# A Toolkit for Evaluating Childhood Healthy Weight Programs

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# ABBREVIATIONS AND ACRONYMS

**BMI**        Body mass index

**CHWP**      Childhood healthy weight program

**CQI**       Continuous quality improvement

**FNPA**      Family Nutrition and Physical Activity Tool

**HCCQ**      Health Care Climate Questionnaire

**HRQOL**      Health-related quality of life

**IWQOL-KIDS**      Impact of Weight on Quality of Life-Kids

**NCH**      Nationwide Children's Hospital

**NHANES**      National Health and Nutrition Examination Survey

**PCON**      Primary Care Obesity Network

**PECHWB**      Parent Efficacy for Child Healthy Weight Behavior Scale

**POTS**      Perceptions of Teasing Scale

**PSAT**      Program Sustainability Assessment Tool

**RIAS**      Roter Interaction Analysis System

**SDoH**      Social determinants of health

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# Introduction

## SECTION 1    Introduction

# BACKGROUND

You may be here because you are aware that childhood obesity in the United States is a serious

**20**% of children in the US have obesity

problem and want to be part of the solution to help prevent and reduce childhood obesity. Obesity is defined using body mass index (weight in kilograms divided by the square of the height in meters [BMI]) at or above the 95th percentile of the CDC sex-specific **BMI-for-age growth charts**.[1] Results from the 2017–2018 National Health and Nutrition Examination Survey (NHANES) indicate that an estimated 19.3% of U.S. children and adolescents aged 2–19 years have obesity.[2] Childhood obesity also disproportionately affects some racial and ethnic minority populations, with Hispanic and non-Hispanic Black children having higher obesity prevalence than non-Hispanic white children.[1]

In 2017, the USPSTF provided a grade B recommendation for screening for weight status in children and adolescents and offering or referring to intensive behavioral intervention programs.[3] Intensive programs were defined as delivering ≥ 26 hours of intervention contact time over a 2–12 month period. Adherence to evidence-based program recommendations and understanding and addressing the systemic root causes are critical to achieving positive outcomes. However, you may need guidance on how to determine whether your program is achieving its goals. If this sounds like you, then this toolkit may be able to help you enhance your knowledge and skills in evaluating childhood healthy weight programs.

## Toolkit Overview

Program evaluation is a fundamental component of any intervention to improve health, including childhood healthy weight programs (CHWPs). Assessing the impact of such efforts can improve program effectiveness and sustainability, build capacity, and advance population health. A top priority for the National Collaborative on Childhood Obesity Research (NCCOR) is to enhance the ability of CHWP staff and leadership to conduct program evaluations. NCCOR recognizes that it can be challenging for those who implement CHWPs to know how to evaluate their programs.

### DEVELOPMENT PROCESS

To address this need, NCCOR developed this toolkit in collaboration with invited subject-matter experts and CHWP leaders to assist users in understanding and implementing the key areas of program evaluation that can be included across CHWPs, whether they are just getting started or have been implementing their programs for years.

### PURPOSE AND UTILITY

This toolkit will walk users through several focus areas and assist them with selecting appropriate measures to include when evaluating their programs. Focus areas include program-specific factors as well as contextual factors, which can help identify and address barriers and facilitators to successful implementation. Although this toolkit is designed for professionals and practitioners who have an interest in evaluating CHWPs in community-based settings, the information in this toolkit can be

useful in other settings as well. Helpful resources are offered throughout the toolkit and are compiled in the **Resources section**. **Appendix 1** provides a logic model template. **Appendix 2** contains a selected list of process and outcome measures described in the toolkit organized into Level 1 and Level 2 categories for you to choose from, based on your capacity and familiarity with evaluation. On a scale of 1-5, how familiar are you with program evaluation (1 = not familiar at all; 3 = somewhat familiar; 5 = very familiar with evaluation and I feel comfortable conducting program evaluation in general)?

If you selected 1 or 2, you may wish to begin using this toolkit by reading **Sections 2** and **3**. After you had read these sections and the relevant portions in the **Resources Section**, and have taken some time reflect and discuss evaluation of your program with your team, you may wish to proceed further in the toolkit.

If you selected 3 or 4, you may wish to begin using this toolkit by reading **Sections 4** and **5**. These Sections will help familiarize you with some of the considerations when selecting process and outcome measures when evaluating a CHWP. Once you have completed these sections and the relevant portions in the **Resources Section** you can discuss how you would like to build your program's evaluation with your team and proceed from there.

