

Monitoring and Evaluation

The Colorado Health Foundation
Linkage Lab

May 12, 2016

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Session objectives

- By the end of this session, you will be able to:
 - Develop and use **logic models** to visualize theories of change and inform evaluation of your LTSS programming
 - Develop an **M&E plan** for your LTSS programming

Monitoring vs. evaluation

- **Monitoring:** The continuous and systematic process of obtaining, analyzing, and interpreting data (information) regarding program or service implementation and progress toward program or service objectives
- **Evaluation:** The systematic collection, analysis, and interpretation of data to determine the merit, worth, or value of a program or service, including whether it has met its objectives

Some key benefits of M&E

- Facilitates service improvements
 - Helps make the case for service value to health sector partners
 - Agency reach in the community
 - Better patient experience of care
 - Improved patient/client health outcomes
 - Lower costs to health care system
- (Shier et al., 2013)



- Provides evidence that organizations are delivering on promises
- Informs decisions about service (dis)continuation and expansion
- Informs the field about promising practices and policies

Before conducting M&E, it is important to have...

- A **logic model** that lays out the theory of change for the program or service to be monitored and evaluated
- An **M&E plan** that is agreed upon among the key stakeholders responsible for program/service delivery and M&E implementation

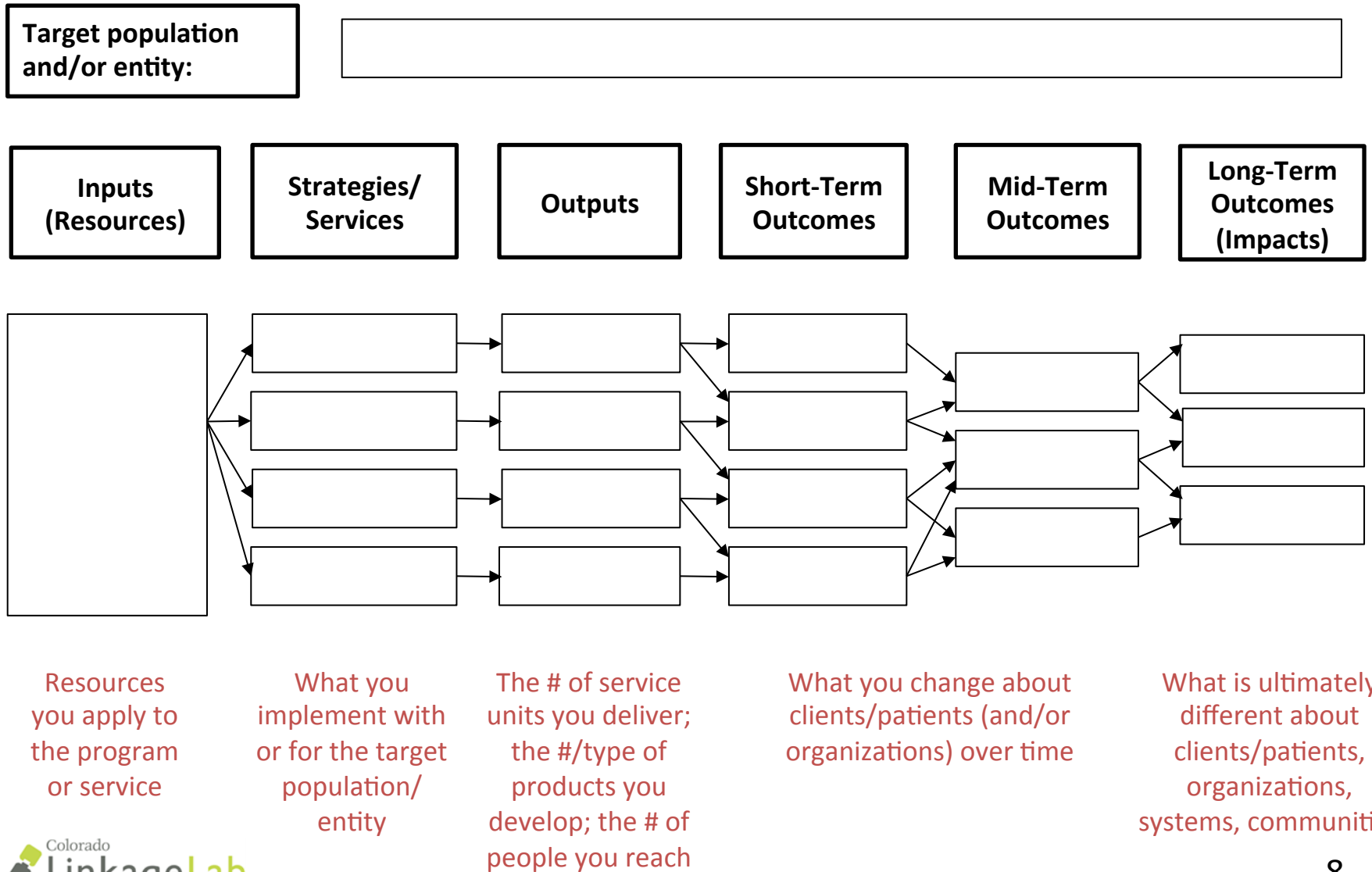
What is a logic model?

