

# Democratizing Valuation

## A Guide for Multi-Sector Collaboratives

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# Introduction

Multi-sector collaboratives (MSCs) are a promising strategy for moving the needle on high-priority health and equity issues.<sup>1</sup> However, given their breadth and long-term prevention orientation, these collaboratives often struggle to demonstrate their cost effectiveness, return-on-investment, or value to partners, contributors, and funders.<sup>2</sup> There are numerous challenges to assessing MSC value including a lack of existing long-term evidence and limited capacity and bandwidth to marshal evidence and conduct analysis. With a simplified set of tools and processes, valuation can serve to clarify and convey the value of MSC activity to core supporters and potential contributors.

## What is valuation?

Valuation examines the relationship between the costs and benefits of an investment such as a health intervention, policy, or program using methodologies such as burden of disease analysis, cost-effectiveness analysis, and budget-impact analysis.<sup>3</sup> Valuation can be a useful tool for multi-sector collaboratives seeking to demonstrate the impact of their activities and strategies.

## What can valuation accomplish?

Valuation can be applied in a range of circumstances in order to:

- **Estimate the benefits and impact of interventions and initiatives:** For example, projecting the health, social, and economic impacts of a new walking path in a community.
- **Support raising funds for continuation or expansion of programs:** For example, making the case for continued funding for a patient navigator program based on the positive health impacts (e.g., decreased disease transmission) and return-on-investment in the program thus far.
- **Help determine high-impact activities:** For example, deciding how to best allocate limited program funds to the most beneficial activities for the target population.
- **Calculate the potential economic implications of achieving health and safety milestones:** For example, examining how a 5% improvement in physical activity rates in a community mean for health care utilization and productivity of employees.
- **Identify the implications of policy change:** For example, to analyze the likely value, based on prospective changes in health status and outcomes, of a new public policy or organizational practice.

## What is the purpose of this guide?

Traditional valuation approaches have often not met the needs of MSCs and other community-based health initiatives. They require expensive engagements with external consultants, significant staff time, and specialized technical expertise (even for determining the scope of the valuation). Existing models and methods often produce results that are irrelevant in a local context (e.g., a model is built to demonstrate budget impacts for state and federal agencies but the MSC is focused on compelling local government to participate).

This guide is designed to support “democratizing valuation” by providing guidance on how to initiate and scope a project and simplified valuation tools and strategies to help MSCs understand and communicate their potential impact in their communities. However, this guide is not sufficient for a novice practitioner to conduct a valuation; additional tools, technical assistance, capacity building, and collaborative engagement are needed.

## Who is this guide intended for?

Valuation can be used by many different entities. This guide was specifically designed for multi-sector health collaboratives and their supporters with:

- a prevention and equity focus;
- existing cross-sector partnerships;
- established vision, goals, and activities; and
- a clear valuation need or question and audience in mind.

## Our partners

With support from Blue Shield of California Foundation, through an Exploring the Value of Prevention grant, JSI Research & Training and Minga Analytics set out to develop and test feasible and accessible valuation methods and tools with MSC partners in California. We worked closely with the California Accountable Communities for Health Initiative (CACHI) to understand the needs of collaboratives in the state and to identify potential partners. We

selected a set of partners who reflected diversity in terms of geography, issue/focus area, and valuation goals and questions. The work with these partners informed every aspect of this document and examples of their valuation processes are used to illustrate concepts. All four of the communities we worked with to develop this guide were interested in building broader support for their work. Each had a different valuation strategy, and all described multiple uses for their valuations.

	Be There San Diego	Santa Clara Getting to Zero	Humboldt Community Health Trust	Hearts of Sonoma County
Description	Cardiovascular disease-focused collaborative led by non-profit organization	HIV/AIDS-focused collaborative based in a county health department	Substance use-focused collaborative led by a health improvement and information network	Cardiovascular disease-focused component of Health Action’s Committee for Healthcare Improvement
Valuation Goal	Estimate the impact of activities on health care and employer costs in working-age population in San Diego	Assess the impact of a pre-exposure prophylaxis (PrEP) navigator program on HIV infections and associated costs	Estimate the impact of a perinatal substance use disorder screening and referral program on health and costs for new mothers and infants	Demonstrate the value of scaling-up existing hypertension control efforts and adding a community health worker component to address food insecurity
Primary Audience	Business sector	County Board of Supervisors	Medi-Cal Managed Care plan	Health care payers

## SECTION 1

# Is Valuation the Right Approach?

Multi-sector health collaboratives are under constant pressure to demonstrate value; their ability to attract funding and continue to exist likely depends upon it. That does not mean that valuation is always an efficient or effective strategy. It is critical for leadership and staff of a multi-sector collaborative to reflect on the clear purpose and anticipated use of the valuation before committing time and resources.

## Conceptual considerations

Below are some questions for collaboratives to consider when deciding whether to pursue valuation; reflecting on these questions at the outset could help avoid a time-consuming and ultimately fruitless effort if valuation is not the right approach for the issue at hand.

### Is there a clear question that valuation could help answer?

An appropriate valuation question is focused on costs and benefits (both financial and non-financial), reflects the values and

purpose of the collaborative, and is specific enough to be investigated. Questions that are not appropriate for valuation include those that are primarily focused on program effectiveness (better suited for evaluation), emphasize strategies or interventions that are incongruent with the collaborative's vision and mission, or for which there is an absence of data either from local activity or in the literature.

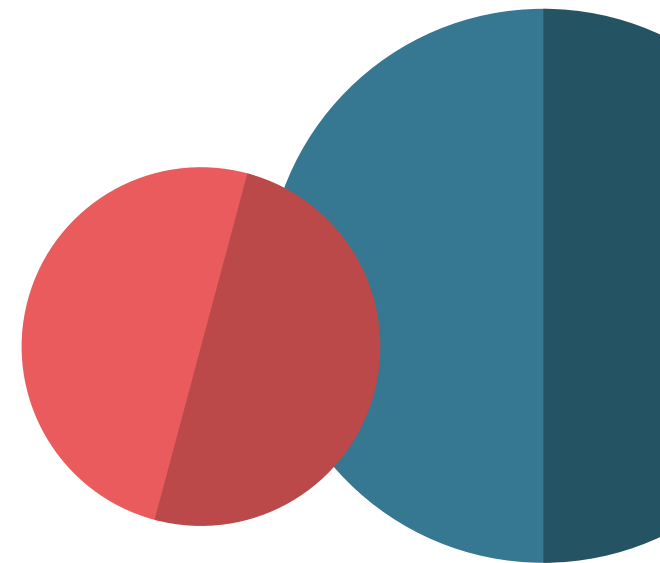
### Do the multi-sector collaborative's goals and strategies actually align with the question?

