needed
9. Share results, successes, and lessons learned
### Potential Pitfalls in Measurement / Evaluation

<table>
<thead>
<tr>
<th>Pitfall</th>
<th>Solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Outcomes are not measurable or not realistic given strategies and activities</td>
<td>Write S.M.A.R.T. objectives</td>
</tr>
<tr>
<td>Activities do not support the Objective. Objectives do not support the Goal.</td>
<td>Check the logic / flow under each Goal.</td>
</tr>
<tr>
<td>The wrong outcome is measured</td>
<td>Create an evaluation plan detailing methods of data collection and timing</td>
</tr>
<tr>
<td>The right outcome is measured but with the wrong or a bad instrument</td>
<td>Use pre-developed instruments or surveillance systems</td>
</tr>
<tr>
<td></td>
<td>Ask for help reviewing your data collection tools</td>
</tr>
</tbody>
</table>

Any others from your experience?

“Sometimes, what counts can’t be counted. And what can be counted doesn’t count….”

-Albert Einstein
Resources for Evaluation & Methods

- University of Wisconsin Extension Program
  - [www.uwex.edu/ces/pdande/evaluation/](http://www.uwex.edu/ces/pdande/evaluation/)
- Research Methods Knowledge Base
  - [www.socialresearchmethods.net/kb/intreval.htm](http://www.socialresearchmethods.net/kb/intreval.htm)
- Healthy People 2010 / 2020
  - [www.healthypeople.gov](http://www.healthypeople.gov)
- Intro to Program Evaluation for Public Health Program - A Self-Study Guide
  - [http://www.cdc.gov/eval/whatsnew.htm](http://www.cdc.gov/eval/whatsnew.htm)
- Community Toolbox, Part J, Chapters 36-39

- Your MCH Generalist and Me!
- (Optional) Evaluation Webinar: April 12th 9:00am
Questions?
Small Group Activity #3:

Evaluation Practice

*Fill in Grey Boxes, complete worksheet *