- A table or diagram of a program or service that shows the links between:
 - what resources will be brought to bear
 - what strategies or services will be implemented
 - and what will be changed
 - among a target population and/or entity
- Provides a visual representation of the theory of change that underlies the program or service

Theory of change

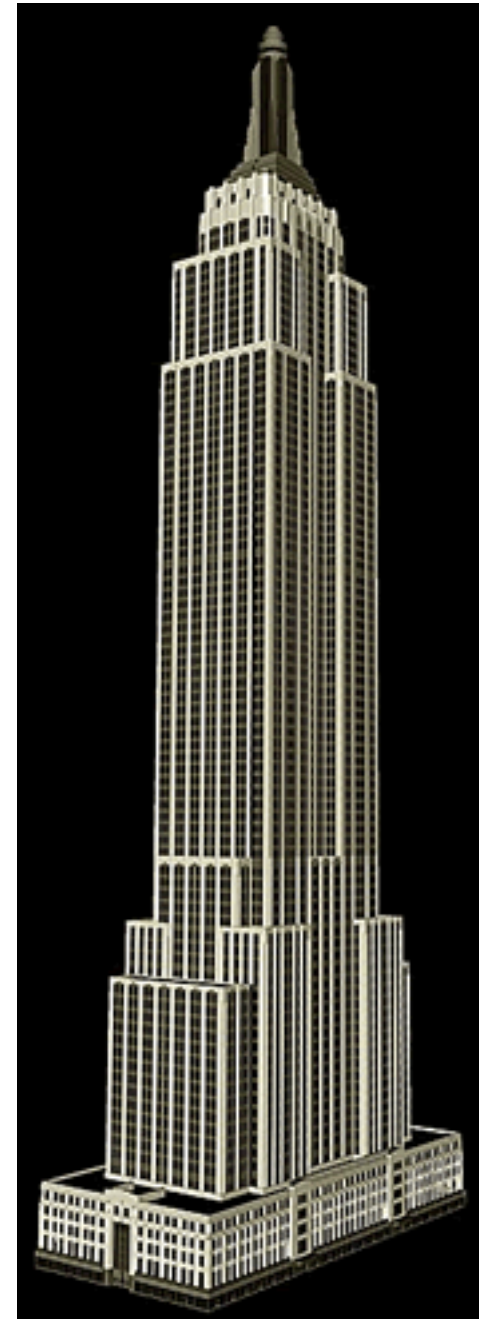
- Hypothesis that is essential to both planning and evaluating a program or service; addresses:
 - Ultimately, what does the program/service seek to achieve?
 - What are the causal pathways that will lead to the desired outcomes?
- Can be based on:
 - Formal theories (e.g., see NCI, 2005)
 - Research and case studies
 - Practical experience

