Program Evaluation and Public Health Community Based Practice

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This Session

- A systematic process for program evaluation
  - Steps 1-4
- Evaluation in grant-writing
  - Process, outcome, and impact measures
  - Collecting the appropriate data
- An evaluation plan in action
  - Louisville Putting Prevention to Work federally funded grant
The Goal of Evaluation

“To assist with continuous programmatic improvement and introspection.”

- Michael Quinn Patton, 1996

Evaluation

“Evaluation is an art and every evaluation should represent an idiosyncratic effort to meet the needs of program funders and stakeholders.”

- J. McLaren, 2000
## Types of Evaluation

- **Formative** – used to improve the program  
  - Conducted **before a program is fully implemented**
- **Process** – used to document outputs from a program’s implementation
- **Summative** – used to determine program effectiveness  
  - **Outcome**  
  - **Impact**

## Formative Evaluation

- Conducted to get information  
  - During program planning  
    - To test a program’s materials, messages, procedures using pilot tests  
    - During the early implementation/pilot phase with the intention to improve a program
Process Evaluation

- Monitor and document program factors
  - Implementation evaluation – determines how the program is implemented
  - Asses the fit between the implementation and plan
  - Identifies barriers to implementation
  - Charts progress towards program goals and objectives
  - Documents satisfaction and perceptions of program participants and other stakeholders

Summative Evaluation

- Summative – used to determine program effectiveness
  - Outcome
  - Impact
The Evaluation Process

Steps in the Evaluation Process

- Step 1: Provide a thorough description of the program you are evaluating
- Step 2: Specify the evaluation questions you need to answer and the approaches needed
- Step 3: Collect and analyze data that is valid and reliable to answer the evaluation questions specified in step 2
- Step 4: Develop a comprehensive report of your results and share them with multiple stakeholders.
A Cyclical Evaluation Process

Step 1: Describe the Program
Step 2: Specify the Evaluation Questions and Evaluation Approaches
Step 3: Collect and Analyze Data
Step 4: Report Findings

Step 1: The Program’s Description
The Program’s Description
Benefits of a Clear Description

- Funders want to support a well articulated program
- Program participants are more easily identified and recruited
- Ensures everybody understands how the program fits in with the vision
- Can transmit a clear and consistent message about the program
- Clarifies the components for evaluation
  - Evaluation questions are more clearly and easily identified for developing a thorough evaluation plan

The Program’s Description
Stakeholders: Roles and Responsibilities

- Stakeholders
  - Funders
  - Beneficiaries
    - Those affected directly by their participation or impacted by the program or policy
  - Management and staff
  - Program/policy supporters
    - Individuals
    - Lawmakers (local, state, national)
    - Media
  - Program/ policy competitors
The Program’s Description
Stakeholders: Roles and Responsibilities

- Stakeholders identify
  - Previous research and/or needs assessment
  - Program components
  - Staffing
  - The program’s expected change process
- Stakeholders participate in
  - Identifying evaluation questions
  - Collecting and analyzing valid and reliable data
  - Reporting evaluation results to other stakeholders

Components of a Clear Description

- Research
  - Community assessment
  - Problem being addressed
    - nature, magnitude, populations most affected
  - Risk factors giving rise to the problem
  - Protective factors that minimize the problem
  - Existing programs and policies
  - Community resources for addressing the problem
    - material, financial, human
  - Literature Review
- Program
  - Components - Activities
  - Goals and SMART objectives – expected effects/outcomes of the program
  - Program’s Effect Model/Logic Model
Program’s Effect Model

- **Inputs**
  - Resources (trained staff, venue, transportation, etc)
  - Financing
- **Activities** – what the program actually does to achieve the outcomes
- **Outputs**
  - Number of clients/program beneficiaries/lawmakers participating or trained
  - Number of lights put up to improve safety
  - Number of sidewalks striped
  - Number of corner stores opened
  - Number and type of media messages aired
- **Outcomes/Outcome measures**
  - Ultimate results of efforts to change, knowledge, attitudes, behavior, and environmental status or policy
- **Impact of the programs and policies for the whole community in 5-10 years**
  - Ultimate improvements in quality of life, incidence and prevalence of public health problems identified in the HP 2020 e.g. Reducing the rates of Diabetes in the US

Impact HP2020

Components of the Program’s Effect Model/Logic Model
Step 2: The Evaluation Questions

Evaluation Questions

- Purpose of the Evaluation
  - Gain insight
  - Change practice
  - Assess effects
  - Accountability
  - To change/empower program participants
Selecting the Questions

- Basis for selecting questions
  - Stage of the program
  - Concerns and priorities of the stakeholders
  - Time and resources available
  - Experience of the evaluation team
  - Effect model/Logic model