If you selected 5, you may wish to review **Sections 6** and **7**. These Sections will help you think through issues relating to contextual factors and sustainability as they relate to your particular CHWP.

All users of this toolkit will find the considerations on remote evaluation in **Section 8** to be helpful. Users will also find valuable links and further reading in the **Resources Section**. Please be sure to come back to the **toolkit website (www.nccor.org/CHWPtoolkit)** in the future for updates.

# ORGANIZATION OF THIS GUIDE

*A Toolkit for Evaluating Healthy Weight Programs is organized into sections:*

**1  Introduction**

**2  Program Evaluation Overview**

**3  Evaluation Readiness**

**4  Process Measures**

**5  Outcome Measures**

**6  Contextual Factors**

**7  Program Sustainability**

**8  Remote Evaluation of CHWPs**

**9  Conclusion**

**Resources**

**References**

**Appendix 1: Logic Model Template**

**Appendix 2: Selected List of Process and Outcome Measures**

# 2 Program Evaluation Overview

## SECTION 2     # Program Evaluation Overview

## What is program evaluation?

Program evaluation has been defined as "the systematic collection of information about the activities, characteristics, and results of programs to make judgments about the program, improve or further develop program effectiveness, inform decisions about future programming, and/or increase understanding."[4] Program evaluation serves as a means to learn about the impact of your program and how that impact can inform sustainability. All of us are committed to having an impact. That means being attentive to what we do, monitoring how it's going, and then making appropriate changes to improve our efforts. This continuous quality improvement (CQI) approach helps you think about evaluation as a continuous and systematic cycle of collecting data and responding to that data to improve program processes.[5,6] The cycle's components include identifying, planning, and improving. In the context of CHWP's, you may want to ask questions such as:

- What actions will help our program best reach our goals and objectives?
- What can our program do more efficiently?
- What can our program do more effectively?

## Why do I need to evaluate my CHWP?

Undertaking program evaluation is no easy feat, especially when many CHWPs are under-resourced. The idea of adding one more thing to your plate may seem daunting, but we know you are reading this toolkit because you recognize the value of program evaluation. When it comes to your CHWP, the value of program evaluation is extensive. Evaluation can help you do the following:

- Make data-driven decisions about your program
- Identify objectives and goals achieved as a result of your program (among participants as well as providers and the larger system in which the program is being delivered)
- Ensure the time, money and other resources that enable program delivery and attendance are being spent efficiently and appropriately
- Ensure that your program and its activities are being delivered as intended
- Establish and sustain program practices that work
- Make the case for your program to interested parties
- Improve your program if the delivery or resources are not working as intended
- Determine if your program is meeting national guidelines

The University of Kansas's **Community Tool Box** offers additional examples of the ways in which program evaluation can be used.

The value of program evaluation extends beyond single programs. When CHWPs across the country begin to evaluate their programs using similar evaluation frameworks and measures, comparisons can be made across programs to learn about the overall effectiveness of CHWPs. This can allow programs to learn from one another and share best practices. It also allows for the pooling of data across programs to show larger impact.

## What is important to know regarding program evaluation?

When you are ready to conduct a program evaluation, there are several questions that you will need to address. The Community Tool Box highlights these questions:

- What will you evaluate?

- What criteria will you use to assess program performance?

- What performance standards do you want a program to attain for it to be considered successful?

- What conclusions about program performance can you draw based on the available evidence?

- What is important to your institution, organization, or community partner(s)?

You can learn more about program evaluation, including how to frame your evaluation from the Community Tool Box's chapters on **Evaluating Community Programs and Initiatives**.

## How do I conduct a program evaluation?

Now that you know what program evaluation is and why it is important, you may be wondering how to get started. Here we share an example of a framework you can use as a guide to develop your evaluation. A framework is a tool that can help you organize, link, or order key evaluation components to help you develop an evaluation plan. Often, these tools display relationships graphically. Frameworks create a way to understand:

- Evaluation questions

- Evaluation components and their logical order

- Evaluation data sources and data collection methods

One of the most commonly used program evaluation frameworks is the **CDC's Framework for Program Evaluation**. This framework consists of six connected steps (listed below) to help tailor an evaluation of your CHWP. For more information on this framework, refer to the **Overview of the Framework**.