Common logic model format

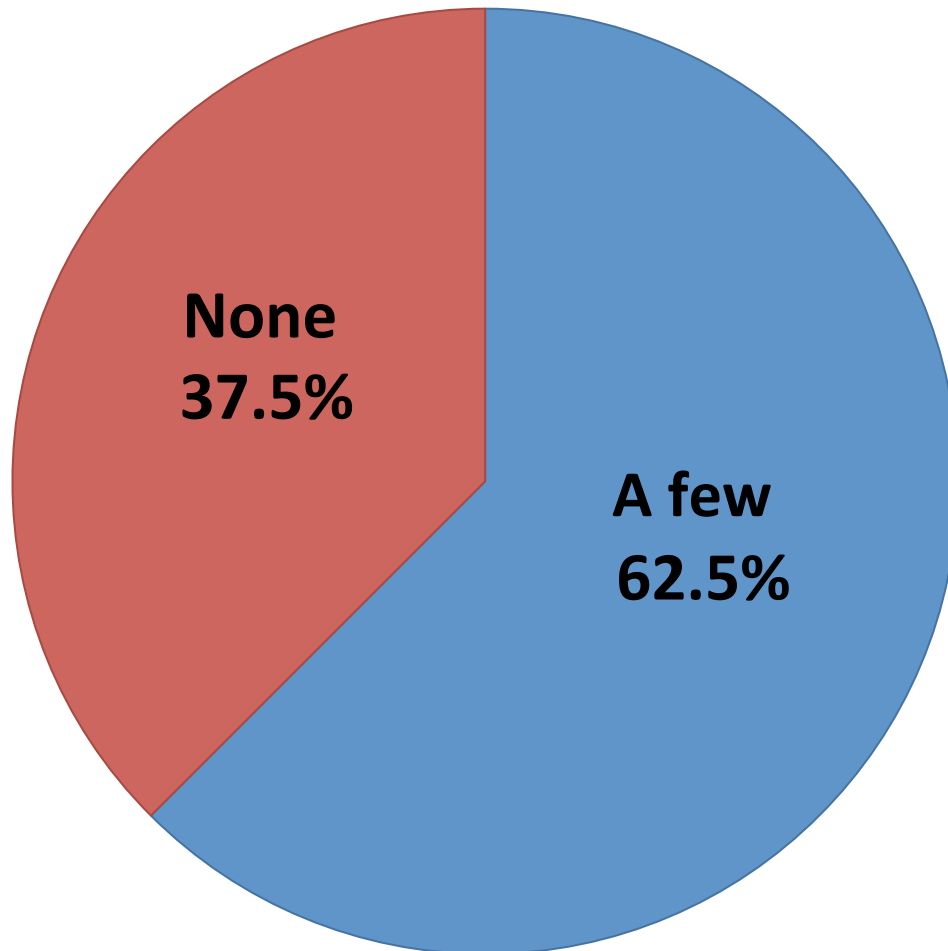


“The logic model, like an architect’s scale model of a building, is not meant to be a detailed ‘blue-print’ of what needs to happen. It is a place to lay out the major strategies, to see how they fit together and whether they can be expected to ‘add up’ to the changes... stakeholders want to see.”

(Little et al., 2002: 17)



CO LL organizations: How many of your major services have a logic model?*



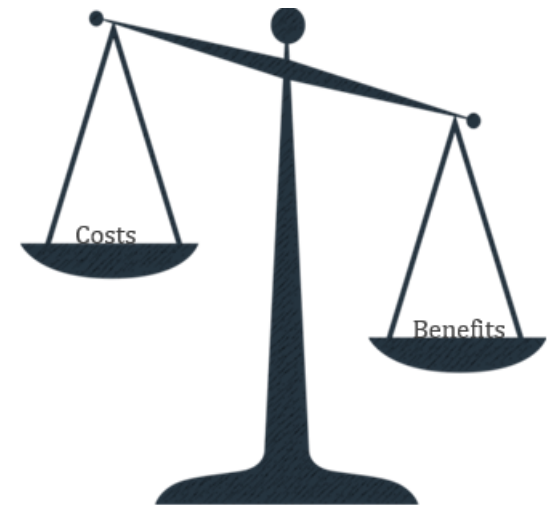
*N = 8;

Answer options:

None, A few, About half,
Most, All

Logic modeling: costs vs. benefits

- Robust and flexible process
- Requires only limited input of human and financial resources
- Many benefits from the **process** and the **product**



Key logic model(ing) uses

- **Planning**
 - Facilitates consensus on and commitment to program/ service purposes and design
- **Evaluation**
 - Indicates what would constitute “success” from process (output) and outcome perspectives
 - Facilitates evaluation plan development
- **Communication**
 - Aids communication with stakeholders

Building the model step by step

Step 1. Define the target population/s or entity/ies

Usually, we then work from “right to left” to:

Step 2. Identify desired outcomes (long-, mid-, short-term)

Step 3. Define inputs, strategies/services, and outputs

Next we:

Step 4. Put model together and assess its strength

Step 5. Review model periodically; revise as needed

Be sure to involve relevant stakeholders in the process!