Effect Model

- Process Evaluation
  - Inputs
  - Activities
  - Outputs

- Outcome Evaluation
  - Short term
  - Intermediate
  - Long term

- Program Outcome Objectives

- Impact HP2020
Evaluation Questions

Essential questions versus interesting questions

- **Process Evaluation**
  - Assessing program monitoring
    - Inputs/Resources
    - Activities
    - Outputs

- **Outcome Evaluation**
  - Assessing program effects
    - Program Outcome Objectives
      - Short term (<1 year)
      - Medium term (2-3 years)
      - Long term (4-10 years)
Process Evaluation

- Assesses the program at the level of implementation
  - Inputs/resources
  - Outputs/products of the initiative
  - Effectiveness of the administrative structures
  - Barriers to implementation
- Satisfaction
- Context
- Reach
- Dosage / Intensity
- Fidelity

Process Evaluation Questions

- Is the program being implemented according to the plan?
- What type, quality and quantity of the program is being provided?
- Who is providing the program and are they qualified to do so?
- What are the products of the program’s implementation?
- What barriers are there to program implementation
Process Evaluation

- Considerations for selection of questions
  - Availability of resources
  - Budget, expertise, and experience
  - Time
  - Access and availability of administrative and participant data
  - Stage of the program

Process Evaluation

- Assessing Resources
  - Funding levels and distributions
  - Resources utilized
  - Number and qualifications of staff and others implementing the programs
  - Quality of curricula, training and other program components
Process Evaluation

- Assessing the Processes
  - Level of implementation
  - Intensity and reach
  - Participation of target audience
  - Staffing of program activities
  - Training

Summative Evaluation
**Effect Model**

- **Process Evaluation**
  - Inputs
  - Activities
  - Outputs

- **Summative Evaluation**
  - Short term
  - Intermediate
  - Long term
  - Program Outcome Objectives
  - Impact

**Summative Evaluation**

- **Outcome**
  - Did the initiative make a difference for those who were exposed to it?
  - Carried out when the initiative or component of the initiative is expected to have had an effect on the participants or those exposed to it
  - The questions that are answered are also dependent on:
    - Resources, expertise, training, team preferences, etc.
Summative (outcome) evaluation

- Quasi-experimental Designs
  - To examine whether a program or policy causes a change
  - To determine if the intervention (program or policy) causes the outcome (effect/results) that is being observed

Quasi-experimental designs

- Often used, but designs that do not show causation
  - One group post test only measurement
  - One group pre/posttest measurement of change
    - Vulnerable to all the threats to internal validity
Attributing Outcomes to Programs

- Quasi-experimental designs
  - Designs that may permit causation
    - Pre/post test designs with comparison groups
    - With only 2 data points it may be difficult to assess change at the
    - Improved design
    - Multiple data points before and/or after the intervention
    - Randomly assigning the groups/not selecting particular people
      into the intervention or the comparison/control group
    - Carefully monitoring events for both groups
    - Using identical testing/observation methods and trained data
      collectors for data collection

Collecting and Analyzing the Data
Step 3: Collecting and Analyzing the Data

- **Data collection** approaches are dependent on the question being answered
  - The time frame for the evaluation
  - The expertise of the evaluation team in data collection and data analysis
  - The purposes of the evaluation
    - Decision making may require more definitive data
    - Program improvement may require more enquiry and therefore lend itself to more readily to qualitative data

Data Collection Methods

**QUANTITATIVE**
- Surveys
  - Primary data
  - Secondary data (existing)
- Existing data sets
  - BRFSS
  - YRBS
  - NHANES
  - Hospital Discharge
  - SEER

**QUALITATIVE**
- Focus Groups
- Individual and Key Informant Interviews
- Document/Record Reviews
- Observation
- Written monthly reports
- Audio-visual approaches
  - Digital stories
  - Photovoice
Step 3: Collecting and Analyzing the Data

- **Data analysis** is dependent on the type of data collected
  - Quantitative (numerical)
    - e.g. survey, log sheets, databases
    - Data analysis software: Excel, SPSS, SAS etc.
  - Qualitative (word based)
    - e.g. photographs, transcriptions of audio materials, review of printed/written materials
    - Data coding and analysis software: Nvivo, AnsWer etc

Reporting the Results
Step 4: Reporting the Results

- Discuss reporting strategy with stakeholders
- Communicate findings to relevant audiences
  - Timely manner
  - Unbiased
  - Consistent
  - Appropriate
- Tailor report content for the audience
  - Board of Governors
  - Funders
  - Staff
  - Program Beneficiaries

Disseminating Results

- Effective Communication
  - Style
  - Tone
  - Message source
    - Credibility
    - Knowledge of the progress and product
  - Vehicle
    - Oral vs written
    - Format of information product
Evaluation in Grant-Writing