**1** Engage stakeholders

**2** Describe the program

**3** Focus the evaluation design

**4** Gather credible evidence

**5** Justify conclusions

**6** Ensure use and share lessons learned[7]

Each step in this framework has multiple options. There is no single way to conduct an evaluation; rather, it's about selecting the best options at each step that maximize the following factors:

- **Utility:** Who needs the information from this evaluation? What specific information do they need?

- **Feasibility**: How much money, time, and effort can we put into evaluation?

- **Propriety:** Who needs to be involved in the evaluation for it to be relevant, engaging, and ethically sound?

- **Accuracy:** What evaluation design will lead to gathering valid and reliable information?[8]

Cultural competence in evaluation is an area you want to consider incorporating in evaluation because it can help your evaluation efforts be culturally relevant and provide meaningful findings to interested parties.[9] CDC's Framework for Program Evaluation can be used with the **Evaluation Guide: Practical Strategies for Culturally Competent Evaluation**. This guide provides cultural context for each of the six steps listed above in the framework.

**FIGURE 1:** CDC's Framework for Program Evaluation in Public Health
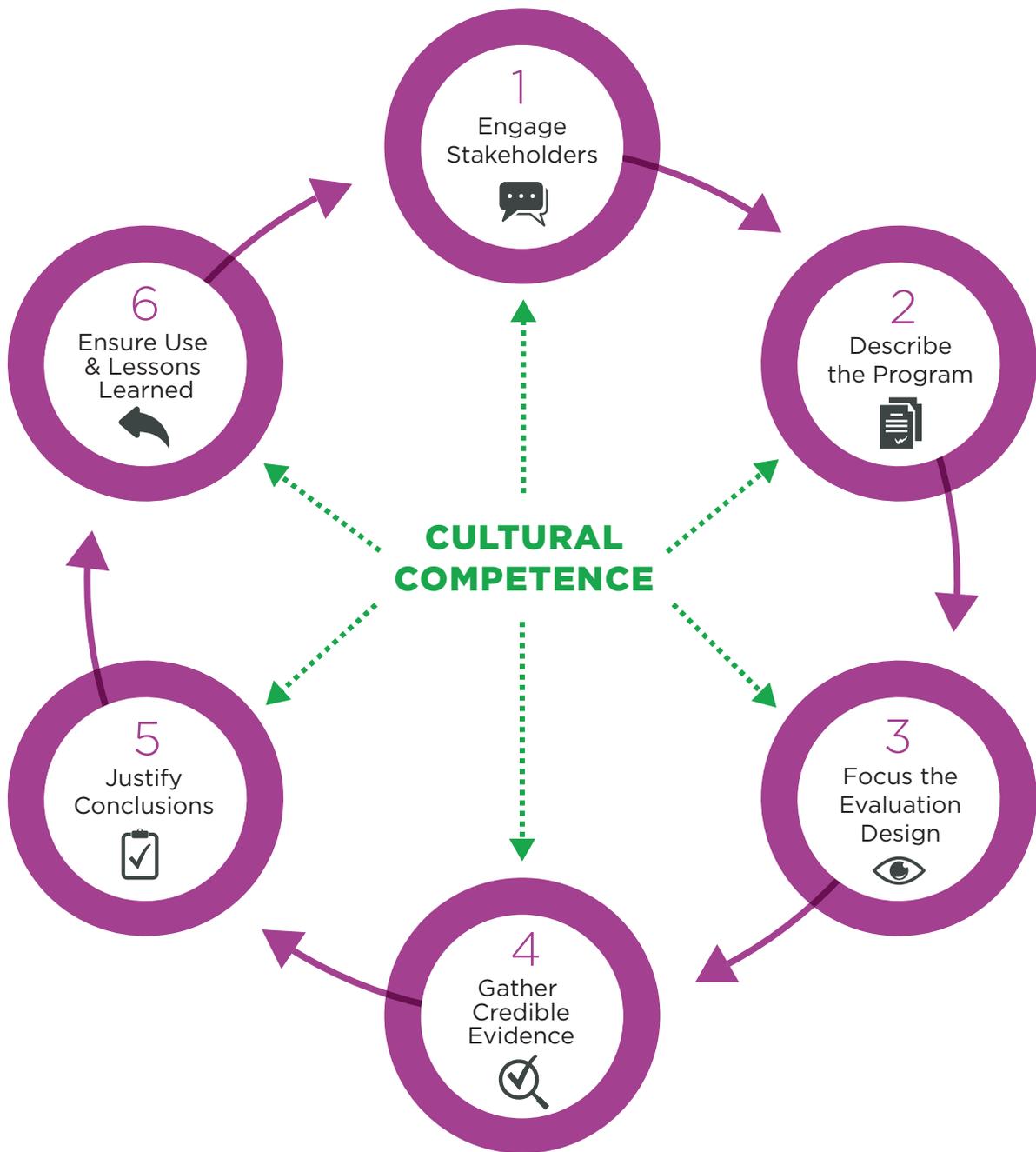
1
Engage
Stakeholders

