

# DIY Series: Performance Measures

## Laurin Kasehagen, PhD

Senior MCH Epidemiologist / CDC Assignee to CityMatCH  
Adjunct Assistant Professor in Pediatrics  
University of Nebraska Medical Center

## Michael Kogan, PhD

Director, Office of Data and Program Development  
US Dept of Health and Human Services  
Health Resources and Services Administration  
Maternal and Child Health Bureau



## Workshop Goals

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- **Recognize** the **utility of logic models** for program planning
- **Develop** **strong program objectives** that can be associated with high quality performance measures
- **Develop** high **quality, measureable performance measures** that maximize the potential for meaningful data reporting
- **Identify** **sources of data** for performance measures

## Activity #1: What is a logic model?

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- Individual work
- Write 3 answers to each statement on post-it notes, one answer per note
- Post on your table's flip chart
- Read each other's ideas
- 2-3 minutes
  
- Questions:
  - What stands out?
  - What do you notice?
  - What are your experiences developing and using logic models?
  - 3-5 minutes

## What is a logic model?

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A logic model is . . .	A logic model is NOT . . .

## Logic model is . . . Is not . . .?

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A logic model is . . .	A logic model is NOT . . .
A chart	REALITY
A picture of a program at a point in time	New
A framework that describes the relationships between investments, activities and results	An evaluation model or method
Required by funders	Easy to develop

## A logic model is . . .

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- A depiction of a program showing
  - What the program will do, and
  - What it hopes to accomplish
- A series of "if-then" relationships that, *if implemented as intended*, lead to the desired outcomes
- The core of program planning and evaluation

## Logic models . . .

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- Are known by many other names
  - Theory of change
  - Program map
  - Program action
  - Program logic
  - Conceptual map
  - Model of change

■ *If you don't know where you're going, you might wind up someplace else.*  
-Yogi Berra

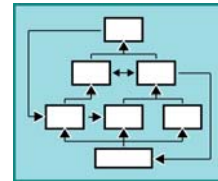
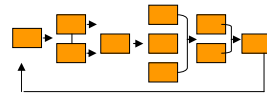
## Logic model benefits

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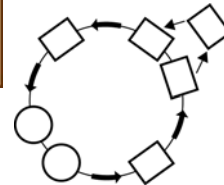
- Provides a common language
- Helps differentiate between "what we do" and "results"
- Increases understanding about program
- Guides and helps focus work
- Leads to improved planning and management
- Increases intentionality and purpose
- Helps to identify important variables to measure
- Increases communication and team work
- Is often required . . . Need we say more?

## What does a logic model look like?

- Graphic display of boxes and arrows; vertical or horizontal
  - Relationships, linkages
- Any shape possible
  - Circular, dynamic
  - Cultural adaptations; storyboards
- Level of detail
  - Simple
  - Complex
- Multiple models
  - Multi-level programs
  - Nested programs
  - Multi-component programs



Inputs	Outputs	Outcomes
1		1a b
2		2a b c
3		
4		3a b



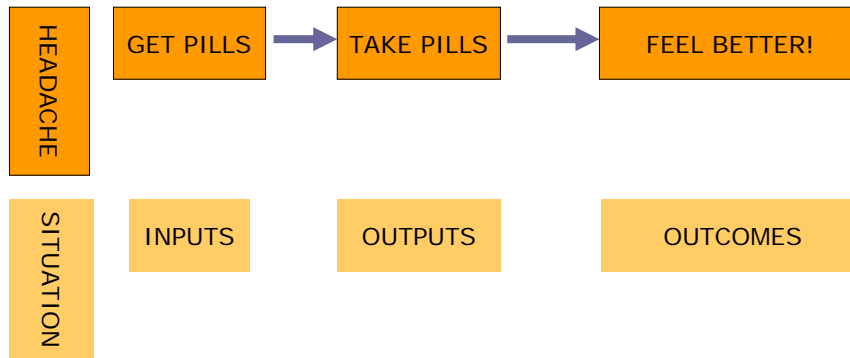
Adapted from the University of Wisconsin-Extension, Program Development and Evaluation

## Logic Model: The simplest form

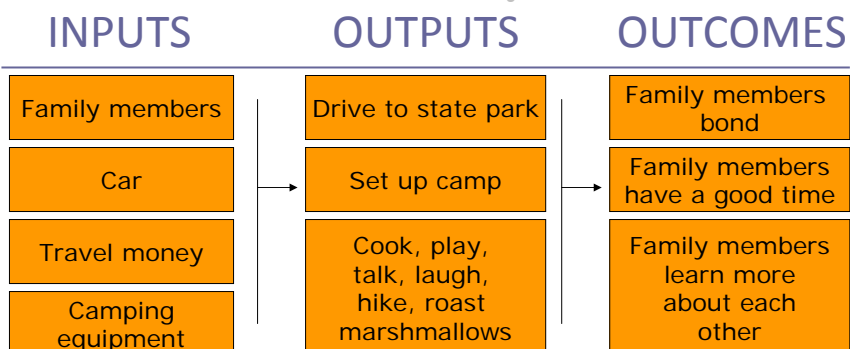


- The logic model can be seen as an expression of the program's goals and objectives
  - **Goals** are most often reflected in the target population and outcomes columns
  - **Objectives** are most often reflected in the activities, outputs and outcomes columns