Framework for the Evaluation Component
The Evaluation Plan
Benefits of a Clear Plan

- Funders want to support well articulated programs
- Ensures everybody understands how the program fits in with the vision
- Transmits a clear and consistent message about the program’s expected results
- Clarifies how the program or policy will be assessed
  - Articulates how program process and outcomes will be measured
  - Presents the evaluation design
  - Discusses the data collection and analysis strategy
- Presents a plan for reporting results
- Presents the personnel and level of expertise

Evaluation Plan Components

- Introduction
  - The rationale/purpose for the evaluation
  - The approach for the evaluation
    - Underlying philosophies or guiding principles associated
    - Purpose of the evaluation /stage of the program
    - Behavioral theories being used
Evaluation Plan Components

- **Step 1**
  - Describe the program. Provide an overview with the logic model that will guide the evaluation

- **Step 2**
  - Evaluation Questions and Indicators for Measurement of change
    - Process
    - Outcome

- **Step 3**
  - Approaches and methods for answering the evaluation questions
    - Data collection to ensure valid and reliable data

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**Evaluation Questions and Indicators Table Format**

<table>
<thead>
<tr>
<th>Evaluation Question</th>
<th>Indicator(s) / measure of change</th>
<th>Data Collection Method</th>
<th>Baseline Data / Current Status</th>
<th>Person responsible for data collection</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.1</td>
<td>Were procurement policies passed to improve healthy eating across educational institutions?</td>
<td>Procurement policies at educational institutions</td>
<td>Milestone Reporting, Document review / Key Informant Interview</td>
<td>No policies</td>
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<tr>
<td>2.1</td>
<td>Did student participation in National School Breakfast and National School Lunch programs increase following the implementation of the LPPW initiative?</td>
<td>Student participation in National School Breakfast and National School Lunch Programs</td>
<td>Document Review / student participation records</td>
<td>20,000 students participating</td>
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</tbody>
</table>
Evaluation Plan Components

- Step 4
  - Deliverables
    - Reporting the results of the evaluation to stakeholders
    - Public Meetings
    - Reports
    - Publishing results
      - Scientific journals
      - Practice journals
      - Conference presentations
  - Additional information
    - Time Line
    - Budget
    - Personnel and level of expertise

Applying the lessons:
An Evaluation Plan in Action
The Louisville Putting Prevention to Work Plan Evaluation

- Introduction
  - ARRA funding through DHHS and CDC to LMDPHW
  - Period March 2010 – March 2012
  - To assess the outcomes associated with the LPPW
  - The approach for the evaluation
    - Health Equity
      - Particular reference to 12 low income neighborhoods of West Louisville
    - Shovel ready projects: expectation to be able to see some outcomes
    - Logic model
## The Louisville Putting Prevention to Work Plan Evaluation

### Step 1 – Describe the Program

- **Program activities outlined in Community Action Plan**
  - Identified the area for the initiative as
    - Louisville Metro
    - 12 neighborhoods that have less access to resources
      - Lower social and economic status
      - High rates of chronic disease
      - Low access to opportunities for healthy nutrition and physical activity

## Louisville Putting Prevention to Work

- **Environmental, Systems, and Policy Changes based on MAPPS strategies**
  - **Environment and Systems**
    - Schools & afterschool and childcare programs to improve nutrition and physical activity
    - Media/social marketing
      - Multiple channel media campaigns
        - Web-based
        - Print (billboards, bus wraps, posters, brochures)
        - Mass media (radio, TV)
    - Community nutrition and food access
      - Corner stores (12)
      - Community Gardens
      - Farmers Markets
      - Menu labeling
    - Breast feeding
      - Lactation clinics
Louisville Putting Prevention to Work

- Environment and Systems
  - Community strategies to improve physical activity access
    - Walking trails
    - Complete streets
    - Buses equipped for carrying bicycles
  - Safety
    - Improved security in parts of Louisville Loop

Community strategies to improve physical activity access
- Walking trails
- Complete streets
- Buses equipped for carrying bicycles
- Safety
  - Improved security in parts of Louisville Loop
Louisville Putting Prevention to Work Initiative