2
Describe
the Program

3
Focus the
Evaluation
Design

4
Gather
Credible
Evidence

5
Justify
Conclusions

6
Ensure Use
& Lessons
Learned

**CULTURAL
COMPETENCE**

## What is a logic model, and do I need one?

A logic model is a tool that can help you plan, describe, manage, and evaluate your program. It graphically presents the shared relationships between your program's activities, its intended effects, and assumptions of how your program works.[10] Developing a logic model is a straightforward endeavor, and its basic level depicts how what you put into your program (i.e., resources and activities) results in what you get out of it. Logic models can positively impact your program because they may help you:
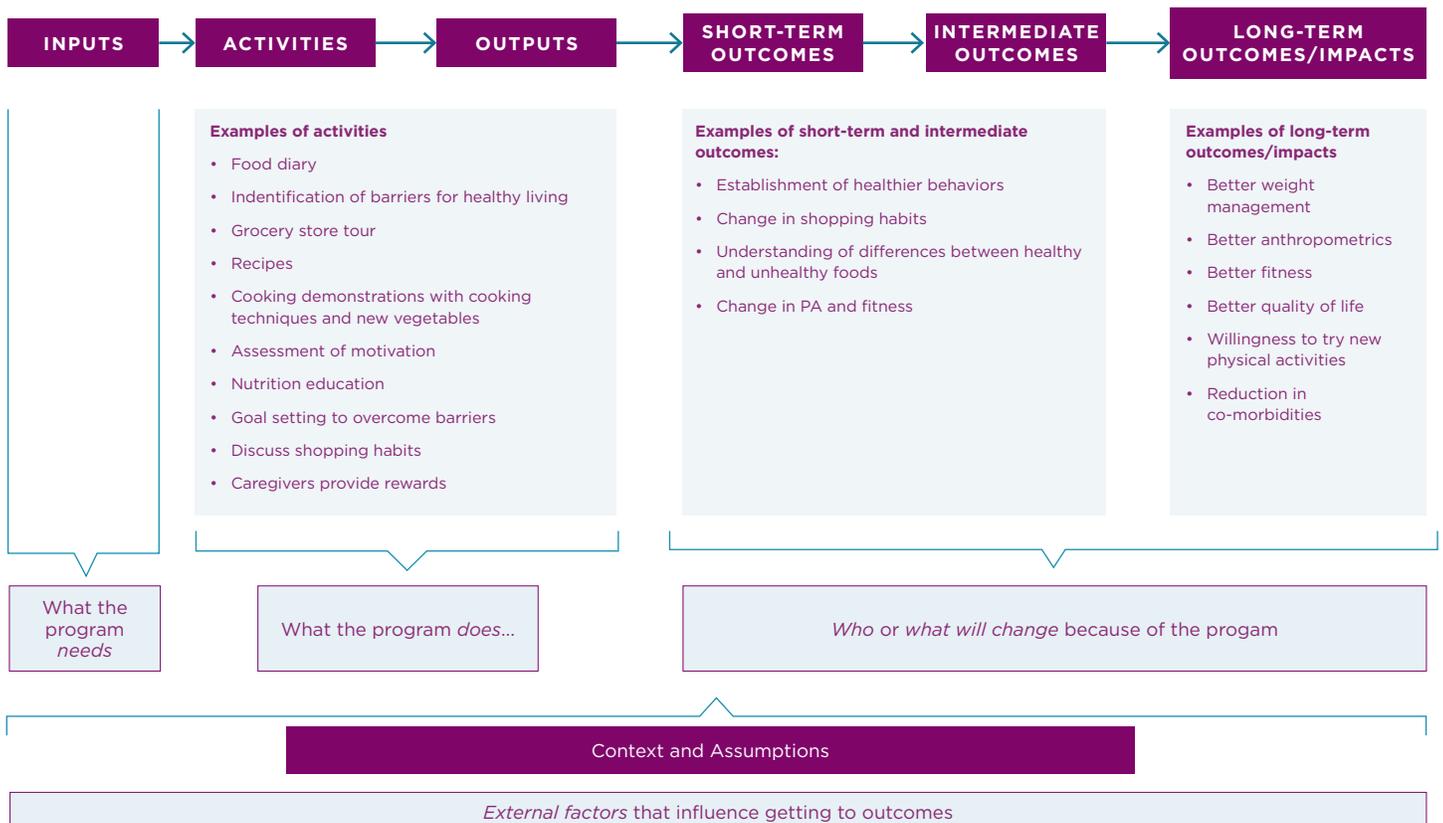
- Communicate your program's purpose and expected results to staff and interested parties.