The valuation team should deeply consider whether the multi-sector collaborative's goals and strategies align with the potential valuation question at hand. For example, if the MSC's mission is to improve integrated services for people with diabetes, but the valuation question is estimating the community-level impact of healthy eating and active living on diabetes in a specified county, there is likely a need for the MSC to either: reflect on expanding its mission to include a broader scope beyond the delivery

## VALUATION VS. EVALUATION

A **valuation** is an examination of the relationship between the costs and benefits – both financial and non-financial – of an investment (e.g., a health intervention, policy, or program).

An **evaluation** focuses on the effectiveness of a program or intervention.



of services, or to revise the valuation question so that it assesses outcomes for the target population related to services received.

### **Is there adequate evidence (either locally or in the literature) to develop a valuation model?**

It is critical to understand if there are existing data (local, state, national) or literature (peer-reviewed or grey literature) that could inform the valuation model. Are there data from a pilot or related intervention that have been tested in the community? Are there implementation costs for the intervention being valued? If the valuation team is setting out to complete a valuation on a very novel intervention, the valuation may have to be built from scratch. The level of effort and requirements will be much greater than if the intervention is fairly established and has data on costs and outputs or has some emerging literature to support it. If the intervention or strategy is very novel or if an existing intervention has no cost and output information, a valuation may not be appropriate.

## **Practical considerations**

Additionally, there are practical considerations for determining when to design and complete a valuation. Here are a few key questions for reflection:

### **Has the collaborative established a vision, set of partners, and governance practices?**

Valuation makes the most sense once a MSC has gone through a formative, foundation-building phase including buy-in from community partners. This presumes that there is a clear sense of direction that is informed by the interests of partners and reflective of the perspective of community members. While the valuation question development should be informed by community partners, and the results should be shared with those partners, valuation is not suited, in most cases, to serve as the central component of a partner-engagement strategy. However, valuation can complement other actions focused on trust-building and shared vision development.

## **WORKING WITH EXTERNAL CONSULTANTS VS. DOING IT YOURSELF**

One of the primary questions about valuation team composition is whether or not to engage external expertise. The need for external consultation will likely depend on the complexity of the question being asked. In all cases, trying to conduct a valuation with only this guide as background is **not recommended**. At the same time, it does not always require a health economist with decades of experience.

Some experience and knowledge of economic analysis and public health research may suffice. In some cases, it may also be possible to arrange coaching/ training for lead staff with some experience from someone with deep valuation knowledge. **If external expertise is desired, this guide can help by outlining the components of a valuation and highlighting the capacities necessary.**

### Is the collaborative stable?

Major changes or anticipated future changes to leadership, key staff roles, the budget, mission, or structure of the collaborative can undermine a valuation process. If such changes are likely, it may not be the best time to launch into a valuation.

### Is the right level of expertise available?

Conducting a valuation requires experience and training. If the right people—within the lead organization, from a partner, or an external consultant— aren't available or feasible, it will be impossible to conduct a successful valuation.

### Do staff have adequate time to participate in and manage the valuation process?

Staff will need dedicated time away from program responsibilities to engage in the valuation process, including finding and sharing relevant data and bringing in other staff as needed to answer key questions about the interventions and valuation scope. If the staff expected to engage in the valuation do not have the time and bandwidth to do so, it may not be the right time.

## Alternatives to comprehensive valuation

While there are many potential benefits of a comprehensive valuation, it is not always the right choice based on the considerations above. There are other strategies for marshaling evidence and communicating value that aren't as intensive and may allow for quicker engagement with desired audiences.

If the team is unsure whether a valuation would be useful for the MSC or whether the team has the necessary time, data, and expertise, consider these alternatives:

- **Evidence collection:** Packaging evidence-based information from multiple sources into a fact sheet can be a much less time-intensive approach when the conditions are not right for a comprehensive valuation (see box on page 6 for an example). There is a lot of existing evidence and data that can be gathered and packaged to help to illustrate the value of a collaborative or initiative. For example, there are numerous sources for the economic cost of health conditions by geographic area. That information can illustrate why the

## STRENGTHS AND WEAKNESSES OF VALUATION

### Strengths

- Valuation can help communicate the value and benefits of a program.
- Valuation can make the case for future funding, expansion of efforts and partnerships.
- Going through the valuation process can help the team articulate its intervention or program components, target audience, and the impact of collaborative efforts.

### Weaknesses

- Valuation requires some technical expertise (whether an outside expert or on the team) and can be complex (and costly).
- The process can be time consuming, particularly if clear parameters are not established early on.
- Requires sufficient data from local sources or the literature.



## LEVERAGING EXISTING EVIDENCE

Starting in 2014, **Hearts of Sonoma County** (HSC) led an effort to improve hypertension control and HEDIS scores among patients of four clinical partner organizations. Positive results were published, and the HSC team envisions expanding the initiative's impact by building more robust linkages and pathways between clinical care and community services, such as adding community health workers and addressing food insecurity and other social care needs.

We explored valuation approaches for the expanded model. A few methodological issues and a desire to engage potential supporters to gauge interest, led to assembling a fact sheet instead of a more time-intensive valuation model. The fact sheet draws on existing data and literature to outline costs of cardiovascular disease and hypertension in Sonoma County, recap HSC's successful work thus far, and provide simple calculations on potential impact and value of future work.

issue that a collaborative is focused on is important or can serve as the basis for a simple calculation of potential savings (“If we reduced rates of [focal condition] by 5%, we could save money [healthcare expenditures, productivity gains, etc.]”). There may also be information from valuations of similar initiatives or academic studies that can serve as rough estimates of expected results.

- **Business planning:** In some circumstances, the audience is primarily interested in whether or not the collaborative has a well thought-out business plan rather than a valuation of part or all of their activities. A business

plan is concerned with budgeting, opportunity and risk analysis, and realistic expectations of how much various contributors will invest, in addition to the potential value produced by the investments. A valuation could be a component of a business plan, but it is not a substitute for one.