## Everyday example: **HEADACHE**



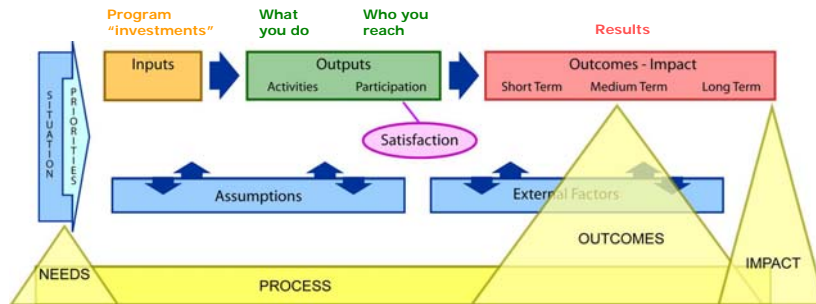
## Everyday example: **Family Vacation**



### □ Fits criteria

- Simple
- Conveys the main elements/components of the “program”
- Indicates how activities and outcomes are related
- Fits on a cocktail napkin

In a more complicated form, the logic model can be expanded to depict an integrated snapshot of the whole program



## Evaluation

### Needs/asset assessment:

What are the characteristics, needs, priorities of target population?

What are potential barriers/facilitators?

What is most appropriate?

### Process evaluation:

How is program implemented?

Fidelity of implementation?

Are activities delivered as intended?

Are participants being reached as intended?

What are participant reactions?

### Outcome evaluation:

To what extent are desired changes occurring? For whom?

Is the program making a difference?

What seems to work? Not work?

What are unintended outcomes?

## Activity #2: Creating a Logic Model

- Break into groups of 3-4 at your tables
- Using the logic model cards, place items in the correct category:
  - Inputs: resources
  - Outputs: activities, participants
  - Outcomes: Short-, intermediate-, long-term
- Come to a group consensus
- Mill around and look at the other logic models
- 7-10 minutes
- Discuss reasoning behind placement, noting variations, simple to complex, etc.

## Defining the Situation: Critical first step in logic model development

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- What **problematic** condition exists that demands a **programmatic** response?
  - Why does it exist?
  - For whom does it exist?
  - Who has a stake in the problem?
  - What factors affect the problem – both risk and protective
  - What can be changed?
- If incorrectly understood or identified, everything that flows from the “situation” will be wrong
  - Review research, evidence, knowledge-base
- Traps:
  - Assuming we know cause of the problem: symptoms / marker vs. root causes – e.g., PNC
  - Framing a problem as a need – e.g., “Communities need leadership training” -- Precludes discussion of nature of the problem: What is the problem? Whose problem? Leads one to value provision of the service as the result – is the service provided or not?

## Development of a logic model

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- Determine purpose of logic model
  - Who will use it?
  - For what?
- Involve others
- Set boundaries of logic model
  - Level of specificity
  - Fits on the size of a cocktail napkin
- Understand the situation
- Explore research, knowledge base, what others are doing, what others have done

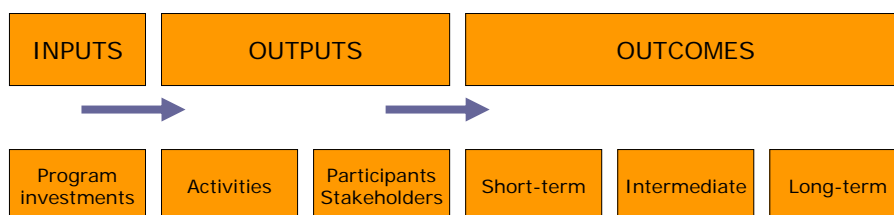
## Assumptions

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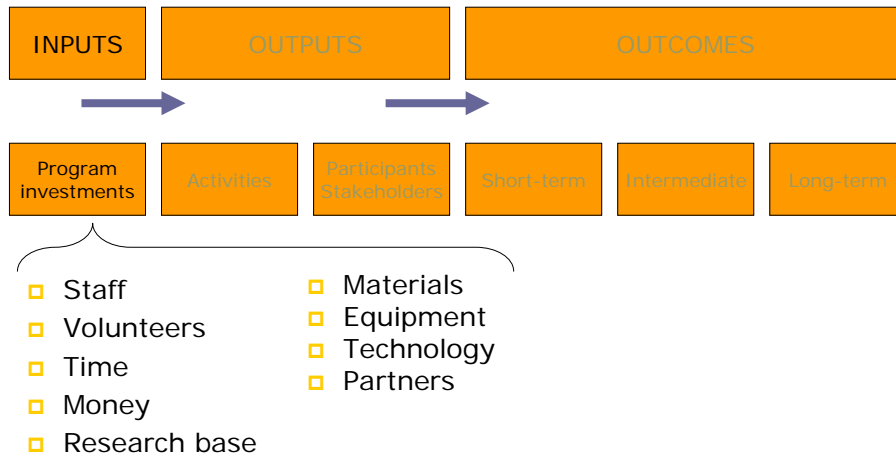
- Assumptions underlie much of what we do
- These underlying assumptions often hinder success or produce less-than-expected results
- One benefit of logic modeling is that it helps us make our assumptions explicit