Step 1. Define the target population(s)/ entity(ies)

- Who or what is the target for change?
 - Patients/clients
 - Family caregivers
 - Health care payer/provider
 - Health system



Step 1. Define the target population(s)/ entity(ies) – cont'd.

- For patients/caregivers, indicate inclusion criteria, e.g.:
 - Age
 - Medicare/Medicaid enrollment
 - Income
 - Chronic illness or qualifying condition
- Indicate overall target number to serve (e.g., per month, year)

Step 2. Identify desired outcomes

- Intended short-term, mid-term, and long-term changes or results among the target population(s) or entity(ies)



Outcomes: LTSS examples

Among patients/clients:

- Positive behavioral and lifestyle changes (e.g., improvement in nutritional habits, increase in medication adherence)
- Decrease in preventable hospital admissions
- Decrease in 30-day hospital re-admissions
- Decrease in ED visits
- Decrease in skilled nursing facility utilization
- Increase in successful transitions from nursing facility to home
- Improvement in quality of life

Outcomes: LTSS examples – cont'd.

Among family caregivers:

- Decrease in perception of burden or stress
- Improvement in quality of life

Among hospitals:

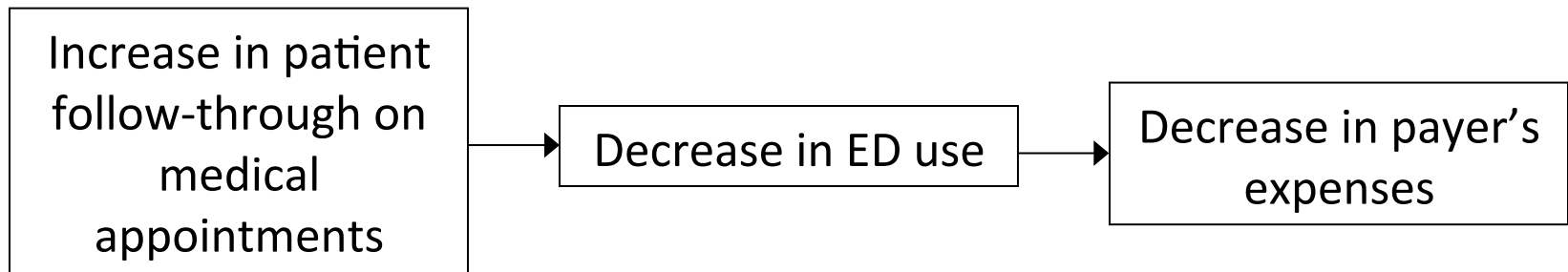
- Reduction in costs
- Enhancement of reputation

Among health plans:

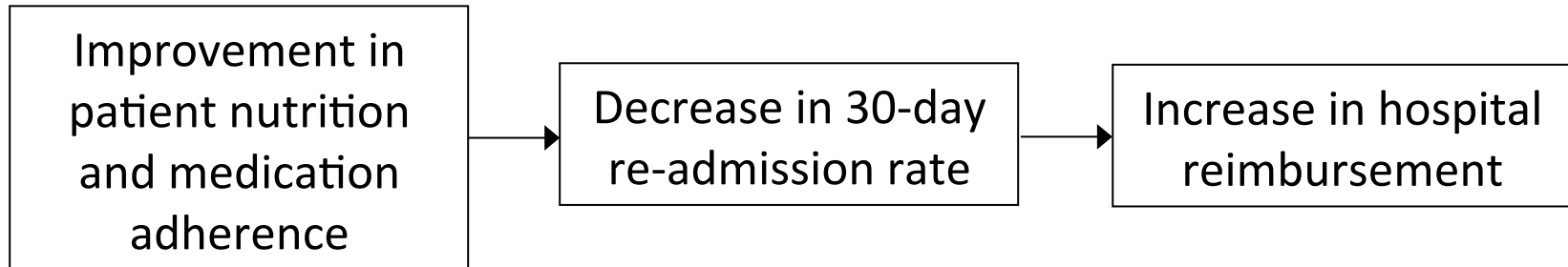
- Decrease in expenses

Outcome chains: examples

Example 1



Example 2



Make desired outcomes as SMART as is feasible

- **Specific**
- **Measurable**
- **Appropriate**
- **Realistic**
- **Time-delineated**

