Developing a Logic Model for a Cross-Jurisdictional Sharing Initiatives

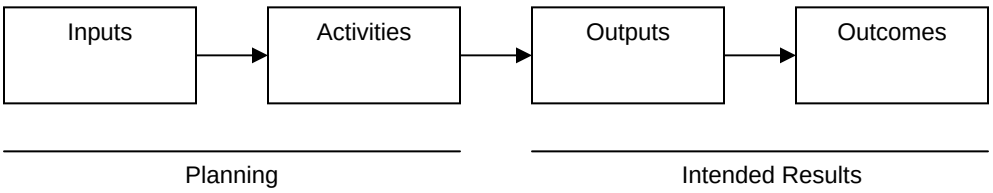
This document describes the basic elements of a logic model and the process of developing one for groups considering or adopting cross-jurisdictional sharing (CJS) initiatives. This document is based on a report published by James Bell Associates, *Evaluation Resource Guide for Responsible Fatherhood Programs*, which was prepared in 2011 by Matthew Shepherd, Ph.D., a consultant with the Center for Sharing Public Health Services.

What is a Logic Model?

A logic model is a visual representation of a CJS initiative from inputs to outcomes (see Exhibit A). It provides a way to systematically and logically portray a sequence of events, beginning with their inputs, then detailing major activities and their immediate outputs, and finally progressing toward the intended intermediate and longer-term outcomes.

Exhibit A

Logic Model: A Visual Representation of a CJS Initiative



A logic model is an effective planning, management and evaluation tool used, for example, by project or agency directors to describe their planned programs and the effectiveness of current programs. The logic model is a narrative and graphical representation of how a project or program works, as well as the theory and the assumptions that underlie the initiative. The model illustrates a sequence of cause-and-effect relationships linking outcomes with the CJS initiative's activities and theoretical assumptions. The logic model provides a flowchart depicting how the CJS initiative works, which activities precede others, and how the desired outcomes are achieved.

Why Develop a Logic Model?

Developing a logic model can promote consensus among collaborative partners, agency staff and others about a potential CJS initiative's focus, activities, and desired outcomes. Spending the time and effort to collaboratively develop a thoughtful logic model also can prove helpful in a number of other ways (see Exhibit B). For example, partners may gain a deeper understanding of the CJS initiative and its ultimate goals as the result of negotiating what should be the key areas represented in the logic model. The process also can help clarify the CJS initiative's strengths and weaknesses, thereby creating opportunities for fine-tuning activities or improving the overall design in order to help ensure the likelihood of successfully obtaining the CJS initiative's goals. Lastly, the logic model itself can act as an anchor to keep the CJS initiative on track over time and also can be used as a yardstick by which to measure progress and success.

Exhibit B

Reasons to Develop a Logic Model

1. A logic model helps develop a shared vision of key activities and their outcomes. It helps ensure that there is a clear understanding of what activities are being implemented, what goals the team hopes to achieve, and how the initiative's success will be determined.

2. A logic model helps build consensus among agency staff, policymakers, stakeholders, and possible funders regarding the planned CJS effort. Specifically, stakeholders can reach agreement on the intended goals of the initiative, the changes from current practice, the responsibilities of all parties, and the anticipated outcomes of the CJS effort. A logic model provides an opportunity for stakeholders to jointly assess the feasibility and practicality of implementing CJS activities. It also provides a benchmark to measure change in selected project outputs.

3. A logic model offers a concise, easy-to-understand visual summary of the CJS initiative, which can serve as a handy reference that outlines key activities and expected outcomes. A logic model can be disseminated to interested third parties to provide a synopsis of CJS initiative's goals and activities.

4. A logic model can be used to identify gaps and inconsistencies in the CJS initiative's design. A logic model can help identify areas in which planned activities or interventions need to be articulated or clarified. It can be used to identify discrepancies between project activities and expected outcomes.

5. A logic model can serve as a "reference point" for proposed modifications by comparing proposed changes with the original logic model to determine if changes are being made to core elements of the CJS initiative. A logic model will allow responsible parties to assess whether the proposed changes affect linkages to anticipated outcomes.