## The logic chain showing what the program intends to accomplish

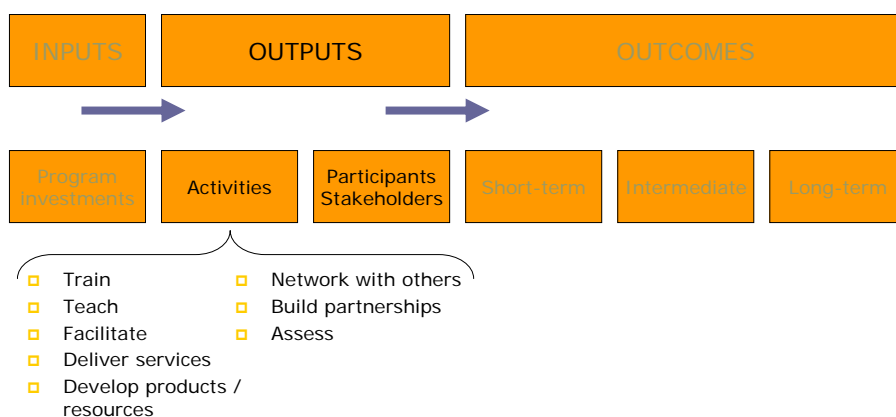
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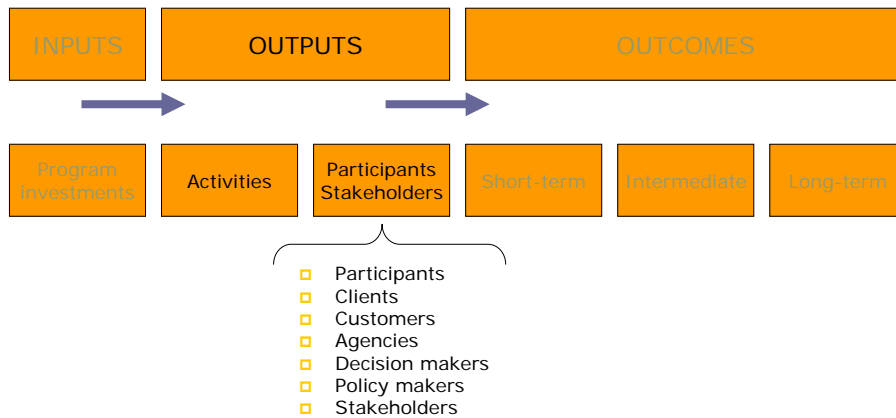
## INPUTS: The logic chain showing what the program intends to accomplish



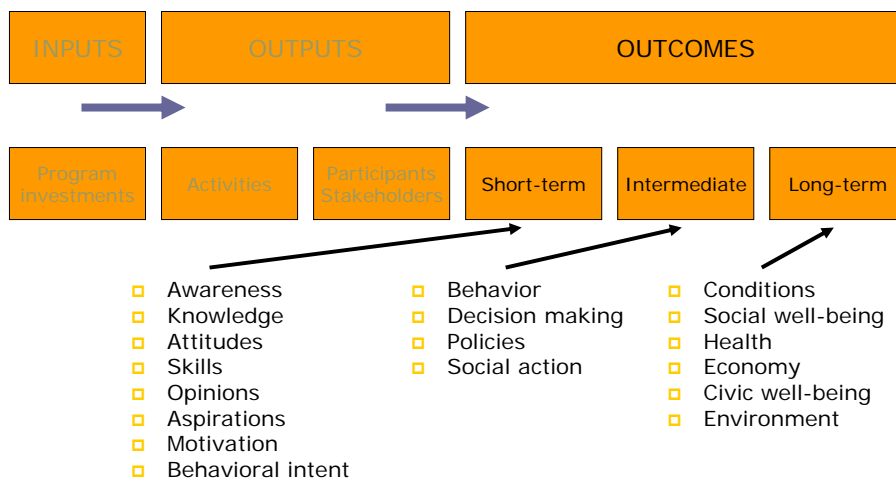
## OUTPUTS: The logic chain showing what the program intends to accomplish



## OUTPUTS: The logic chain showing what the program intends to accomplish



## OUTCOMES: The logic chain showing what the program intends to accomplish



## Not usually represented in a logic model

- Situational statement
- Priorities
- List of assumptions
- List of external factors
- Evaluation methods

## Activity #3: Logic Model Lingo

- Pair up
- Determine whether each element on the logic model lingo list is an
  - Input - resources
  - Output – activity, participation
  - Outcome
    - Short-term, learning
    - Intermediate-term, action
    - Long-term, ultimate benefit
- Be prepared to share and defend your decision!
- 10-15 minutes

### Discussion Points for Activity #3

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- How easy was it to distinguish between inputs, outputs, and outcomes?
- How did you determine whether something was an output or an outcome?
- How did you distinguish short-term, intermediate-term, and long-term outcomes?
  - What are some considerations in determining whether an outcome is short-term, intermediate, or long-term?