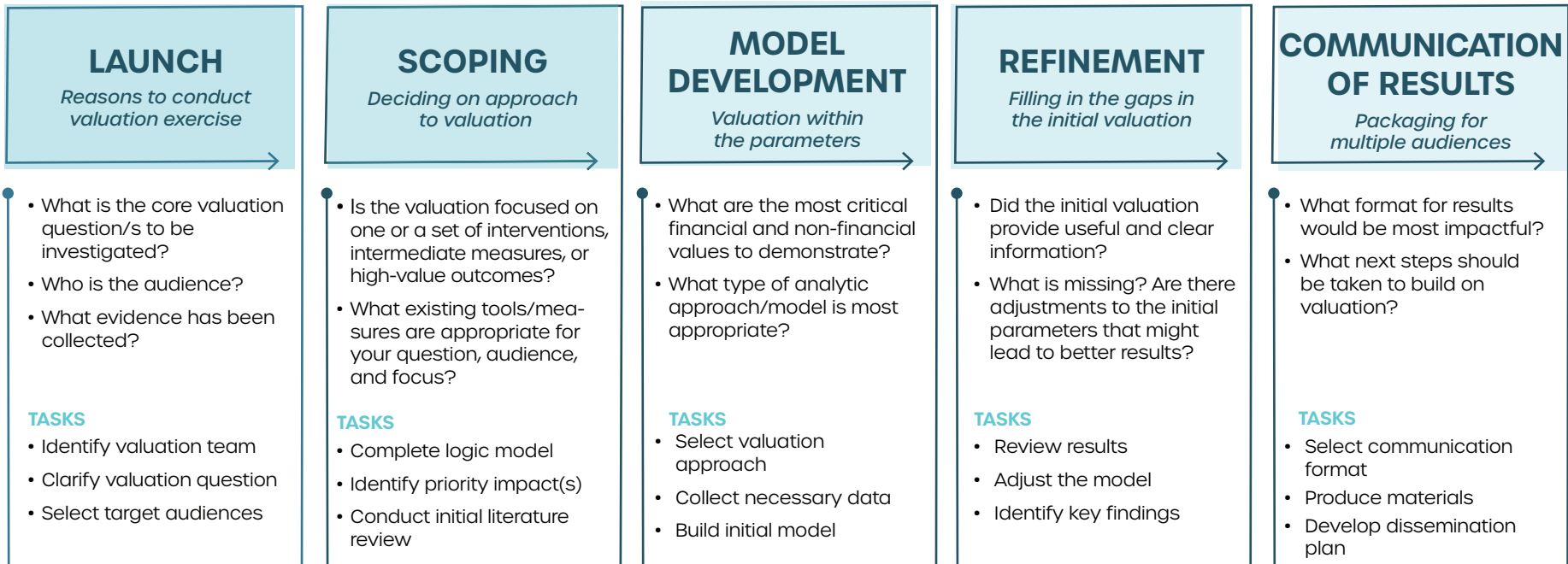
When setting out to complete a valuation, keep an open mind. While going through the first steps of a valuation, it may become clear that the questions at hand may be better answered by other methods (especially when clarifying the specific valuation question, purpose, and audience, or if there are no resources to support a valuation).

## SECTION 2

# Overview of the Valuation Process

It is important to start a valuation with a timeframe in mind. Without a clear plan, valuation processes can drag on, a collaborative can miss key opportunities to use the results, and conditions change significantly enough that results are no longer relevant. Infrequent meetings result in a lot of time devoted to catch up and little or halting momentum. The longer the timeline, the greater the chance that key team members will begin focusing on other priorities or leave the organization altogether.

Timelines should be set based on context and need. Is there a specific deadline to meet (e.g., presentation for the scheduled Board of Supervisors meeting)? Is it best to develop a draft valuation quickly and decide on next steps based on the results? Consider when to engage specific team members (e.g., specialists, leadership, and partners) and build in flexibility in case of unforeseen interruptions, scheduling challenges, etc., especially when working with an external consultant.





## SECTION 3

# Valuation Launch

The first stage of the valuation is designed to set conditions for success and to identify key goals and values. This section should help the collaborative create a shared understanding of the purpose and create a blueprint to reference as the team moves into the second stage, Valuation Analysis.

## Identifying the valuation team

To complete a meaningful and useful valuation, it is crucial to assemble the right team. The best team for the valuation will likely include:

**An organizational leader.** It is important to get buy-in for the valuation from the start, and one way to do that is to incorporate leader(s) onto the team early on.

**Subject experts and on-the-ground implementers of interventions.** These crucial team members understand the nuances of the intervention's target population, flow of intervention processes, and barriers and facilitators of success.

**Valuation lead.** One point person to ensure that everyone is engaged and that tasks are completed.

**Financial expert.** Someone who has knowledge of intervention and healthcare costs. This team will need to work together to clarify internal team capacities, gaps and external needs; for example, how much support will the team need from a health economist or a valuation expert? Where does the team already have the needed expertise to complete the valuation?

## Clarifying the valuation question

The valuation question is the driving force behind the valuation. The analysis based on it should convey why the collaborative's activities are important or impactful. It can be written as a question, such as, "Are the health and financial impacts of this intervention worth the investment?" or as an argument, such as, "Our collaborative's intervention substantially decreases the chance that prediabetes becomes diabetes." The result is significant improvements in life expectancy and quality of life and a reduction in health care costs." It should create a clear sense of correlation between the strategies and potential outcomes.

### EXAMPLES FROM THE FIELD

## VALUATION TEAM EXPERTISE

The main valuation team for **Humboldt Community Health Trust's** (HCHT) perinatal substance use prevention collaborative consisted of members of the backbone organization's staff. As coordinators of the initiative, they had the high level programmatic, budgetary, and community landscape knowledge needed to understand what variables needed to be included in the model.

However, because a large part HCHT's program was connecting pregnant women to medical addiction treatment, the team decided to seek the input of two clinicians. With their help, the model was modified to capture a more realistic depiction of substance use intervention outcomes and the initiative's potential health care savings and social impact.

## Key things to remember:

- The valuation question has to have a reasonable scope—think about the actual outcomes of the intervention that are measurable, a realistic expectation of target population size who will be effected, and the resources available for this valuation.
- The valuation question has to be relevant to the intended audiences; there should be some indication that positive results will motivate engagement and support of the collaborative's efforts.

## Connect value and values

Collaboratives are encouraged to center their values even when examining the financial impacts of their work. This often means repeatedly framing the valuation within the context of the driving values of the work—the “why” behind the collaborative (e.g., promoting health equity, building a thriving community, ensuring healthy starts for all children, or developing healthy local food systems). This is important for a number of reasons: it reminds the valuation team that their process needs to align with and

support the collaborative's core values (and not to pursue peripheral strategies that may be more likely to show short-term savings); it prevents audiences from considering the valuation results solely from a financial perspective and as indicative of either success or failure (the point of MSCs is not to achieve ROI); and it makes it clear that valuation findings are intended to tell just one part of the holistic story of prevention and equity focused collaboratives.

## Determining the audience

The team should be clear on who the audience for the valuation results is early on in the process.

It may take a few conversations to determine the target audience(s), which could include potential funders (e.g., philanthropic funders, local, state or federal funders, businesses, etc.), potential partners, policymakers, or the media. Is the audience primed to receive valuation results? Does the valuation question align with their interests? It generally does not make sense to conduct a valuation to initiate a new relationship or test

stakeholder interest: there is a good chance that even if the valuation goes smoothly and produces positive estimates, the audience will not be interested and significant time will have been wasted. Ideally, the target audience would signal their interest in the valuation question prior to initiation.

MSC partners, in particular community stakeholders, should always be considered as an audience. The information from a valuation should bolster support and buy-in to the MSC vision and goals. Partners can be helpful in promoting the valuation results and honing effective communications. Moreover, it is critical for trust-building and equitable power sharing that financial information and decision making not sit with a subset of partners. The technical steps may be conducted by a small group, but the goals and results of a valuation should be collectively determined and shared. This can often be accomplished by engaging community stakeholders who are already part of the MSC leadership structure to provide input on the goals and valuation question up front and results and communication strategy after the analysis is complete.

