

## Calculating the Cost of CAPABLE

**Defining Terms.** It is helpful to define terms on the *types of costs* first before going any further to answer this question. We will briefly discuss the following terms, give examples, and explain how to use this in your operational analysis to better understand program success and evaluate return:

- start-up costs
- direct operating costs
- indirect operating costs
- fixed vs. variable

Start-up costs are usually one-time expenses to get the program ready to launch and maintain the program through the defined time period (e.g., two years) at the desired scale (e.g., 100 participants per year). For example, one-time expenses may include:

- Cost of a technical consultant or subject matter expert such as legal advisor or compliance officer to review CAPABLE consent to participate form (if needed), release of information form (if needed) and data privacy processes for HIPAA compliance.
- I.T. or software vendor program costs to create or modify existing data/information platform to incorporate CAPABLE forms and design standard reports.
- Purchase of new hardware or software, such as portable printer/scanner or database management software.
- Bulk purchase of participant educational material.

It is important to identify and calculate your one-time, start-up costs and separate them from your general operating budget for CAPABLE.

**Start-up Costs.** Start-up costs do not reoccur annually. They are usually one-time investments or periodically are incurred—more akin to capital expenses that happen on a defined timeframe according to a schedule set in advance, such as purchase of equipment or upgrades to avoid obsolescence or three-year renewal of licenses. If the organization eventually decides to substantially increase the program reach or begin CAPABLE service in a new location—then the start-up expenses may be repeated.

**Direct Operating Costs.** These are the expenses associated with directly serving each participant—including the 10 CAPABLE RN/OT visits (time in the home, transportation to/from the home, documentation time, etc.), handy worker expenses for repairs and modifications in the home, supplies and equipment for the participant, printed educational or reference materials given to the participant. They must be in the operating budget for the program.

**Indirect Operating Costs.** These are expenses of the CAPABLE program but not tied to directly serving a participant. This can include overhead costs, such as CAPABLE PM time, administrative support or data entry time, attendance by the OT and RN in operational team meetings and Office Hours, special data tracking or reporting platform subscriptions (e.g., REDCap), program marketing or advertising costs, data analytics time to set up or run special reports or interpret CAPABLE data, cost of an independent evaluation or allocated internal evaluation costs, time to prepare and issue grant reports (if CAPABLE is grant supported), ongoing legal expenses (e.g. for monitoring of Business Associate Agreement (BAA) or other legal agreement), technical support (e.g., for ongoing HIPAA compliance review), and other CAPABLE-related allocated expenses incurred by the organization around operating the program. Any indirect operating costs that are tied to CAPABLE and *would not be expended otherwise* should also be in the operating budget for the program unless the organization has decided to absorb these expenses in other parts of the operating budget.

## Budget – Direct & Indirect Costs

### Direct Costs

- Johns Hopkins Training and licensure costs (Start-up only)
- OT and RN time
- Mileage/transportation expenses
- Handy worker time (labor) and home repair or modification costs
- Other home functional adaptive equipment or supplies
- Costs of participant materials, printing



### Indirect Costs

- Program administrator/manager time dedicated to CAPABLE
- Marketing, recruitment, outreach and screening expenses
- Legal/HIPAA costs such as BAAs, ROI/consent (usually Start -up only)
- Data/information sharing platforms and data tracking, aggregation
- Evaluation costs
- Additional insurance, HR, accounting, analytics, if needed

## Organization ABC Example

An illustration showing these three types of costs is shown in Table 1. In this simplified example, we built in specific assumptions:

- (1) the average home repair and supplies cost per participant is \$1,000,
- (2) the CAPABLE program grows modestly in number of participants served from Year One (60 participants) to Year Two (100 participants), and
- (3) the existing staff are able to handle the increase in caseload without adding new OT or RN time.

**Year One.** In this example, the OT had a base salary of \$65K, with 30% benefits and was full-time for 11 months of the year (she had other duties to assist with start-up). The RN in this example was ½ time in year one, so the RN salary for Year One was \$35K with an additional 30% benefits. The handy worker labor plus supplies and repairs budget was set at \$1,000 per person for a total cost of \$60,000 since 60 people were served. There were some start-up costs including the training/licensure fees and a programmer to modify the electronic record system.

<b>Table 1. Organization ABC: CAPABLE Initial Implementation for 60-100 participants per year</b>			
Type of Cost	Description	Year One (N=60)	Year Two (N=100)
<i>Start-up</i>	JHU license and training fees; I.T. programmer time	\$27,000	\$0
<i>Direct</i>	OT, RN, Handy worker, supplies, equipment	\$180,000	\$255,00
<i>Indirect</i>	Program manager (% of time); partnership meetings; marketing and referral outreach; administrative support for screening and scheduling, data entry; analytics/evaluation; REDCap subscription; BAA and HIPAA monitoring and compliance expenses including firewalls	\$60,000	\$60,000
	Total	\$267,000	\$315,000

*[Note we rounded the figures for ease of display]*

In Year Two, there were no start-up expenses, and the same indirect expenses. The RN time went up to .8 FTE for the year and the handy worker expenses were still \$1,000 per person, but the total is now \$100,000, as 100 people were served.