Less SMART	SMARTer
<ul style="list-style-type: none">• Decrease in re-admission rate	<ul style="list-style-type: none">• 20% decrease in 30-day re-admission rate from 2016 to 2018

Which SMART elements are exemplified?



Setting targets

- A **target** is a specific level or rate that you are aiming for, e.g.:
 - “By January 2018, nursing home placement among Medicaid beneficiaries will decline **by 25%**.”
- To set realistic targets:
 - Know your baseline (starting point)
 - Consider existing (external) standards/benchmarks
 - Consider internal and external circumstances
- You may not always be able to set specific targets when you are first developing a logic model

Step 3. Define inputs, strategies/services, outputs

- **Inputs**
 - Resources that will be applied to strategy or service implementation
 - E.g., funding, paid staff, volunteers, in-kind contributions, existing best practice models, etc.
- **Strategies/Services**
 - Summary of strategies and services and key steps in their provision
- **Outputs**
 - Units of services to delivered; products to be created and disseminated; and who will receive each

Outputs vs. outcomes

Outputs	Outcomes
<ul style="list-style-type: none">• Units of services to be delivered• Products to be created/disseminated• Who will participate in or receive each	<ul style="list-style-type: none">• Intended short-term, mid-term, and long-term changes or results among the target population(s) or entity(ies)
<p><u>Example:</u> 4-session in-home coaching in self-care, home safety, and medication adherence with 240 seniors with chronic conditions per year</p>	<p><u>Example:</u> 25% decrease in preventable ER visits from 2016 to 2018</p>
Measured through process evaluation	Measured through outcome evaluation

Exercise: output or outcome?

- Skilled nursing facility utilization decreases by 15% within 12 months
- 5 counseling sessions are provided to each patient's family caregiver
- By December 2017, at least 80% of our healthy meals clients report being “very satisfied” with our meal services
- Patient satisfaction with hospital care increases by 20% by June 2018

Step 4. Put model together and assess its strength

- Put model components in a table or diagram format
- Add arrows to show principal relationships among elements
- Iterate model until consensus is achieved

Step 4. Put model together and assess its strength – cont'd.

- Is the **theory of change** underlying the model coherent?
- How strong is the **evidence for effectiveness** of the model or its characteristics/components?
 - Research literature
 - Your evaluation data
 - Your practical experience
- Does the implementing agency/partnership have the **capacity and resources** to implement the model successfully?

Make the model a good communication tool

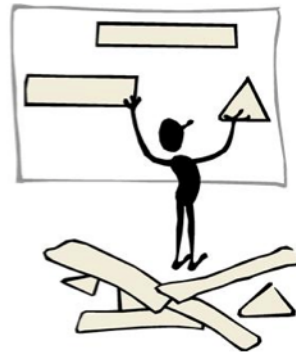


- If multiple target populations or entities, make clear the theory of change for each
- Fit model on one page
- Use readable font size and leave some white space
- Include date model was last updated
- Include key with technical terms and acronyms (as appropriate)
- Consider different versions for different audiences

Step 5. Review model periodically; revise as needed

- Revisit model regularly and update it as needed to reflect:
 - Changes in inputs
 - Mid-course corrections
 - Ability to make desired outcomes “SMARTer”
- Change date on model accordingly
- Consider implications of model updates for evaluation processes