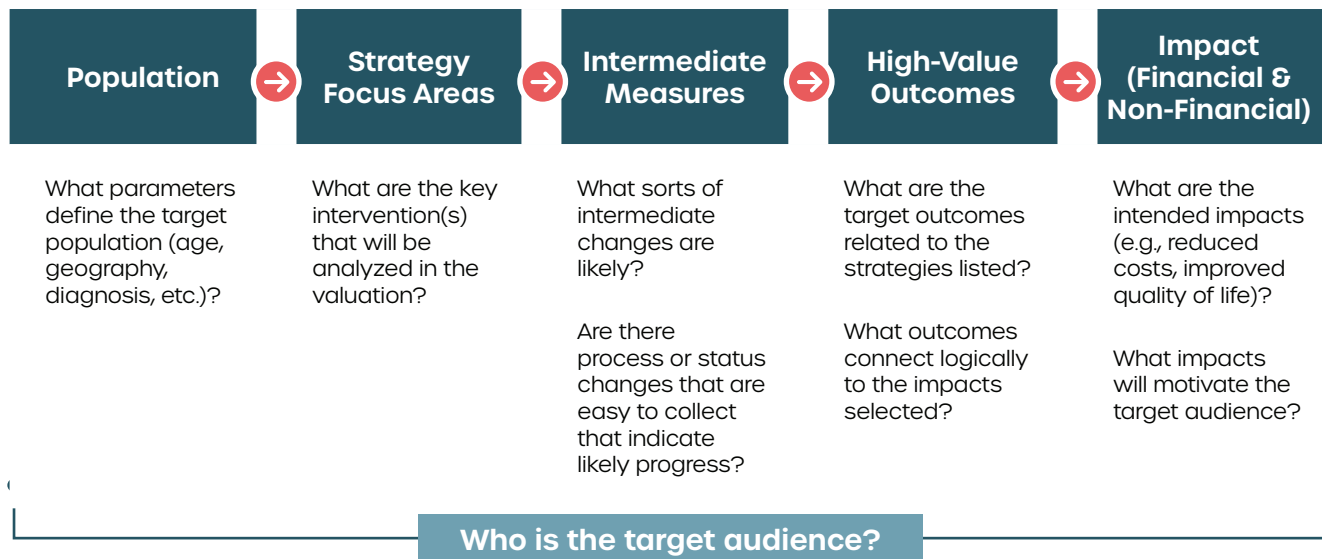
# SECTION 4

## Scoping

### Developing the logic model

The logic model is meant to set key conceptual parameters for the valuation. When it is complete, the logic model should be a digestible representation of how the intervention supports the valuation concept.

The valuation logic model flows from left to right through five elements, with one underlying element (Audience). This does not necessarily mean that “population” is the first element to be filled out. Usually, it makes sense to start with what is most certain and build out from there. In some cases, this may be the strategies that are in place or the impact to which the collaborative is committed. Regardless of starting place, the logic model process is inevitably iterative; clarifying one element leads to modifying others to achieve alignment across all elements.



#### EXAMPLES FROM THE FIELD

### FILLING DATA GAPS

The **Santa Clara County Getting to Zero (GTZ)** team wanted to explore the financial and health impacts of their current PrEP navigator program and the implications of expanding their program, specifically for the County’s budget.

The valuation team found a publicly available PrEP navigation effectiveness model from researchers at John Hopkins University, and it was similar enough to use for GTZ with modifications.

However, some GTZ program parameters had not been established, including the optimal caseload for each navigator. The valuation team explored different scenarios to land on a reasonable estimate, balancing the data available, literature, and expert opinion.

## Literature Review

A scan of the literature can help: 1) improve familiarity with other relevant findings generally, 2) identify whether similar valuations have been completed to date and their findings, and 3) provide relevant information that could be used in the valuation in the absence of available local data or for events that are projected to occur in the future. See the example on the following page for an illustration of how existing literature and data can be used to make a compelling value case. Broadly, the steps of a literature scan include:

- **Identifying the goal of the literature review** and the main research questions.
- **Determining inclusion and exclusion criteria** (e.g., population characteristics, time period, outcome measures, study design, location of studies) to help narrow down what studies are relevant to the valuation and to the program or strategy.
- **Setting search terms** that are specific enough to yield relevant results, yet not overly narrow. If you try a search term and get thousands of results, chances are, the search is too broad and more specific search terms are needed. Use the advanced search function to limit key terms to the title or abstract and narrow the time period to more recent publications. PubMed and Google

Scholar are generally sufficient for this type of literature search.

- **Reviewing literature** while considering:
  - » **Does this research or inquiry's study population show differences from the target population that may make it an incongruent comparison?** For example, was the study focused on a rural population while the collaborative is based in an urban setting?
  - » **Does this research or inquiry's strategy or activity mirror the collaborative's strategies and activities?** If not, are the differences pivotal to the results? Are there ways to adjust for these? For example, perhaps the study features a nurse in the role of primary care coordinator but the collaborative's has community health workers (CHWs) playing that role. Can the valuation team find evidence that indicates CHWs achieve similar or better care coordination results?
  - » **Does this research or inquiry use strong research methods and/or methods that meet the standards the valuation audiences would require?** Projects and initiatives will not always publish findings in peer-reviewed publications. Self-published results, findings from applied research centers, policy briefs, and case studies may prove relevant to the valuation. That said, peer-reviewed articles generally indicate more rigorous

studies that have stronger predictive value. The valuation team or team member focused on the literature search may want to set a criterion that some of the evidence used will be from peer-reviewed sources.

- » **Does the research include results that may be useful for the valuation model?** Studies that demonstrate results on outcomes and impacts that are different from those identified in the logic model are unlikely to be useful. There are some cases, however, when it is necessary to build a logical chain in order to get from interventions to impact. For example, a diabetes prevention initiative that wants to demonstrate health care cost savings may need to begin by establishing that their interventions are likely to create change in a proximal factor (such as physical activity levels) that can then be linked to reduced rates of diabetes and lastly to cost savings associated with those rate reductions.
- **Extracting useful information** to inform the valuation approach or model: While reviewing literature, document key findings that could be useful for the valuation in a structured format such as an Excel spreadsheet. On the sheet, use column or row headers to extract specific study details for later review such as: population focus, intervention description, and results summary.

**EXAMPLE: DATA FROM MULTIPLE SOURCES**

## POTENTIAL BENEFITS OF A HYPOTHETICAL WALKING AND CYCLING TRAIL

This hypothetical example of a cost-benefit analysis illustrates how data from multiple sources can be integrated to demonstrate multiple benefits of a single project or intervention.

**Project:** Construction of a five-mile walking and cycling trail through a county park on the edge of a medium- sized metropolitan area. The primary goal of the project is to provide new recreational opportunities for area residents. The county also hopes the trail will attract visitors from outside the area.