March 2010 to March 2012

**LPPW Logic Model**

<table>
<thead>
<tr>
<th>Resources</th>
<th>Organizational, Community and Policy Change Strategies</th>
<th>Short term and Intermediate Outcomes</th>
<th>Long Term Outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Leadership</td>
<td>Health, physical activity and nutrition</td>
<td>Increased percent who value physical activity and healthy eating</td>
<td>Increased social norms associated with physical activity and healthy eating</td>
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<tr>
<td>Partners</td>
<td>Improving community nutrition</td>
<td>Increased percent who perceive they have access to and opportunities for physical activity and healthy living</td>
<td>Increased access to opportunities for physical activity and healthy eating for Little</td>
</tr>
<tr>
<td>Funding</td>
<td>Improving community access to physical activity</td>
<td>Increased percent with positive attitude toward physical activity and healthy eating</td>
<td>Reduced incidence of obesity</td>
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<tr>
<td>“Shovel Ready” Projects</td>
<td>Improving community access to physical activity and healthy eating</td>
<td>Increased percent with intention to be physically active and eat healthy</td>
<td>Reduced prevalence of obesity</td>
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<tr>
<td></td>
<td>Improved Nutrition Campaign</td>
<td>Increased percent of people who are physically active</td>
<td>Reduced rates of disease and disability</td>
</tr>
<tr>
<td></td>
<td>Increased percent who are eating healthy</td>
<td>Increased percent who are eating healthy</td>
<td>Leading to -----</td>
</tr>
</tbody>
</table>

**Policies**

- Organizational policies to improve physical and nutrition systems
  - Breastfeeding policies in metro government and area hospitals
  - Nutrition policies to increase healthy eating in schools
  - Physical activity in schools and after-school programs
  - Improved access to opportunities for physical activity
    - TARC buses routes and bicycle racks

**Resources Organizational, Community and Policy Change Strategies**

- Leadership
- Partners
- Funding
- “Shovel Ready” Projects

**Short term and Intermediate Outcomes**

- Improved Nutrition Campaign
- Increased percent with positive attitude toward physical activity and healthy eating
- Increased percent with intention to be physically active and eat healthy
- Increased percent of people who are physically active
- Increased percent who are eating healthy

**Long Term Outcomes**

- Increased percent who value physical activity and healthy eating
- Increased social norms associated with physical activity and healthy eating
- Increased access to opportunities for physical activity and healthy eating for Little
- Reduced incidence of obesity
- Reduced prevalence of obesity
- Reduced rates of disease and disability
Evaluation Components

Steps 2 & 3 Identify the Evaluation Question

- **Formative Evaluation**
  - Media campaigns
    - How effective are media messages for specific populations?

- **Process Evaluation**
  - Assessing Context
    - What conditions exist in the IDNs that provide opportunity for physical activity and healthy eating?
      - Physical
      - GIS Mapping
      - Environmental scan – observation study
    - Social and cultural factors
      - Interviews, surveys and site visits

Evaluation Components

- **Implementation**
  - How well was the initiative implemented?
    - Monthly written reports
    - Milestone reporting forms
    - Policy reporting forms

- **Information requested**
  - Description of activities undertaken
  - Outputs
    - Materials produced; number of people trained
    - Reach of the programs and activities
  - Barriers and activities that minimize the barriers to achieve stated milestones
  - Success stories, “spin offs,” leverage of existing funds to expand reach and intensity
Evaluation Components

- **Summative Evaluation**
  - **BRFSS/YRBS**
    - How did physical activity and nutrition behavior change between spring 2011 to fall 2012?
      - Survey of 1,500 residents of Louisville
  - **Family Study**
    - How did members of individual families change as a result of the LPPW programs?
      - Focus groups with 40-60 families in 12 neighborhoods (IDNs)
  - **Outcomes Survey**
    - How effective were the strategies aimed at improving access to physical activity and healthy foods?
    - How did physical activity and nutrition behavior change between spring 2011 to spring 2012?
      - Pre/Post Survey of 500 residents in IDNs

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Evaluation Components

- **Leadership Study**
  - What was the role of leadership in the implementation and outcomes of the LPPW initiative?
- **Policy Study**
  - How did policy impact outcomes associated with the LPPW initiative?
Evaluation Components

- **Step 4**
  - Deliverables
    - Publications (scientific journals, practitioners journals, newsletters etc.)
    - Conferences
      - Local (e.g KPHA)
      - National (e.g. APHA)
        - CDC
        - Federal Government

Additional Information

- **Budget**
  - Personnel
  - Supplies and Equipment
  - Incentives (focus groups/individual interviews)
  - Travel
  - Indirect costs (f&a)

- **Personnel**
  - Team of 7 evaluators with varying levels of expertise and skills in evaluation related areas in consultation with project staff at the Louisville Metro Department of Public Health and Wellness

- **Time Line**
Time Line

Time Line for completing evaluation data collection
Start date: March 19, 2010
End date: March 18, 2012

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The LPPW Evaluation Team (in no particular order!)
- Richard Wilson, SDc
- Melissa Schreck, MEd
- Tiffany Robinson, MPH
- John Myers, PhD
- Makeda Harris, MPA
- Whitney Kirzinger
- Diane Watts Roy, PhD

I couldn’t do this without you, thank you!