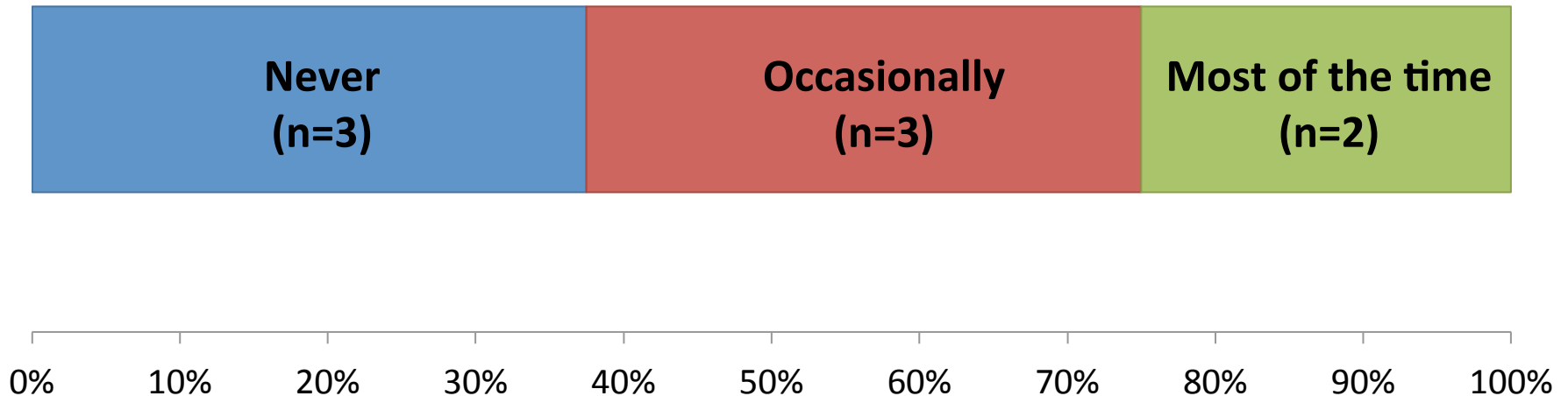
Group Exercise: Develop a Logic Model



Final logic modeling tips

- Involve all relevant stakeholders in model development
- Ensure program staff have copies of model
- Consider: Can model help you communicate about your services with current and potential health sector partners?
- Use model to inform M&E plan development

CO LL organizations: How often do you use logic models to inform evaluation plans for major services?*



* N = 8; Answer options: Never, Occasionally, About half the time, Most of the time, Always

The M&E plan



- Provides answers to **key questions** about M&E efforts

The M&E plan addresses....

What	<ul style="list-style-type: none">• Process and outcome objectives• Evaluation questions• Indicators
How, Where, When	<ul style="list-style-type: none">• Evaluation design• Data sources• Data collection methods• Data collection timing/frequency• Data analysis methods
Who	<ul style="list-style-type: none">• Responsible parties
Why	<ul style="list-style-type: none">• Communication and use plans

The WHAT of the M&E Plan

“You do work. When you evaluate how well you do what you do, it’s called ***process evaluation***.

Your work has results. When you evaluate the results of your work, it’s called ***outcome evaluation***.”

(Festen & Philbin, 2007: 14)

Process and outcome objectives: WHAT you want to achieve with respect to the program/service

Process evaluation addresses	Process objectives
<ul style="list-style-type: none">• Whether the target population is reached with services• Whether the intended services are provided as planned	In the logic model , see: <ul style="list-style-type: none">• Target population• Outputs (= Process objectives)
Outcome evaluation questions	Outcome objectives
<ul style="list-style-type: none">• Whether the intended changes or results are achieved in the target population(s) or entity(ies)• Whether observed changes or results are due to the services provided• What other factors influenced observed outcomes	In the logic model , see: <ul style="list-style-type: none">• Outcomes (outcome objectives)

Process and outcome questions: WHAT you want to learn through M&E

Examples of process evaluation questions:

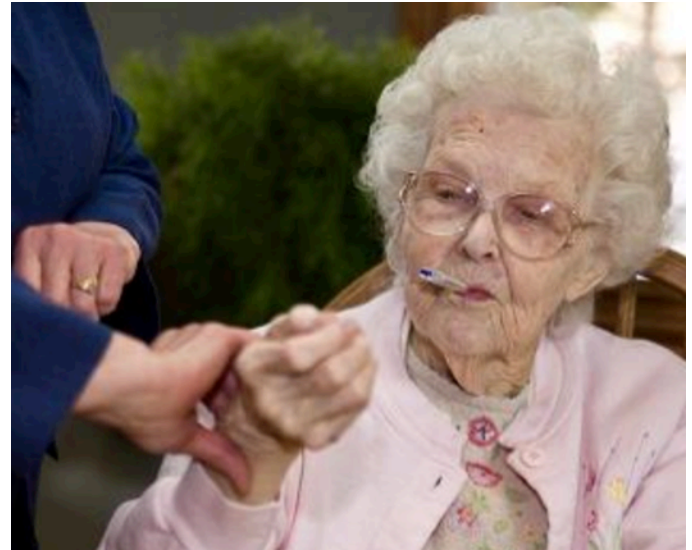
- In 2017 do we reach the intended 500 seniors (ages 65+) with Medicaid who are at high risk of (re-)hospitalization?
- Does each of the seniors in our program receive 4 sessions covering in-home coaching in self-care, home safety, and medication adherence?

Examples of outcome evaluation questions

- Do we achieve the intended 25% reduction in in 30-day hospital re-admissions by 2018?
- How do re-admission rates compare to those among comparable patients who did not receive our services?
- What factors other than our services may have influenced re-admission rates?

Indicators: WHAT is to be measured

- **Indicators** are specific, observable, measurable characteristics of people, services, organizations, or systems that permit assessment of progress toward process and outcome objectives.
- They are NOT targets or objectives.
- To measure change, compare indicator measurements taken at different timepoints (e.g., baseline, follow-up).



Examples of indicators

Process objective	Process evaluation questions	Ex. of process indicators
<ul style="list-style-type: none"> Provide weekly group support sessions to 200 family care-givers of chronically ill seniors in 2016 	<ul style="list-style-type: none"> How many weekly sessions do we offer in 2016? 	<ul style="list-style-type: none"> Number of sessions offered
	<ul style="list-style-type: none"> How many caregivers attend the support group sessions? 	<ul style="list-style-type: none"> Number of caregivers who attend at least one session
Outcome objectives	Outcome evaluation questions	Ex. of outcome indicators
<ul style="list-style-type: none"> Decrease in caregiver-perceived burden by 40% over 3 months 	<ul style="list-style-type: none"> Does perceived caregiver burden decrease by at least 40% over three months? 	<ul style="list-style-type: none"> Caregivers' self-reported perception of burden
<ul style="list-style-type: none"> Significantly greater decrease in caregiver burden among service recipients vs. control group 	<ul style="list-style-type: none"> After 3 months, do caregivers receiving our service report significantly lower burden than a well-matched control group? 	<ul style="list-style-type: none"> Self-reported perception of burden among service recipients and among control group members

Selecting indicators

- Be as specific as possible
- Ensure alignment with objectives / evaluation questions
- Consider available data sources
- Consider standards in the field