BENEFIT	CALCULATION	ANNUAL VALUE	10-YEAR PRESENT VALUE <sup>i</sup>
Health care costs averted	4,563 users newly active trail users x \$482 health care savings/each	\$2,199,125	\$18,758,982
Environmental benefits	18,250 trail users x 3 visits per year x WTP of \$2.00 = \$109,500	\$109,500	\$934,057
Increased property values <sup>ii</sup>	200 homes within half mile of trail x \$5,000/house price premium	\$1,000,000	\$1,000,000
New economic activity	9,125 trail users from outside county x 3 visits per year x \$13.54 spent per visit = \$123,553 (direct affect) + \$123,553 x 2.1 (indirect affect)	\$383,014	\$3,267,187
<b>Total Benefits</b>		–	<b>\$22,960,227</b>

*i Discounted at 3%*

*ii One-time benefit. This example does not calculate the revenues generated from increased property values.*

### Benefit Information (from the literature and local government statistics):

- The annual average health care costs saved per newly active trail user is estimated to be \$482.
- Increases in physical activity levels decrease the risk of chronic health conditions such as diabetes, cardiovascular disease, and depression.
- There is a price premium of \$5,000 for homes located within a half mile of a recreational trail.
- Average willingness-to-pay (WTP) for each trail use - \$2.00
- Analysis of satellite photos showed 200 homes located within a half mile of the trail.
- The county estimates that, for every dollar spent locally by visitors from outside the county, another \$2.10 in economic activity is generated.
- Estimated annual number of trail users - 18,250; 25% of users will be newly active.
- On average, recreation users from outside the county will spend \$13.54 on food, beverages, and other purchases from local stores per trail visit.

## SECTION 5

# Model Development & Analysis

The next step in the valuation process is the most complex and time consuming. Although, as our health economist partner, Dr. Anne Haddix, likes to say, “It’s just arithmetic.” However, it is useful to have a team member with some valuation experience or an outside expert for this stage.

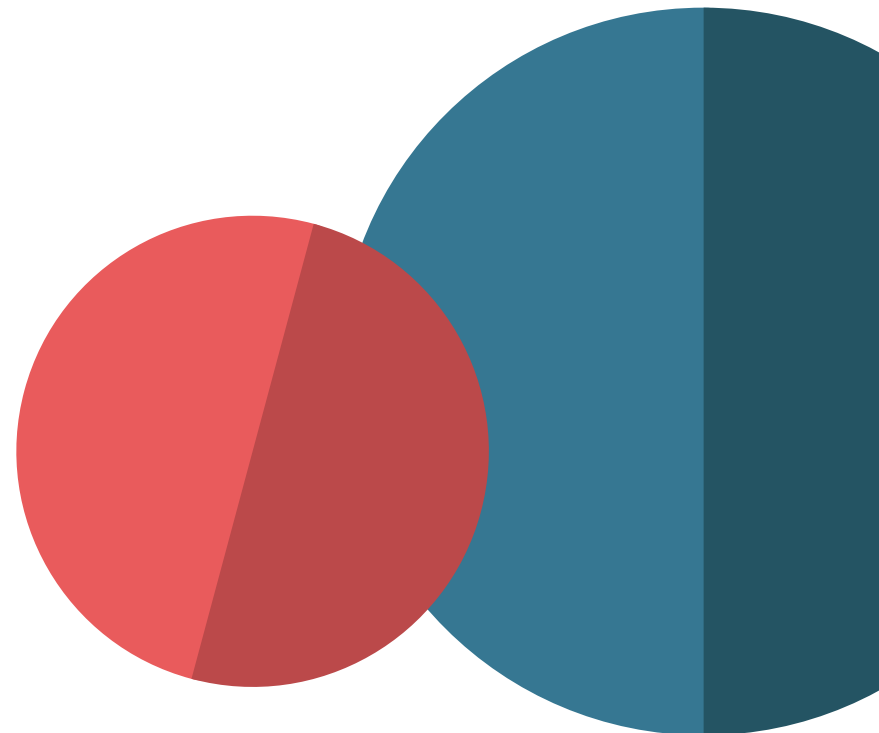
### Selecting a modeling approach: What question is the valuation trying to answer?

Choosing the right approach will depend on a variety of factors, most importantly, what is the valuation intending to demonstrate and to whom. The valuation team may start by asking key staff and collaborators whether one of these guiding questions captures the right valuation question:

- *Why should we address this problem or invest in potential solutions? (Consider a burden of disease analysis)*
- *Once we decide to focus on a specific condition or issue—what are the cost effective interventions or approaches available to address that condition or issue? (Consider a cost-effectiveness analysis)*
- *How will these activities impact our budget? (Consider a budget-impact analysis)*

**“It’s just  
arithmetic.”**

- Dr. Anne Haddix





Below, we describe in more detail three of the most common types of analyses that include financial and health outcomes.

## Burden of disease analysis

Why should we address this problem or invest in potential solutions?

- *How does it compare with other problems that we're tackling?*
- *Is this the right place to be focusing our energy?*
- *Can we demonstrate to our supporters the potential economic and health impacts from reducing the burden?*

*Burden of disease* estimates health consequences and economic costs associated with a health condition for a given population.<sup>4</sup> Health consequences could include number of infections, premature deaths, and quality adjusted life years lost. Costs could include health care costs, lost productivity, and other social and economic costs. It is a useful form of analysis for prioritizing the health problems in a community. The analysis can also be used to assess the potential health and economic impact of setting a goal to reduce the prevalence of a health condition.

## Cost-effectiveness analysis

What are the cost effective interventions or approaches available to address that condition or issue?

- What is the value of the intervention in terms of net cost per unit of health improvement?
- How does this compare with other interventions for this health condition?
- Are the interventions worth the money and the investment?

*Cost effectiveness* examines the relationship between the costs and health outcomes of intervention(s) expressed as the net cost per additional unit of the health outcome. The CDC describes cost effectiveness analysis as “ [comparing] an intervention to another intervention (or the status quo) by estimating how much it costs to gain an additional unit of a health outcome, like a life year gained or a death prevented”.<sup>5</sup> Cost effectiveness does not consider the implementers’ available budget or who captures any potential savings.

## Budget-impact analysis

How will these activities impact our budget?

- Will the intervention have a negative or positive impact on the budget over a 2-, 5-, 10-year period?
- What would be the cost of the intervention for the target population in my jurisdiction? Within the current budget, how many of the interventions from those listed above are affordable?
- What health impact will the budget for health interventions produce?

*Budget impact* estimates the financial impacts of an intervention for a specified population within a defined period of time. It often takes the perspective of a single payer, for example, the local government or the state Medicaid program. In plain language, a budget impact analysis assesses whether implementing an intervention will have a negative or positive impact on the payer’s budget within the specified time period.<sup>6</sup> Often, it is performed along with a cost-effectiveness analysis. A prominent performer of budget impact analyses is the Congressional Budget Office, which assesses whether proposed legislation will cost or save the government money.<sup>7</sup>

## Building the valuation model

After choosing an approach, the team will need to build the valuation model. Building a model requires answering a series of questions such as which software to use and what parameters the model will include. It also requires an understanding of the algorithms for producing the results of the valuation model.