- Describe how your program will achieve its desired results.

- Serve as a valuable reference point for everyone involved in your program.

- Identify facilitators and barriers to program implementation.[10]

However, some programs may not require a formal logic model. In such cases, your program may have a logic model that staff and interested parties are implicitly aware of and understand, instead of one that is formally described. For many programs this works out fine, but if you find yourself in a scenario where an interested party is requesting a logic model, you can refer to **Appendix 1**, which provides a printer-friendly logic model template for your use.

Now that you have learned a little bit about program evaluation and the tools that can facilitate preparing you for a program evaluation, let's take a closer look at what is required to be ready to evaluate.

**FIGURE 2:** Logic Model



| INPUTS | ACTIVITIES | OUTPUTS | SHORT-TERM OUTCOMES | INTERMEDIATE OUTCOMES | LONG-TERM OUTCOMES/IMPACTS |
|---|---|---|---|---|---|

**Examples of activities**
- Food diary
- Indentification of barriers for healthy living
- Grocery store tour
- Recipes
- Cooking demonstrations with cooking techniques and new vegetables
- Assessment of motivation
- Nutrition education
- Goal setting to overcome barriers
- Discuss shopping habits
- Caregivers provide rewards

**Examples of short-term and intermediate outcomes:**
- Establishment of healthier behaviors
- Change in shopping habits
- Understanding of differences between healthy and unhealthy foods
- Change in PA and fitness

**Examples of long-term outcomes/impacts**
- Better weight management
- Better anthropometrics
- Better fitness
- Better quality of life
- Willingness to try new physical activities
- Reduction in co-morbidities

What the program *needs*

What the program *does*…

*Who* or *what will change* because of the progam

Context and Assumptions

*External factors* that influence getting to outcomes

3 **Evaluation Readiness**

# SECTION 3    Evaluation Readiness

## What is evaluation readiness?

For an organization to undertake an evaluation of a CHWP it is currently offering, the organization must first be ready for evaluation. *Evaluation readiness* is determined by an organization's ability to successfully assess how well a project was implemented, how successful that project was, and what were the determinants of the degree of success or failure.[7] Evaluation readiness has several components, including leadership support; organizational culture and readiness; and the evaluation expertise, skills sets, and available resources. Because a key challenge for CHWPs is funding, considerations on the sustainability of the program are critical.

*Organizational readiness* reflects how well an organization is prepared to undertake an evaluation by way of operations, resources, and work culture and attitudes towards evaluation.[11] The extent to which all individuals or groups in an organization are psychologically and behaviorally prepared to implement a CHWP evaluation affects organizational readiness. This includes ensuring that all interested parties are on the same page about the purpose and goals of evaluation, including program sustainability.

An organization starts the process of becoming evaluation-ready with mission and vision statements for the CHWP that include the need for evaluation. These statements must align with the purpose of the organization. Mission statements define why a program exists while helping to guide decisions about priorities, actions, and responsibilities. A vision statement is a clear and aspirational statement of what your program wants to accomplish.

Community-based CHWPs may face unique challenges such as the lack of access to resources to undertake evaluation in their efforts to develop an evaluation plan. However, clearly defining these needs and how they align with the mission and vision for the CHWP and working with the organization's leadership and interested parties may help in overcoming these challenges. With the right tools and training, existing staff may be able to develop and implement an evaluation. Furthermore, continued development of trust-based relationships with interested parties and community partners will help develop a successful evaluation effort.