### Questions to ask yourself about your program

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- What is your program?
- What does your program do?
- What need is addressed by your program?
- Who is served?
- How do participants / clients benefit?
- Will you be able to demonstrate change?
- How would you know that your program is a success?
- When do you know that you need to change the program?

## Check your program logic model . . .

- Is it meaningful?
- Does it make sense?
- Can it be done?
- Can it be verified?

## Summing it up: Logic models position programs for success

- Program design and planning
  - Planning tool
  - Examine best practice research
- Program implementation
  - Core of a focused management plan
  - Monitor and improve programming
- Program evaluation and strategic reporting
  - Inform progress towards goals
  - Advocate for program approach
  - Teach program stakeholders

## Remember!

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- It's a theory . . . Doesn't have to be perfect or right . . .
- Represents intention, not reality
- Pay attention to inputs and outputs
- Challenge of causal attribution
  - Many factors influence process and outcomes
  - Pay attention to external factors, assumptions

## Goals ----- Objectives ----- Measures

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PROGRAM GOAL

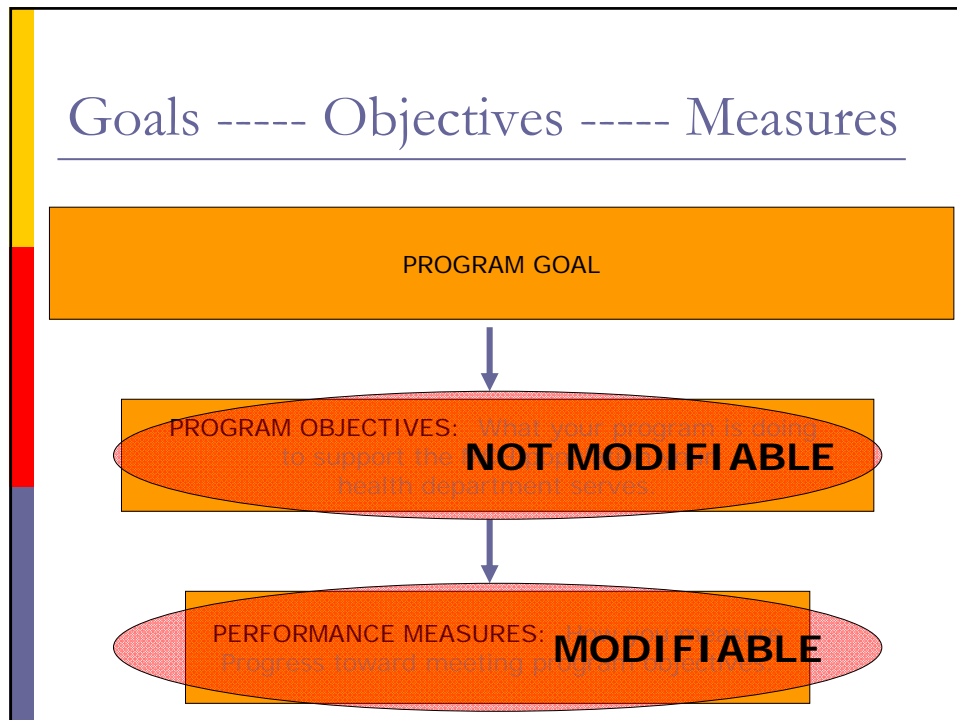


PROGRAM OBJECTIVES: What your program is doing to support the MCH population your health department serves.



PERFORMANCE MEASURES: How you measure progress toward meeting program objectives.

## Goals ----- Objectives ----- Measures



## Objectives often are reflected in logic model outcomes

- Outcomes
  - Measurable changes that occur in the target community or population beyond the point of service or intervention
  - Define the logical and desired results of the services the program provides
- Measuring outcomes is a way to detect whether your program is making a difference
- Long-term outcomes may need to be assessed using shorter term indicators
- Limit the number of outcomes so that you can focus resources

## High quality program objectives have 4 criteria . . .

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- Criterion #1: **Relevance**
  - The objective should reflect the *overall goal of the program*
- Criterion #2: **Applicability**
  - The objective should be directly applicable to the *specific activities* that are being conducted through the program
- Criterion #3: **Focus**
  - The objective should be a simple statement, limiting the number of constructs, and include both process and outcome
- Criterion #4: **Measurability**
  - The concepts in the objective should *lend themselves to feasible measurement*

## Example: Reducing Risks to Teen Drivers

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- 1 in 5 new drivers experiences a collision during first year
- **Highest risk is during 1<sup>st</sup> month of driving**
- After 6 months, risk drops to twice the risk of adults
- After 3-4 years, risk is more similar to adults
- Why?
  - Developmental issues: teens tend to overestimate their abilities and misperceive risky situations
  - Environmental influences: media, peers, parents
  - Overall, inexperience