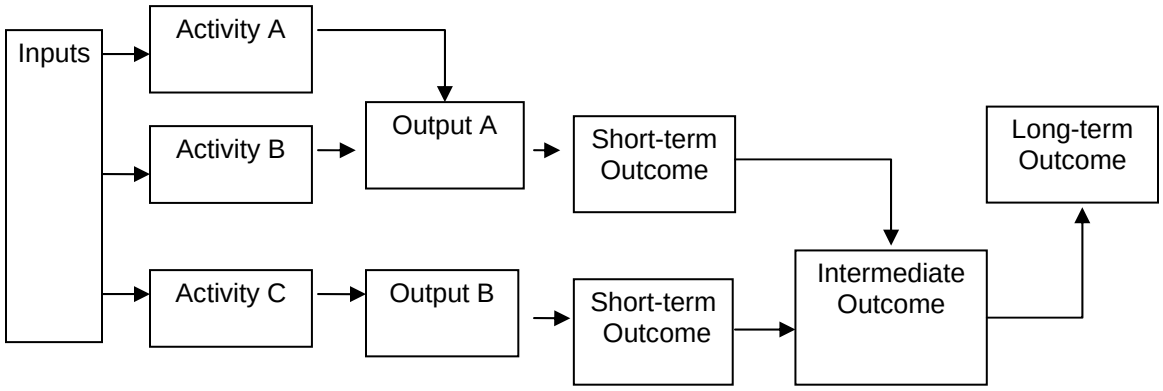
6. A logic model can serve as a CJS initiative's monitoring tool and help identify key questions and answers, like: Have key components been implemented? What are the outputs to date? Are relevant data being collected? What outcomes have been achieved to date?

Components of a Logic Model

The first step in developing a logic model for a CJS effort is to identify the components or elements of the CJS initiative (see Exhibit C). A typical logic model depicts four types of project components that are connected by unidirectional arrows: 1) inputs, 2) activities or interventions, 3) outputs, and 4) outcomes.

Exhibit C

Basic Components of a Logic Model



1. Inputs are the financial, material, and personnel resources needed to accomplish the CJS initiative's activities. Examples of common inputs include funding, staffing, community partners, office space, and office equipment. Identifying resources (i.e., inputs) is an important first step as it helps determine: a) what resources are necessary and available; b) whether the resources are adequate to ensure successful implementation; and c) whether the expected outcomes are realistic and achievable in light of the available resources. For CJS efforts it is particularly important to identify the resources being contributed by all partners to ensure an equitable balance of cost, effort and anticipated benefit.

The Center's *Roadmap to Develop Cross-Jurisdictional Sharing Initiatives* is a tool to guide jurisdictions that are considering or adopting CJS arrangements. The *Roadmap* contains three phases that should be followed incrementally. Determining inputs on the logic model closely aligns with activities from *Phase One: Explore* on the *Roadmap*.

2. Activities are interventions or changes that can lead to the CJS initiative's goals. Activities can include services, practices, policies, and procedures that are planned for implementation in response to identified problems or needs within the target population. For example, CJS activities that provide a *direct service* to a shared target population could include tuberculosis screening, home visitation, or dental clinics.

Logic model activities are usually developed during *Phase Two: Prepare and Plan* on the Center's *Roadmap*.

However, activities within a CJS initiative do always provide a direct service to the target population. For example, CJS efforts in the prepare and plan phase might include activities like developing a written agreement between the jurisdictions or developing shared policies and procedures. These *systems-level* changes can

be essential preconditions to serving a shared target population, so they are important activities to plan for and track using a logic model.

Additionally, CJS initiatives also may be involved in *knowledge development* activities. Conducting needs assessments, asset mapping, or public health improvement planning all aim to help stakeholders and public health officials develop better or more current understanding of public health related issues. Such information gathering processes should be reflected in a logic model as an activity or outcome depending on the goals of the CJS effort.

While a CJS initiative can involve countless activities, some will be more crucial than others to its overall success. An effective logic model should spotlight only those activities that are key to producing the desired outcomes.