### What are evaluability assessments?

An evaluability assessment is a methodical process to decide whether a program has the necessary information, engagement with interested parties, and organizational structure to be evaluated successfully.[12] The evaluability assessment will help you determine if it is be feasible to conduct a full evaluation. It helps identify whether program evaluation is justified, feasible, and likely to provide valuable information. If a program already has an evaluation plan, conducting an evaluability assessment can help gauge the effectiveness of that plan. A final advantage of an evaluability assessment is that it is likely to be less expensive than a full evaluation. However, if a full evaluation can be carried out, that is the preferred course of action. You can find more detailed information about evaluability assessments from **BetterEvaluation** which provides an overview that is based on a literature review of evaluability assessment.

## What is important to know regarding evaluation readiness?

When determining your program's evaluation readiness, it is important to fully understand the needs of your program. This may include staffing and training, financial and capital resources, technology, and infrastructure needs. At the same time, consider what aspects of your organization's culture, policies, and procedures will help or hinder evaluation efforts. Use this information as you engage in discussions with others in your leadership that focus on the need for evaluation. You can use the same process of reflection to have similar discussions with other interested parties and community-based partners.

If the information is available, find out the prevalence of overweight and obesity in your program's community. Information might be available through resources such as **County Health Rankings and Roadmaps**. Also try and understand the local drivers, including perceptions, which influence behavioral choices in your community. Communicate this information back to your organization, interested parties, and community partners. You will also want to determine how you will use data from the CHWP to support your evaluation efforts, including data relating to enrollment, attendance, and outcomes. Determining the evaluation readiness of your organization and program is an on-going process, and you can expect to make frequent improvements as both your needs and experience change. Similarly, the actual evaluation of the CHWP is also an on-going process that needs frequent adjustments.

## The Primary Care Obesity Network

Nationwide Children's Hospital (NCH) developed the Primary Care Obesity Network (PCON) as a community outreach program with primary care practices linked to NCH's tertiary care obesity center.[13,14] Early in the development of PCON, partners, champions, primary care practices, and community members agreed on the importance of evaluation to the successful implementation and support of *weight management programs* and services in primary care centers and in the community. These members understood that the need for evaluation must be driven by the clarity of the program's purpose, goals, and sustainability. As a result, all members were able to appreciate their roles, and the PCON model was borne.

PCON can be likened to a hub (the tertiary care center) and spokes (the primary care practices) model of care. The hub provides training, education and materials, and administrative support and serves as an integrator between the central clinic and community. Additionally, the hub serves as a referral source for the "spokes" (primary care practices); however, the hub has *no* operational responsibilities within each primary care practice. In this way the overall costs were lowered, and this allowed the hub to take on the responsibility of evaluation and data analysis.

The PCON evaluation plan consists of three levels of outcomes:

1   **Child and family outcomes.** These outcomes address whether the program affects a child's and/or family's knowledge, health, or well-being as it relates to their healthy weight.

2   **Process outcomes.** These outcomes address how the program is implemented.

3   **Balancing outcomes.** These outcomes help determine if the program has any negative outcomes that may affect the program's acceptability or even outcomes.

PCON has several metrics that have a fixed and precise relationship to PCON's goals. The variables are at the program, provider, and patient/family levels and include the following: program utilization, resource utilization, training and continuing education participation, anthropometrics (i.e., BMI, BMI z-score), and behavior change.

## Healthcare-Community Partnerships for Child Obesity Treatment

Duke University developed a model for child obesity treatment that involves both the primary care provider and a community-based recreation center.[15,16] The primary care provider screens for obesity and related co-morbidities and provides family-centered counseling on lifestyle modifications. The community-based recreation center can be a parks and recreation facility, a local YMCA, after-hours school facility, or other community settings. Families participate in evening and weekend cooking classes and physical activities tailored to children with obesity. The model is implemented using an evidence-based curriculum and executed through a shared-use agreement between the healthcare and community entities.

This healthcare-community model has evidence for engaging low-income and racially/ethnically diverse families over a 6- to 12-month period and has demonstrated effectiveness in improving physical activity and weight-related quality of life. Outcomes are sustained to at least 2 years.

The healthcare-community evaluation plan assesses the following:

- Proportion of patients with high BMI who are referred from the primary care physician to the community program

- Proportion of referred patients who participate in the community program

- Proportion of patients who meet the USPSTF benchmark of ≥ 26 hours over a 2- to 12-month period of intensive, behavioral, comprehensive weight management.