## Graduated Drivers License (GDL)

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- Place restrictions on driving to minimize risky situations while allowing new driver to gain critical experience
- Highest risk situations:
  - Teen/peer passengers
  - Night driving

## Factors that decrease effectiveness of GDL

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- Night restrictions start too late
- Passenger limits that still allow for one teen passenger
- Exceptions made for work / activities
- Lack of DMV involvement
- Low compliance / enforcement
- Parental restrictions that undermine implementation of GDL

## Factors that increase effectiveness of GDL

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- Conditional advancement
- Education about GDL and its rationale
- Parent involvement
- Type of restrictions: e.g., earlier restrictions on night driving
  
- Today's example: **Increasing parent involvement to achieve higher impact of GDL**

## Program objective example #1: Improve parents knowledge of teen driver risks

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- Criterion #1: **Relevance**
  - The objective should reflect the *overall goal of the program* -- Increasing parent involvement to achieve higher impact of GDL
- Criterion #2: **Applicability**
  - The objective should be directly applicable to the *specific activities* that are being conducted through the program
- Criterion #3: **Focus**
  - The objective should be a simple statement, limiting the number of constructs, and include both process and outcome
- Criterion #4: **Measurability**
  - The concepts in the objective should *lend themselves to feasible measurement*

## Program objective example #2: Promote the use of parent/teen contracts with restrictions on night driving and # of passengers

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- Criterion #1: **Relevance**
  - The objective should reflect the *overall goal of the program* -- Increasing parent involvement to achieve higher impact of GDL
- Criterion #2: **Applicability**
  - The objective should be directly applicable to the *specific activities* that are being conducted through the program
- Criterion #3: **Focus**
  - The objective should be a simple statement, limiting the number of constructs, and include both process and outcome
- Criterion #4: **Measurability**
  - The concepts in the objective should *lend themselves to feasible measurement*

## Activity #4: Subjective objective?

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- Pair up!
  - Choose 3 logic models
  - Create 2-3 objectives for each logic model
  - Make sure that your objectives fulfill the criteria
    - Relevance
    - Applicability
    - Focus
    - Measurability
- Use templates provided
- Report back in 10 minutes!

## Discussion Points for Activity #4

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- What did you learn?
- How did you decide if the objective met each of the 4 criteria?
- From the outcomes in the logic models, how easy was it to define objectives?
- How sure are you that you guessed the objectives correctly?
  
- Normally, the objectives of a program are set by people external to the program (e.g., funders) . . .
  - What are your experiences with “misaligned” or “mismatched” program objectives and outcomes?
  - How did you handle that situation?

## Performance Measures

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- Are measurable indicators used to determine how well objectives are being met
  
- Indicators need to be able to demonstrate
  - How progress will be assessed
  - How much progress will constitute success
  - How it will be known if an objective or part of an objective has been achieved
  
- **Baseball is ninety percent mental and the other half is physical. – Yogi Berra**

## Align performance measures with objectives

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- Each performance measure should be aligned with the program objective under which it falls
- If a performance measure is not related to the objective under which it falls, it will not be useful for measuring the processes used to reach the objective or the outcomes associated with the objective

## A comprehensive set of performance measures . . .

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- Addresses both the
  - **Process** of working towards the objective, and the
  - **Outcomes** related to meeting the objective
- **Objective:** *Increase student knowledge of the benefits of eating fruits and vegetables*
  - **Performance Measures:**
    - *80% of teachers in the school will attend recommended workshops on healthy eating during year 1* [process measure]
    - *70% of teachers who attend workshops will develop lesson plans that incorporate benefits of eating fruits and vegetables during year 1* [process measure]
    - *By year 3, at least 80% of students will increase the number of "healthy facts" they know about fruits and vegetables* [outcome measure]

## Performance measures measure . . .

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- Achievement
- Accomplishment
- Change in achievement
- Change in accomplishment
- Comparison of achievement and accomplishment

## 4 components of performance measures

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- Specify
  - **What** will change?
  - **How much** change do you expect?
  - **Who** will achieve the change?
  - **When** will the change take place?
  - Sometimes, **Where** has to be specified . . .
- Examples:
  - The percentage of formerly homeless individuals who remain housed in HUD permanent housing projects for at least 6 months will be 70 percent.
  - Increase the percent of women in the Healthy Start program beginning prenatal care in the first trimester from its present level of 70% to 75% one year from now.