Keep in mind that the logic model audience includes the decision makers with authority over public health functions, other funding and accrediting bodies, and community partners, whose interests center on the CJS initiative's key activities and outcomes.

3. Outputs are the immediate, concrete result(s) of conducting an activity. Examples of outputs include: the number of home visitations conducted, the number of presentations given to county commissioners, and the number of meetings between agency staff. Success in achieving outputs can be determined through *process* or *output* measures, which indicate numbers served, types of services provided, frequency of service, duration of service, etc. It is important to identify outputs because they help conceptually link the CJS initiative's activities to its expected outcomes. Tracking outputs allows the CJS partners to determine if progress is being made as planned and helps identify areas where a CJS effort is not being implemented as planned.

4. Outcomes are the *changes* that are expected to occur as a result of the CJS initiative's activities. Outcomes typically expected in CJS efforts include changes in community-level health status indicators or changes in the efficiency of providing services. Such outcomes can be seen at client, community, organization, and program levels.

The CJS initiative's long-term goals are determined during *Phase One: Explore* on the *Roadmap*.

The CJS initiative's outcomes may be short-term, intermediate, or long-term. However, depending on the nature of the initiative, the logic model may not always have all three types of outcomes. *Short-term outcomes* can include changes in the knowledge or awareness of clients (e.g., clients learn new skills during home visitations). They also could include policy and procedural changes within organizations or local governments (e.g., county begins subcontracting for epidemiological services for a set amount of money). *Intermediate outcomes* can include changes in skills, attitudes, or behaviors of clients (e.g., parents use age-appropriate parenting techniques with their children). They also can include the impact of a policy or procedural changes (e.g., a 20 percent reduction in yearly costs for epidemiological services). *Long-term outcomes* can include logically consistent or expected effects of the changes that may not be measurable in the near future because the full impact is not observable. The long-term outcomes are the ultimate expected goals of the CJS initiative (e.g., decreased incidence of preventable childhood diseases, maintained or expanded public health services without increased funding, improved community-level public health indicators).

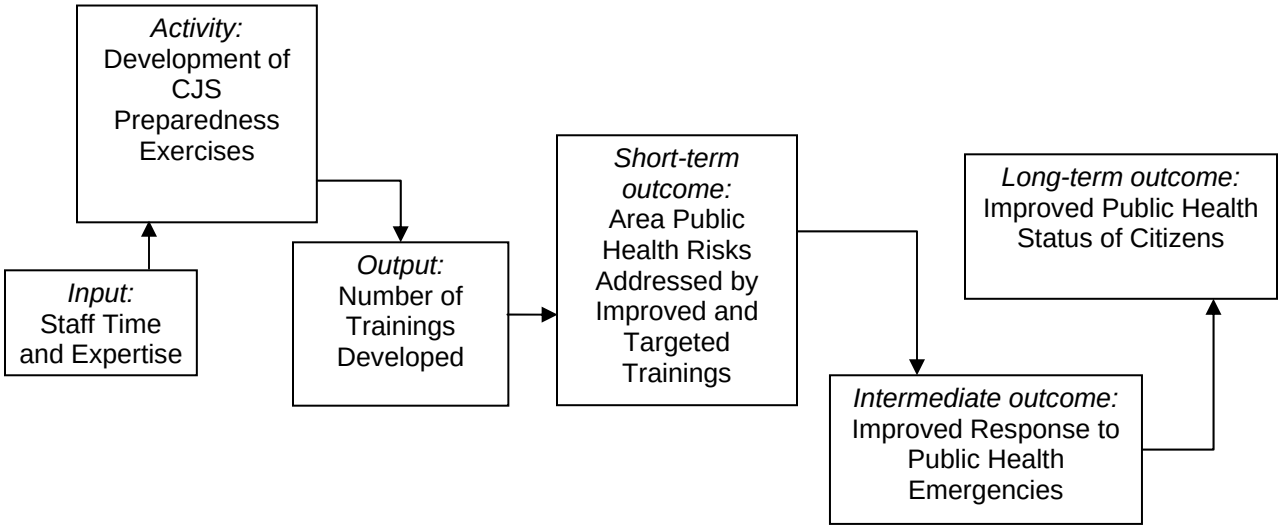
The process of developing appropriate short-term, intermediate, and long-term outcomes should be completed for each key activity. Keep in mind that each key activity may have more than one set of associated outcomes. In addition, some of the key activities may lead to similar or shared outcomes.