The **WHERE, WHEN, and HOW** of the M&E plan

Design and data

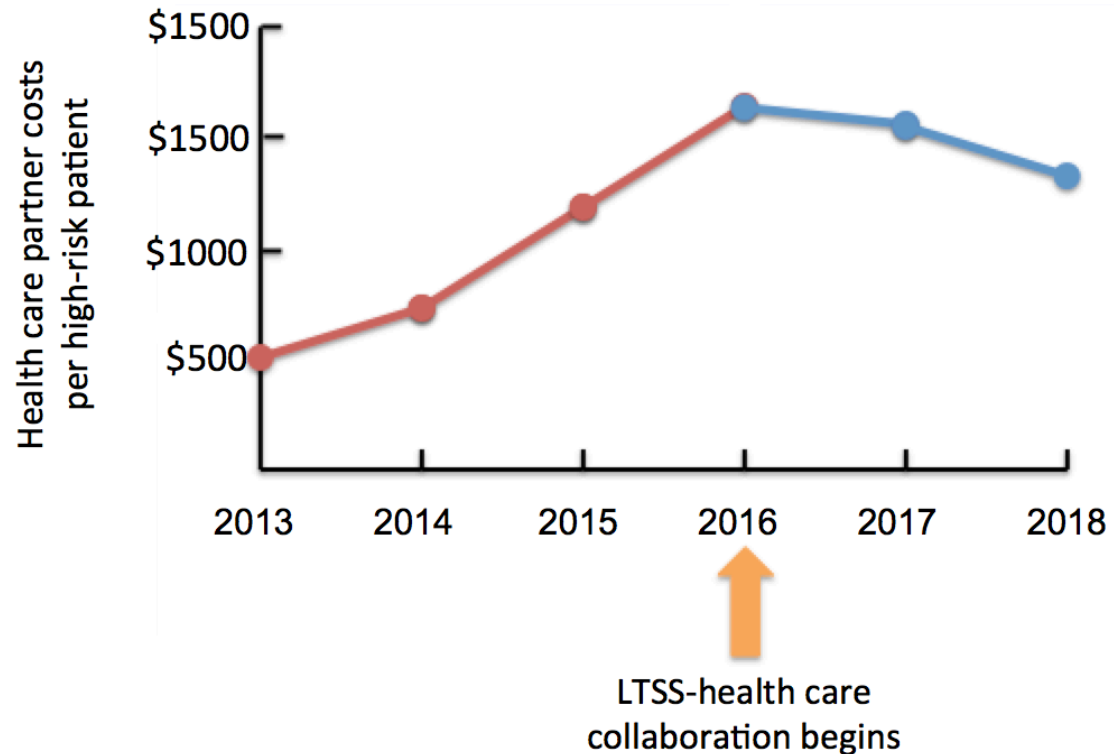
- Evaluation design
- Data sources
- Data collection methods
- Data collection frequency/timing
- Data analysis methods



Evaluation design: HOW

- Pre/post
- Post only
- Time series design
- Comparison/
control group

Time Series Design



Assessing the counterfactual



Data sources: WHERE

- Criteria for source selection
 - Goodness of fit with objectives
 - Accessibility
 - Validity
 - Timeliness
 - Completeness
- Primary, secondary, public use

Data collection methods: HOW

- Quantitative, qualitative, mixed-method
- Program, administrative, and EHR data systems
- Surveys
- Focus groups
- Interviews
- Direct observation



Data collection timing/frequency: WHEN

Consider...

- Timing of participation in program/service
- Expected time lapse for measurable change to occur
- Contract periods and reporting deadlines
- Lag time for needed data / analyses to be available

Data analysis methods: HOW

- **Describe:** Document who was served, what was delivered, what changes participants exhibited (e.g., percentage, mode, median, mean, standard deviation)
- **Infer:** Estimate whether outcomes resulted from your intervention or by chance (significance testing)

The WHO of the M&E Plan

Responsibility for M&E: WHO is involved

- Data collection
- Data entry
- Data cleaning
- Data analysis
- Report preparation / communication of findings



The WHY of the M&E Plan

Communicating and using findings: WHY we conduct M&E

Make an **M&E communication plan** that addresses:

- What is the objective (or purpose) of communicating the findings?
- Who are the target audiences for the findings?
- What findings are to be shared with each audience, how, and when?
- Who will be responsible for communication activities?

Tips: communicating findings

- Consider different media/formats for different audiences.
- Focus on the positive but also disclose negative findings and share a plan to address them.
- Be up front about limitations of methods and data.
- Be ready to address questions from others.

Data communication



Group Exercise: Develop an M&E Plan



Costing out M&E activities

- Consider costs for each key major evaluation task, e.g.:
 - Instrument development
 - Data collection
 - Data entry
 - Data cleaning
 - Data analysis
 - Reporting/ communication



Costing out M&E activities: expense categories

- Staff
- Consultants
- Materials and equipment (e.g., hardware, software, audio recorders, respondent incentives)
- Printing and copying
- Translation services
- Transcription services
- Fees for web-based survey hosting / data analysis platforms
- Fees to use surveys or access datasets owned by others
- Transportation (e.g., for data collection activities)

Paying for M&E

- Build M&E costs into grant and business partnership proposals.
- ***It's part of the cost of doing business!***



What's the M&E take-away message?



Getting the most out of M&E

- Don't try to measure *everything*.
- Align measurement with program/service objectives.
- But also be on the lookout for unexpected outcomes.
- Take a prospective approach.
- Build a **culture of M&E**
 - Make M&E an integral part of service delivery and business operations.
 - Include M&E as a standing item on staff meeting agendas.
 - Celebrate successes and address challenges with your team.

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