## Performance measure problems

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- No action verb
  - Example: *Opportunities to learn about nutrition*
  
- Not measurable
  - Example: *Collaborative connections will be maintained*
  
- Activities versus performance measures
  - Example: *Provide a workshop for parents*

## Performance Measure Example: Achievement / Accomplishment

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- *75% of 5<sup>th</sup> grade students participating in a weekend tutoring program will pass the annual state test of achievement within 12 months of beginning the tutoring program*
  
- *96% of attendees of this workshop will be able to develop a logic model by 6:00 pm today*

### Performance Measure Example: Change in achievement / accomplishment

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- *By 2011, the % of 5th grade students participating in a weekend tutoring program who pass the annual state test of achievement within 12 months of beginning the tutoring program will increase from 75% to 80%*
- *By 6:00 pm today, the % of attendees of this workshop who will be able to develop a logic model will increase from 0% to 96%*

### Performance Measure Example: Comparison of achievement / accomplishment

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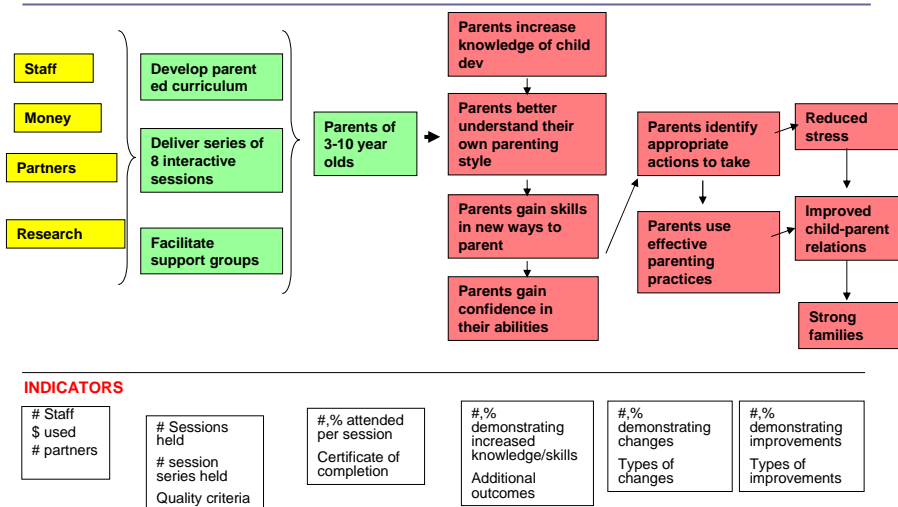
- *College students who attend a smoking cessation workshop and receive coupons for smoking cessation aids (the patch) will report a larger decrease in smoking activities than their peers who only attend the workshop*
- *The percentage of African American women who report that their babies sleep only in the back sleeping position will increase by at least 5% in 2010*

## Typical activity indicators to track

- Amount of products, services delivered
- # / type of customers / clients served
- Timeliness of service provision
- Accessibility and convenience of service
  - Location; hours of operation; staff availability
- Accuracy, adequacy, relevance of assistance
- Courteousness
- Customer satisfaction

E.g.:  
 # of clients served  
 # of consultations  
 # of workshops held  
 # of attendees  
 # of referrals  
 Quality of service

## Parent Education Example: Indicators



From: University of Wisconsin-Extension, Program Development and Evaluation

Evaluation Questions	
1) What was the process of action plan development and implementation? What worked and did not work? What were stumbling blocks along the way?	2) What did the experiences on the Action Learning Collaborative teams mean to the people involved? What is the relationship of the meanings to intended outcomes?
Sources of Information	
<ul style="list-style-type: none"> <li>•Diagram/outline the action planning process</li> <li>•Document review of completed MAPS exercises</li> <li>•Focus groups to gather qualitative info about development and implementation process</li> </ul>	<ul style="list-style-type: none"> <li>•Focus groups</li> <li>•Domains taken from Wilder and Self-Assessment</li> <li>•Call and meeting evaluations (especially open-ended questions)</li> </ul>
Indicators	
<ol style="list-style-type: none"> <li>1.By the end of the first 12 months in the ALC, 80% of the ALC teams will define a common vision and purpose of the team.</li> <li>2.By the end of the 18-month ALC, 80% of the ALC teams will create a logic model and indicators.</li> </ol>	<ol style="list-style-type: none"> <li>1.By the end of the 18-month ALC, 80% of the ALC team members will report an increase in knowledge about racism.</li> <li>2.By the end of the 18-month ALC, 80% of the ALC team members will report an increase in knowledge about disparities in infant mortality.</li> <li>3.By the end of the 18-month ALC, 30% of the ALC team members will report the use of collaborative methods on other projects / work within their organization.</li> </ol>

## Remember! Activities are NOT performance measures

- If you read a performance measure and think to yourself, “yes, we did that!” then that “performance measure” is almost certainly an activity

## Activity #5: Troubleshooting performance measures

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- Pair up!
- With your partner, troubleshoot the performance measures on the worksheet using the criteria:
  - **What** will change?
  - **How much** change do you expect?
  - **Who** will achieve the change?
  - **When** will the change take place?
  - **Where** does the change take place? (if applicable)
- Report back in 10-15 minutes

## Discussion Points for Activity #5

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- What did you learn?
- How easy was it to write an indicator that fulfilled the 4 components of a performance measure?
- What did you find challenging?
- What are the potential landmines in being specific?

## So, why do we need data?

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- The process of measuring performance requires the use of statistical evidence to determine progress toward specific defined organizational objectives.
- Performance measures have to be reportable.