Developing A Logic Model

First, let us take a look at the following simple illustration (see Exhibit D) of a CJS Public Health Preparedness initiative. In this example, a three county CJS initiative aims to enhance public health preparedness in order to protect citizens from potential disasters or public health emergencies in an environment of reduced public health funding. The CJS partners have chosen to use available resources (*inputs*) including staff time and expertise to develop shared preparedness exercises (*activities*). The concrete results (*outputs*) of the combined efforts would be the number of trainings developed. One *short-term outcome* of the combined efforts is expected to be improved and targeted training that addresses the area's public health risks. The *intermediate outcome* is expected to be an improved response to public health emergencies. Over time, the health of the citizens should be better protected by the enhanced public health response capacity (*long-term outcome*).

Exhibit D

Sample Logic Model Elements
For a CJS Public Health Preparedness Initiative



Keeping in mind the example above and the previously presented descriptions of logic model components, CJS partners can begin to develop a logic model for their initiative. Completing the following steps may help in this process:

Inputs
Think about the resources needed to implement the CJS initiative. Resources might include funding, staff, materials, and facilities.

List the resources that will be required:

Activities
Think about the CJS initiative and define the activities or interventions that could reasonably be undertaken. For example, a public awareness campaign may be needed to inform the public about the CJS initiative.

List the planned activities:

1.	2.
3.	4.
5.	6.
7.	8.

Think about the desired ultimate outcomes (goals) of the CJS project, which *key* activities from the list above will likely produce those outcomes?

List the key activities:

1.	2.
3.	4.

Outputs
What are the concrete results of conducting *each* activity and how can it be *quantified*? Outputs are generally expressed in numbers, characteristics, or proportion. For example, the output of a public awareness activity could be the number of community meetings held.

List the output(s) for each of the CJS initiative's *key* activities:

Activity 1.	→ Output(s):
Activity 2.	→ Output(s):
Activity 3.	→ Output(s):
Activity 4.	→ Output(s):

Outcomes

To clarify the outcomes of the CJS initiative's activities, think about what would be the expected changes and real impacts for the participants. In other words, what could reasonably be expected to happen as the result of the CJS initiative's activities and their outputs? For example, a public awareness activity could result in community members being better informed.

List the outcomes(s) for each key activity and its output:

For activity 1.

For activity 2.

For activity 3.