All of the types of analysis described in this guide can be constructed using Excel. We have done this to make valuation as accessible as possible. There are limitations

to Excel, however, especially when exploring how changing model parameters affects the results. This is known as sensitivity analysis and is a critical part of the process, especially when data is limited. Sensitivity analyses can be performed in Excel, although the process requires specialized expertise. Decision analysts often use specifically designed decision software such as TreeAge and At-Risk. The software improves the efficiency of the process, performs more statistically sophisticated analyses, and produces excellent graphical representations of results. However, the software is expensive and requires expertise to use. If the team is

engaging a valuation expert, they are likely to have access to decision software.

The valuation team may build a simple spreadsheet model for a burden of disease analysis or a sophisticated probabilistic decision tree for a cost-effectiveness analysis. A budget-impact analysis may include both. The type of model will impact both the time and resources needed for the analysis. There are several books and online resources available to explain decision models for the public health practitioner.<sup>8, 9, 10</sup> However, it is recommended to have someone with valuation experience on the valuation team.

## VALUING COLLABORATIVE INFRASTRUCTURE

MSCs are about creating more than a sum of parts--accomplishing things together that would be impossible working separately. That takes infrastructure including governance, facilitation, data sharing, evaluation, etc. However, measuring the value associated with infrastructure for a specific collaborative, strategy, or set of interventions can be challenging. Three strategies that MSCs can employ are to:

- **Cite the growing literature** associating strong collaborative capacity and health improvement networks with a range of positive health outcomes.
- **Identify process outcomes** only achievable through effective infrastructure. For example, trust and social capital can be measured over time and are indicators of infrastructure strength and potential for impact (e.g., trust could be measured through periodic surveys of MSC partners and collaborators). More narrowly, health care partners who are investing in screening and referral for social needs may be interested in seeing a closed loop on such referrals. That will only be achievable with effective infrastructure.
- **Build the cost of infrastructure into programmatic models.** This is easier to do when the target outcomes are substantial changes in community conditions or health outcomes (e.g., new walking path or 5% reduction in prevalence of a chronic condition) but can also work with narrower interventions. It may lead to a reduced ROI but paints a true picture of what is necessary and enables discussion of broader benefits of the collaborative

The model parameters guide the data requirements. Parameters may include demographic specifications; intervention costs; short-, intermediate-, and long- term timeframes; and specific health and financial outcomes. After identifying parameters, the valuation team can proceed with assembling the data for the model from both existing program data and data extracted from the literature.

## Identify data

Reliable data directly relevant to the strategy is critical to the valuation model. For example, the valuation team may need accurate information on the population such as the size and demographics of the target population and the size of the cohort receiving the intervention (e.g., the number of patients a patient navigator could see in a quarter). Local data could also include program details like the program cost and evaluation or outcome data (e.g., health outcomes, process indicators, quality of care or quality of life outcomes, and survey data on client or patient experience).

To supplement program-specific data, other local data may also be useful (e.g., data on health outcomes and indicators collected on the local population). If local data is not available, consider the use of state or national data to establish an estimate of local conditions (e.g., the California Health Interview Survey, the Office of Statewide

Health Planning and Development, and the California Healthy Places Index).

Once the team has taken stock of the data available, identify what data gaps remain. There are a number of options for filling data gaps: the team could conduct a more extensive literature search using terms and parameters specific to the missing data; search for related data that can fill the gap (for example, efficacy of a similar intervention targeting a different condition); or, in cases where the missing data is program cost, estimate costs based on reasonable assumptions of staffing levels, supplies, and other budget line items. When data simply are not available locally or from the literature, the valuation team could convene experts and practitioners to estimate missing data elements.

## Perform analyses and interpret results

Once the team has constructed the model and populated the parameters with the values selected, it is time to analyze the model and interpret the results. This part would most likely be done with a valuation expert. However, we have provided Excel models for the three types of analyses described above. All of the formulas used are shown in the Excel files. Our cost effectiveness analysis also shows a schematic for the decision tree upon which the Excel model was developed.

## VALUING A PORTFOLIO OF INTERVENTIONS

Collaboratives usually implement complimentary and reinforcing interventions (sometimes referred to as a portfolio of interventions). It can be tricky to conduct valuation with multiple interventions if:

- The interventions are too loosely connected.
- The intent is to understand the potential impact and value of interventions that have never been tried together. The level of analytic complexity may be beyond the capacity and resources of an MSC.

However, valuation of a portfolio of interventions is possible if:

- There is some evidence base for the effectiveness of the interventions together (e.g., a local pilot, an example from the literature).
- The interventions are all focused on a small number of outcomes. In this case, a valuation model could be developed based on reasonable assumed improvements in those outcomes.

To account for uncertainty in the quality and accuracy of the data, the team can perform sensitivity analyses on those parameters to ascertain how changes in the selected values affect the results of the analysis. The team can create a parameters sheet in the Excel model and link each of the values to the model to see them organized in one location. In a correctly linked Excel model, the user can change values in the parameters sheet and the model will recalculate the results and report the new results in the results table. This is a quick and easy way to perform basic sensitivity analyses.

A full analysis will not only include the “base case” results but also the findings from the sensitivity analyses. Organizing the findings into results tables can be useful for team discussions and stakeholder presentations. The table to the right includes results from the Santa Clara County Getting to Zero analysis. This table does not include the entire model or set of calculations, but it does demonstrate the high-level logic of the analysis and key findings.

It is important to consider uncertainty in the value of certain parameters on the results of the analysis. Various factors can influence the uncertainty – inaccurate parameter estimates, changes in the target population over time; local, national, or

global events; changes to health care costs due to policy or technology changes; etc. The model will not be able to account for all of this uncertainty—there are simply too many possible factors and changes that may not be predictable. However, the valuation team

can take steps to be transparent about what the model assumes remains constant, the conditions under which the model remains relevant, and the factors for which the model cannot account.