**Fixed vs. Variable** - Fixed costs are, as the term implies, expenses that will be incurred regardless of volume –that is, whether one or one hundred participants are served. They can be start-up only, or ongoing. Examples of fixed costs include:

- Program Manager time
- Administrative support - screening, scheduling, data entry (can be variable if % of FTE is not set in the budget)
- OT, RN staff (if employed and cannot be re-assigned)
- Training costs for OT and RN on CAPABLE program
- Licensure fee
- Marketing expenses
- Legal and I.T. costs
- Evaluation costs

Some organizations set a target per participant budget for the home modifications component. This helps make the cost per participant more predictable.

Variable costs are those that are tied to each unit of service and therefore go up and down depending on the number of participants served. For example, travel costs of the OT and RN to the participants' homes rise as the number of people served rises. The costs of supplies, equipment, home repair costs will also vary by participant if the handy worker is paid per participant served/projects completed.

If the organization contracts for OT and RN time with an outside provider and these individuals are paid by the number of visits then the labor/input costs of these clinicians can be variable too.

There is some flexibility in whether an input cost is fixed or variable, based on how the organization has set up the staffing and purchasing model and how much the organization can flex each resource to use for other programs.

A companion question around cost often posed by those exploring CAPABLE is:

### **What is the cost per participant?**

For CAPABLE providers with sustained programs, direct operating costs of CAPABLE were about \$3,200 per participant, with about \$1,300 of that associated with home repair, equipment, and supplies expenses and the remainder pertaining to the OT and RN component. This did not include all indirect operating expenses, such as marketing, data entry, data analytics, or administrative support.

Cost per CAPABLE participant is affected by the operating decisions made and how CAPABLE is budgeted. If the cost of internal support—such as accounting, data analytics, compliance—are placed elsewhere in the organization’s operating budget and are not “charged back” to CAPABLE—then the cost per participant is lower. At the beginning of CAPABLE, most organizations are focused on covering program’s direct operating expenses and are less concerned about indirect expenses.

If this is the approach of your organization, then you would calculate the cost per CAPABLE participant by adding your start-up and direct operating costs and dividing by the number of participants served. See the example in Table 2, where we’ve taken out the indirect costs entirely (as were shown in Table 1).

<b>Table 2. ORGANIZATION ABC - Cost per CAPABLE Participant: Year 1 - Direct and Start-Up Only</b>				
	Start-up	Direct Operating	Total	60 Participants in Year One
Labor	\$2,000	\$120,000	\$122,000	
Non-labor	\$25,000	\$60,000	\$85,000	
<b>Total</b>	<b>\$27,000</b>	<b>\$180,000</b>	<b>\$207,000</b>	<b>Cost per Participant: \$3,450</b>

As the volume of service increases, the costs (fixed and start-up) are spread over more people so the unit cost per participant goes down. That can be maintained until the volume is high enough that more staffing capacity are required. The Year Two direct AND indirect operating costs are shown below.

<b>Table 3. ORGANIZATION ABC - Cost per CAPABLE Participant: Year 2 - Direct and Indirect</b>			
Type of Cost	Description	Year Two (N=100)	100 Participants in Year Two
<i>Direct</i>	OT, RN, Handy worker, supplies, equipment	\$255,00	
<i>Indirect</i>	Program manager (% of time); partnership meetings; marketing and referral outreach; administrative support for screening and scheduling, data entry; analytics/evaluation; REDCap subscription; BAA and HIPAA monitoring and compliance expenses including firewalls	\$60,000	
	<b>Total</b>	<b>\$315,000</b>	<b>Cost per Participant: \$3,150</b>

However, many organizations will not include indirect operating costs when they consider resources needed to scale up CAPABLE. Therefore, in Table 4, we've taken out the indirect expenses and show only direct operating costs—which now spread over 100 participants. This brings the cost per participant down to \$2,150.

Using this figure as a guide, the organization could calculate how much it would cost to scale up to 200, 300, or more participants and what level of payment or funding would be needed to scale the program in units of 100 people served in one year.

<b>Table 4. ORGANIZATION ABC - Cost per CAPABLE Participant: Year 2 - Direct Costs Only</b>			
	Direct Operating	<i>100 Participants in Year Two</i>	<i>(The level of staffing is 1.0 FTE OT and .8 RN per 100 people in this example.)</i>
Labor	\$155,000		
Non-labor	\$100,000		
Total	\$215,000		
		<b>Cost per Participant: \$2,150</b>	

*[Note we rounded the figures for ease of display]*