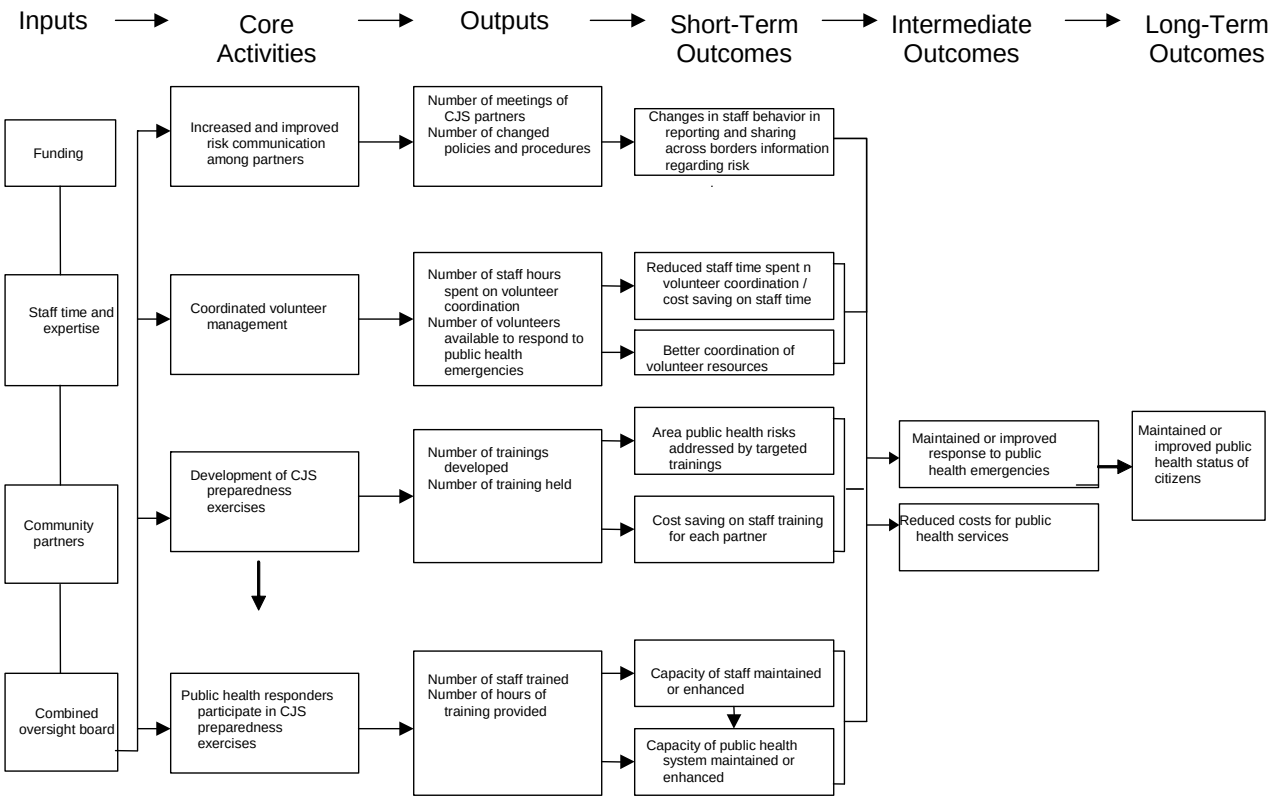
For activity 4.

If some of the CJS initiative's key activities will likely result in several outcomes, determine the order in which those changes would likely occur. Remember that outcomes may be short-term (changes in knowledge, changes in policy), intermediate (changes in skills, changes in behaviors as a result of policy changes), or long-term (changes in health status, or system-level changes).

Use arrows to show the connections between the CJS initiative's inputs and activities, between its activities and outputs, and between its outputs and each sequence of outcomes (see Exhibit E). Remember that one activity could lead to multiple outcomes, or that multiple activities could lead to a single outcome.

Exhibit E

An Example of a Logic Model for a CJS Public Health Preparedness Initiative



The resulting logic model for the CJS initiative may be quite simple or complex, depending on the nature of the CJS effort. However, the model should reflect the entire CJS initiative as accurately as possible. Lastly, keep reviewing the logic model throughout the exploring, preparing and planning, and implementing and improving phases of the CJS initiative, and revise when needed.

Throughout the development of the logic model, focus on the process of developing the model, not just the resulting model. As previously mentioned, the process itself is a valuable exercise for clarifying the CJS initiative's goals, the best ways to achieve those goals, and for building consensus.

Questions to ask when revisiting the logic model:

When reviewing the logic model, keep in mind the intended activities and goals of the CJS initiative. Consider these questions:

- Is the connection between each key activity and its outcomes logical?
- Are the outcomes that are identified clearly the expected results of the activities?
- Are all the crucial activities included in the model?
- Are the connections between the inputs, activities, outputs, and various levels of outcomes clear and logical?
- Are the components and the progression represented by the logic model reasonable based on existing evidence or theory?
- Do the outcomes represent changes that are important to the CJS initiative and to the participants?

Program: _____

Inputs (financial, material, and personnel resources)	**Activities and Outputs** (Activities, policies, practices, or procedures and their result)		**Outcomes** (The incremental events/changes that occur as a result of the outputs)		
Inputs	*Activities*	*Outputs*	*Short-Term*	*Intermediate*	*Long-Term*

Assumptions	**External factors to that may impact the CJS initiative**