**EXAMPLES FROM THE FIELD**

**Results from a Budget Impact Analysis of the Santa Clara County Getting to Zero Initiative’s PrEP Navigator Program<sup>11, 12</sup>**

	NO PREP GROUP	MOD EFFEC PREP GROUP	EFFECTIVE PREP GROUP	TOTAL	
<b>NO PREP NAVIGATOR</b>	Group Size	750	150	1000	
	New HIV Infections	40	5	45	
	PrEP Cost	\$0	\$1,093,350	\$728,900	\$1,822,250
	HIV Infection Cost	\$14,618,999	\$1,657,662	\$160,023	\$16,436,685
	Total Health Care Cost				\$18,258,935
<b>PREP NAVIGATOR</b>	Group Size	100	450	450	1000
	New HIV Infections	5	14	2	21
	PrEP Cost	\$0	\$3,280,050	\$3,280,050	\$6,560,100
	Cost for 2 PrEP Navigators	--	--	--	\$284,000
	HIV Infection Cost	\$1,949,200	\$4,972,987	\$720,104	\$7,642,292
Total Health Care Cost				14,202,392	

KEY FINDINGS	CALCULATIONS	TOTAL
Health Care <b>Savings</b> w/ PrEP Navigator	(\$18,258,935-\$14,202,392)	<b>\$4,056,543</b>
Net <b>Savings</b> of PrEP Navigator Program	(\$4,056,543-\$284,000)	<b>\$3,772,543</b>
HIV Infections <b>Prevented</b> using PrEP Navigator	(45-21)	<b>24</b>
<b>Savings</b> per HIV Infection Prevented	(\$3,772,543/24)	<b>\$156,840</b>

## SECTION 6

# Reviewing and Refining the Model

Once the valuation team has an initial start to the model or a first draft, set up a time to review the draft with key partners. The review of the model should include the full valuation team, including varied perspectives (such as program planning and management, service delivery and clinicians). They can provide feedback on whether the data sources and the specific data, the target population, and other key pieces of the model are reasonable and defensible.

### Review key assumptions

Ahead of reviewing the model, call the team's attention to specific key assumptions made. Is there agreement on the assumptions and the route taken to reach these assumptions? Aim to solicit the team's input on assumptions like:

- the size of the target population;
- the reach of the intervention or approach (e.g., how many services provided or how many people reached);
- the number of staff, providers (e.g., patient navigators, community health workers, health educators, etc.) and any other important assumptions about providers (e.g., the number of patients they can care for in a defined time period, etc.);
- the time period of the valuation; and
- the budget and cost of the program or strategy being evaluated.

### Check the results

At a surface level, do the model results make sense? Does the magnitude of results seem in line with the scale of the program, intervention or strategy? Other questions to consider when reviewing initial model results include:

- Are the results clearly presented? If not, how could the presentation of results be altered?
- Is it clear which results are the key findings?
- Does the team need to call on additional subject matter expertise for input?

### Adjust the model

Based on the input the team receives reviewing the results, refine the model further by adjusting the parameters and underlying assumptions. At this point, it may be necessary to revisit data sources or search for additional data to confirm or refine values in the model. Once the model has been finalized, conduct a closing review with the

full team to check for accuracy, relevance for the specified audiences, and responsiveness to the valuation questions.

### Identifying key findings

A lot of interesting information likely emerged from the analysis, so it is important to identify which findings are the most meaningful. For example, it may be tempting to focus exclusively on the financial or economic impacts. In some cases that may be appropriate, but in others that might not be the most compelling information for the audience. For example, the audience may also be compelled by non-financial impacts that highlight the moral and social value of the collaborative's activities. Or they may be interested in understanding process outcomes that indicate ability to collaborate effectively. If the model does not produce this information it is possible to connect the results to other outcomes using other information. This might include research from other locations or quotes from program leaders and participants.



## SECTION 7

# Communication of Results

The selection of audience and goals for the valuation is discussed in Section 3: Valuation Clarification. Now that the analysis is complete, the next step is deciding how to communicate the findings.

## Communication method

There are numerous options for formatting the results into a digestible and meaningful package. When selecting the approach and format, consider:

- How much content will be needed to contextualize the findings?
- What will the audience be expecting? What will resonate the most? Will they be receptive to visuals, narrative, or quantitative results?
- What resources are available to create communication materials? This includes design skill, software, time, and other factors.

## Pros and Cons of Four Primary Communication Formats

FORMAT	PROS	CONS
<b>PowerPoint slides</b>	<ul style="list-style-type: none"><li>» Accessible to make and share</li><li>» Easy to integrate narrative and other model results</li><li>» Can be visually compelling and hold a lot of information</li></ul>	<ul style="list-style-type: none"><li>» Length might deter readers</li><li>» If sending as a standalone instead of accompanying a verbal presentation, critical content may be missed</li></ul>
<b>Infographic or fact sheet</b>	<ul style="list-style-type: none"><li>» Visually engaging</li><li>» Memorable and easy to share</li><li>» Can incorporate a collaborative's branding</li></ul>	<ul style="list-style-type: none"><li>» Time investment for development</li><li>» Limited information can be shown</li><li>» Adding narrative elements for context can be difficult</li></ul>
<b>Short report or policy brief</b>	<ul style="list-style-type: none"><li>» Doesn't require graphic design skills</li><li>» Easy to integrate narrative</li><li>» Easy to share</li></ul>	<ul style="list-style-type: none"><li>» Not visually engaging</li><li>» Length even if short can deter people from reading</li></ul>
<b>Information tables</b>	<ul style="list-style-type: none"><li>» Good for displaying large amounts of quantitative information</li><li>» May appeal to some audiences that just want to see the results</li></ul>	<ul style="list-style-type: none"><li>» Can be confusing without context</li><li>» Difficult to digest and understand numbers without context and narrative</li></ul>



## Creating a dissemination plan

Before results materials are finalized, the team needs to begin planning dissemination to the target audience. Complete guidance and tools for dissemination and marketing planning are beyond the scope of this guide, however here are few important considerations:

This is a good time to connect with communications assets within the collaborative for support developing and implementing a strategy.

Align the dissemination plan activities and format of communications materials (e.g., create a set of PowerPoint slides for a group presentation but not for one-on-one meetings or email outreach).