## What data can we use for performance measures?

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- Vital statistics data
  - Available at the national, state, and county level (sometimes)
- Examples of performance measures using vital statistics data
  - The rate of birth (per 1,000) for teenagers aged 15 through 17 years.
  - Percent of infants born to pregnant women receiving prenatal care beginning in the first trimester.
  - Percentage of women who smoke in the last three months of pregnancy (2003 revised certificate only).

## Sources of data – part 2

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- National Survey of Children’s Health and the National Survey of Children with Special Health Care Needs
  - Available at the national and state level.
- Examples of performance measures using these surveys
  - Percentage of children, ages 2 to 5 years, receiving WIC services with a Body Mass Index (BMI) at or above the 85th percentile.
  - The percent of children with special health care needs age 0 to 18 who receive coordinated, ongoing, comprehensive care within a medical home.
  - The percent of children with special health care needs age 0 to 18 whose families have adequate private and/or public insurance to pay for the services they need.

## Sources of data – part 3

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- National Immunization Survey
  - Available at the national and state level.
- Examples of a performance measure using this survey
  - Percent of 19 to 35 month olds who have received full schedule of age appropriate immunizations against Measles, Mumps, Rubella, Polio, Diphtheria, Tetanus, Pertussis, Haemophilus Influenza, and Hepatitis B.

## Sources of data – part 4

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- Annual State data to the National Newborn Screening and Genetic Resource Center.
  - Available at the state level.
- Examples of a performance measure using this system.
  - The percent of screen positive newborns who received timely follow up to definitive diagnosis and clinical management for condition(s) mandated by their State-sponsored newborn screening programs.

## Sources of data – part 5

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- CDC's Pediatric Nutrition Surveillance System (PedNSS)
  - Available at the state level.
- Examples of a performance measure using this system
  - The percent of mothers who breastfeed their infants at 6 months of age.

## How do you choose which data source for a performance measure?

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- Example of possible data sources for breastfeeding:
  - The National Immunization Survey
  - The National Survey of Children's Health
  - Vital statistics for those states using the 2003 revision of the birth certificate
  - Ross Laboratories surveys on breastfeeding
  - PRAMS (Pregnancy Risk Assessment Monitoring System)
  - State WIC data
  - CDC's Pediatric Nutrition Surveillance System

## How do you choose which data source for a performance measure?

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- Can the data source address your EXACT performance measure?
  - If the measure was % of women breastfeeding at 6 months, you couldn't use vital statistics.
- How often do you need to report on the performance measure?
  - If it's yearly, then you couldn't use the National Survey of Children's Health.
- Are there any issues with the data source that might affect perception of the results?
  - Ross Laboratories makes infant formula.

## How do you choose which data source for a performance measure?

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- At what level do you need the data, e.g. local, county or state?
  - If it's county, then you can't use the National Immunization Survey or the National Survey of Children's Health.
- Do you need to include the whole population?
  - Vital statistics data theoretically encompasses the whole population, therefore, you are not faced with issues of sampling errors.
  - Using survey data may provide less reliable estimates in some cases, and will have greater confidence intervals in all cases compared to vital statistics data.

## Methods of data collection

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### SOURCES OF INFORMATION

- Existing data
  - Program records, attendance logs, etc.
  - Pictures, charts, maps, pictorial records
- Program participants
- Others: key informants, non-participants, proponents, critics, staff, collaborators, funders, etc.

### DATA COLLECTION METHODS

- Survey
- Interview
- Test
- Observation
- Group techniques
- Case study
- Photography
- Document review
- Expert or peer review

From: University of Wisconsin-Extension, Program Development and Evaluation

## Data Collection Plan

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Questions	Indicators	Data collection			
		Sources	Methods	Sample	Timing

From: University of Wisconsin-Extension, Program Development and Evaluation

## Issues with data for performance measurement

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- The mere measurement of changes in outcomes over a period of time does not establish attribution.
  - For example, just because the percent of women breastfeeding went up, it doesn't mean it had anything to do with your program.
- The data may not be available as frequently as you need it.
  - For example, the NSCH is only available every 4 years.
- The data may not be reliable
  - E.g. maternal conditions from the birth certificate.

## Issues with data for performance measurement – part 2

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- The staff may lack the tools to analyze and report the data accurately.
- The available data may not match the performance measure.
  - For example: The percent of women who smoke in the six months before pregnancy.
    - There is no known dataset on this exact issue.

## Scenario: Sarah and the Prevention First Program

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- Sarah is the Program Director of Prevention First
- Prevention First is part of a large multi-agency collaborative
- Community has:
  - High mobility
  - Low income earned from temporary / seasonal / part-time employment
  - Limited/no English
  - Several immigrant groups with significant populations
  - Some of the immigrant groups prefer traditional healers and know little about western approaches to preventive medicine

## Scenario: Sarah and the Prevention First Program, continued

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The program intends to

- bring together the diverse resources and expertise present in the collaborative
- facilitate the use of preventive health care by this community
- increase public awareness of the many free, non-emergency health and dental services available in the community

## Activity #6: Create a logic model with objectives, performance measures, and data sources

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- Break into groups of 3-4
- Using the logic model cards, create a logic model to illustrate a simplified picture of the components and relationships of the program
- Write a few clear objectives that explain what the program is doing to support the overall goal
- Write a few, specific performance measures to demonstrate how progress will be measured
- Brainstorm about the types of data / data sources you could use
- Be prepared to report back / present your work in 30 minutes!

## Resources available to you for this activity

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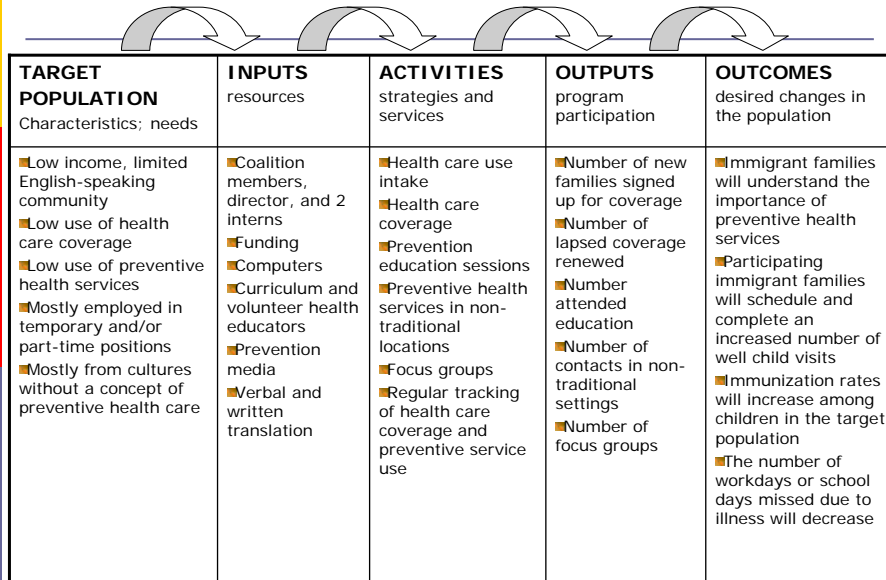
- Logic Model components and worksheet, Program Objective / Performance Measure worksheet, Data Collection worksheet
- Questions you might want to consider . . .
  - Who does the program serve?
  - What problem does the program address?
  - What resources are available to the program?
  - What does the program do in its day-to-day operations?
  - What do participants “get” or “do” as a part of program participation?
  - Given the activities / outputs, what outcomes could the program hope to achieve?
  - What data could you use to show achievement? Accomplishment?

## 1 Possible Solution & Configuration . . .

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- Prevention First Program Goals and Objectives
  - **Goals**
    - Immigrant families will understand the importance of prevention.
    - Immigrant families will use preventive health services
  - **Objectives**
    - Within the first 6 months of the project, we will conduct a focus group with immigrant parents to explore possible barriers to the use of prevention services.
    - By the end of year 1, we will have made presentations to staff of at least 4 agencies serving immigrant families to promote preventive health services and encourage referrals.
    - By the end of year 1, participating immigrant families will schedule and complete an increased number of well-child visits over base line.

## Prevention First Logic Model Example



## Acknowledgements

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- Douglah M. *Developing a Concept of Extension Program Evaluation*. University of Wisconsin-Extension. 1998. Publication G3658-7.
- Taylor-Powell E., Steele S., Douglah M. *Planning a Program Evaluation*. University of Wisconsin-Extension. 1996. Publication G3658-1.
- Innovation Network, Inc. *Evaluation Plan Workbook*. Website: <http://www.innonet.org/>, accessed February 4, 2009.

## Resources

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- University of Wisconsin-Extension
  - Evaluation and Logic Models--  
<http://www.uwex.edu/ces/pdande/> , accessed July 13, 2009.
- Innovation Network, Inc. Website:  
<http://www.innonet.org/>, accessed February 4, 2009.
- U.S. Department of Health and Human Services. Centers for Disease Control and Prevention. Office of the Director, Office of Strategy and Innovation. *Introduction to Program Evaluation for Public Health Programs: A Self-Study Guide*. Atlanta, GA: Centers for Disease Control and Prevention, 2005.
- CDC Evaluation Working Group
  - <http://www.cdc.gov/eval/index.htm>

## Contact Information

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Laurin Kasehagen  
Robinson, PhD, MA  
CityMatCH  
Senior MCH Epidemiologist / CDC  
Assignee to CityMatCH  
Adjunct Assistant Professor in  
Pediatrics  
University of Nebraska Medical  
Center  
Department of Pediatrics  
982170 Nebraska Medical Center  
Omaha, NE 68198-2170  
402-561-7523  
lkasehagen@unmc.edu

Michael D. Kogan, PhD  
HRSA/MCHB  
Director, Office of Data and  
Program Development  
5600 Fishers Lane, Room 18-41  
Rockville, MD 20857  
301-443-3145  
mkogan@hrsa.gov