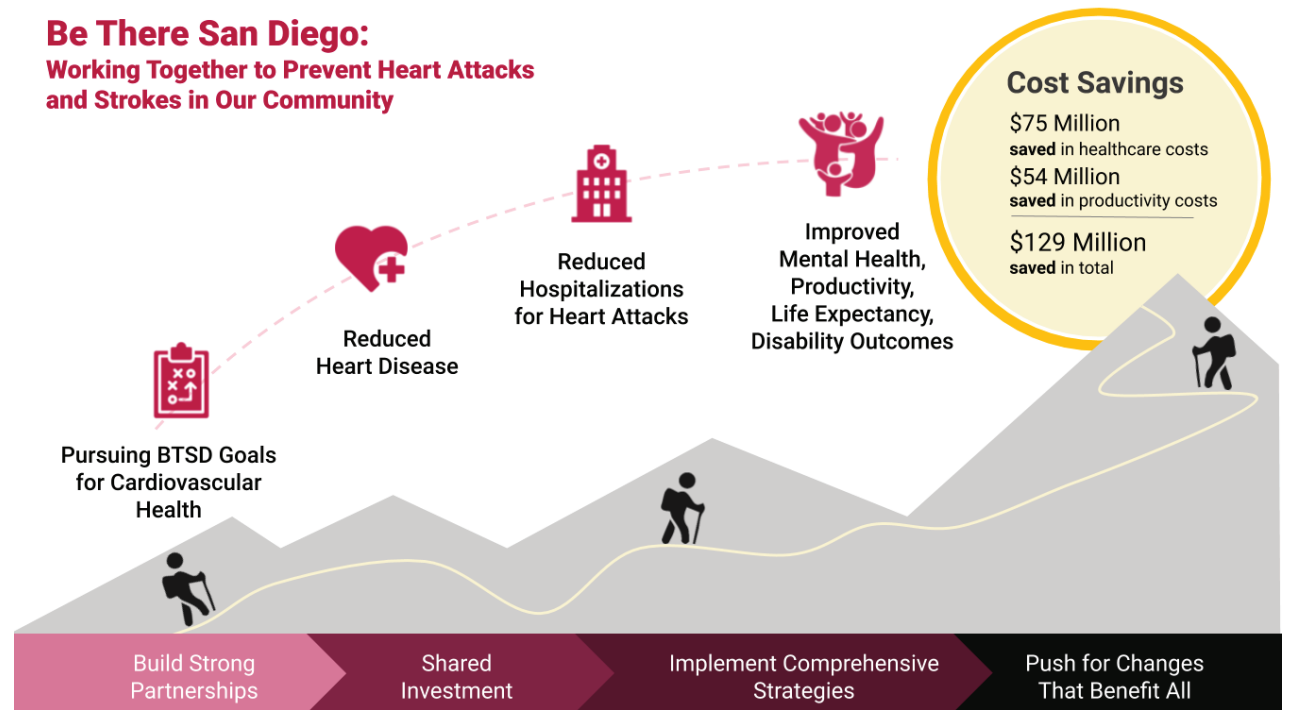
Use multiple methods to increase visibility such as setting up a meeting to present the results, posting on organizational websites, issuing a press release, posting on social media, and conducting individual outreach.

### EXAMPLES FROM THE FIELD

## Graphic representation of the Be There San Diego results

The primary focus of the valuation project was to understand the potential business-sector cost savings associated with reduced heart attacks over 10 years. In order to emphasize the comprehensive process and collaborative-building activities, the results are placed in a broader context.

### Be There San Diego: Working Together to Prevent Heart Attacks and Strokes in Our Community



# Conclusion

Based on our experiences with the partners described in this guide, we continue to see the potential for valuation as a tool for clarifying the impact of multi-sector collaborative efforts.

However, even after simplifying and streamlining processes, undertaking valuation requires substantial time, expertise, and a structured process. The key themes that are woven throughout this guide include:

- **Developing a clear and specific valuation question targeted at a specific audience:** The question should state the target population, the intervention and health problem, and elements of scope including time scale and perspective.
- **Setting realistic expectations and keeping an open mind:** valuation will not automatically reveal savings or short-term ROI but may reveal significant health and social benefits as well as policy and operational implications.

- **Leading with vision, values, and outcomes:** financial info from a valuation should be supporting information not the sole rationale for sustaining or expanding an initiative or intervention.
- **Preparing for a team effort:** valuation requires varied expertise, regular meetings, and “homework” with iteration and refinement.

This guide is intended to demystify valuation, but that does not mean that a novice will be able to conduct a valuation based solely on the information and guidance provided. It is also not always necessary to contract out valuation work to high-priced experts.

There are potential valuation team models that engage internal expertise from the collaborative partners or obtain external advice in support of an internal team. Given the complexity and inevitable nuance that arises in valuation work, it will always be worthwhile to have a team member with valuation experience engaged to help with troubleshooting.

While the partnerships reflected in this guide intentionally represent a range of valuation topics and approaches, they are also limited in scope.

Based on the time parameters of the project, we selected partners who had intervention models developed, a prevention and equity focus, clear valuation questions, and audiences in mind. That leaves a few critical areas for further exploration: how to more fully develop the strategies for marshaling evidence when a valuation is not feasible; how to develop an intervention strategy from the outset so that valuation is a natural output; and how to more explicitly value emerging outcomes that are fundamental to MSC work such as “increased collaborative efficacy” and “improved health equity.”

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# Valuation Worksheets

## Section 1: Is Valuation the Right Approach?

### 1. Conceptual and development considerations

Reflecting on these questions at the outset could help avoid a time-consuming and ultimately fruitless foray into valuation if it is not the right approach for the issue at hand.

**Is there a clear question that valuation could help answer?**

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**Does your multi-sector collaborative strategies actually align with the question?**

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**Is there a target audience who are likely to be receptive to the results?**

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## 2. Practical considerations

Additionally, there are practical considerations to consider. Here are a few key questions for reflection:

**Is the collaborative stable?**

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**Do staff have adequate time to participate and manage a valuation process? How much time outside of meetings can people commit to developing the model, do research, disseminate, etc.?**

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**Is there adequate evidence (either locally or in the literature) to develop a valuation model?**

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# Section 4: Valuation Scoping

## Logic Model

Filling out this basic logic model can help to ensure that the elements align and cohere and that valuation team members share an understanding of the question and focus. The logic model can be revised as the valuation develops.

Population	Strategy Focus Areas	Intermediate Measures	High-Value Outcomes	Impact (Financial & Non-Financial)
Target Population	Strategies	Measures	Outcomes	Visions and Goals
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

Who is the target audience?

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### Looking at your logic model, consider:

- Is this an accurate portrayal of your intervention and impacts?
- What is missing from the model? Are there other aspects or nuances that need to be included?
- Do you need to engage additional people (content experts, physicians, on-the-ground implementers) to review?

# Valuation Resources

## Win-win

The Win-Win Project, developed by the Center for Health Advancement at the Fielding School of Public Health at UCLA, provides an economic analysis of public health and social needs interventions. The project aims to inform policy and program decisions by showing health, crime, and education impacts and associated monetary value of evidence-based interventions. The interventions are sorted by sectors, stage in the life cycle, and the Robert Wood Johnson Foundation's action areas. The results could be very useful to a collaborative that is implementing interventions that are closely aligned with those that Win Win has analyzed.

## Cost-Effectiveness of Chronic Disease Interventions

This website hosts a collection of evidence-based intervention cost-effectiveness fact sheets for several chronic health issues including diabetes, high blood pressure, and tobacco use. The fact sheets introduce some of the shared language and key outcomes various audiences might be interested in seeing. It is also a good example of how to arrange and communicate valuation findings.

## Economic Burden of Chronic Disease in California

This calculator provides the estimated cost of six chronic illnesses in counties in California by age, race and ethnicity, and gender. It was developed to help local organizations and government agencies determine estimated costs associated with common chronic diseases. For collaboratives in California, this resource could provide baseline cost data that could serve as the basis of a basic ROI calculation. For collaboratives outside California, it may be useful to find a county that is similar to the community where you are focused and use that data as an estimate.

## Prevention Effectiveness: A Guide to Decision Analysis and Economic Evaluation

This book, co-authored by one of this guide's writers, Dr. Anne Haddix, provides an in-depth look at creating and understanding valuation. It covers decision and economic analysis concepts, methods that best serve population health efforts, and how to use findings for policy change. Your team can use this resource to expand on the valuation process outlined in this guide and learn to build a valuation model.