- Health outcomes attributed to participation, including BMI and related co-morbidities.

## Summary

When planning and considering the evaluation of a CHWP, it is important to understand both readiness of the parent organization and the evaluation readiness of the CHWP itself. Understanding both levels of readiness will help ensure that any evaluation plan incorporates organizational factors, culture, and perceptions around evaluation, as well as the structural and usability aspects inherent to the program that may help or hinder evaluation. These include expectation management on the part of the organization, partners, and community members as they relate to timelines, feasibility of the program's approach to weight management, and definitions of success.

## READY FOR EVALUATION?
# Tools to help you prepare for evaluation:

**1   Ready, Set, Change!**

Ready, Set, Change! is an online decision support framework for assessing organizational readiness. This evidence-based framework maps organizational readiness to four distinct constructs around perceptions, willingness, and ability of staff and the organization as a whole to undertake change. This free, online tool is intuitive to use and provides helpful insight on organizational readiness.

**2   National Implementation Research Hexagon Tool**

The National Implementation Research Hexagon Tool is both a qualitative and quantitative resource to assess evaluation readiness. It is structured around a team approach to three program indicators and three implementing site indicators. This is a free, multi-item printable tool that needs to be scored. Whereas this tool can be used at any stage in a program's evaluation and implementation, it is best used in the formative stages of a program's evaluation. The tool can also help users apply an equity lens to consider how their program could **advance equitable outcomes** for all individuals and families.

**3   Wilder Collaboration Factors Inventory**

The Wilder Collaboration Factors Inventory is a set of several online resources, including questionnaires and surveys, that can be used to quantitatively assess the degree and strength of collaboration within an organization and provide guidance on evaluating relevant work. This inventory can help an organization connect primary care practices with community partners when they have different organizational structures and policies.

# 4 Process Measures
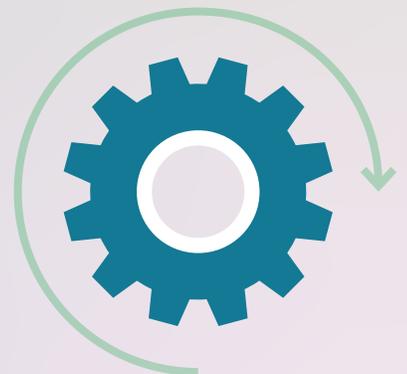
**Process Measures**

## What are process measures?

Process measures focus on different aspects of your program's delivery and activities such as enrollment, setting, transportation, participation, readiness to change, and mastery of skills. For each of these aspects, it is important to consider related facilitators and barriers. This will help you describe and examine how your CHWP activities are delivered.[17,18] Process measures enhance your understanding of what is being done during the delivery of the program and how children and families are receiving your program. In this way, you will begin to understand what factors may help or hinder the uptake and effectiveness of your program. Furthermore, by looking at process measures you will be able to acquire a better understanding of the fidelity with which your program is being delivered, compared to how it was intended to be delivered. Finally, process measures will not only allow you to describe your program, but they will help you to modify your CHWP as you implement it and discover areas that may be improved or enhanced.

## What types of process measures are appropriate for CHWPs?

Process measures may be categorized according to those that capture information on the program and participants and those that focus on providers, including the interventionist who delivers the program. Whereas the goals of your program are to engage children and their families, meet enrollment goals, and enhance completion of program activities, the reality is that these may be very difficult to accomplish and track. By identifying and collecting process measure data proactively, you will be able to enhance engagement and participation in your program. In fact, in some instances process measures can be used as a surrogate for outcomes.

- **Program-based measures** include those that describe:
    - » Requests to enroll, including phone calls, online registrations, and referrals
    - » Enrollment
    - » Attendance
    - » Program activities

Assessing requests to enroll or referrals about the program and enrollment helps you to determine if you are finding and enrolling the children and families you originally intended to target for program participation. By tracking referral and enrollment, you will be able to determine if your outreach and enrollment goals are likely to be met. Program attendance has been shown to correlate with successful weight- and behavior-related outcomes in studies of weight management programs.[19,20] Process measures relating to attendance include the number of sessions attended by each child and family and the proportion of enrolled children and families who completed all sessions in your program. Finally, process measures on program activities include in-session activities and between session activities, such as homework and at-home or outside activities.

- **Provider-based measures** will help you understand the process that supports your program's delivery. You can assess how providers deliver the program—specifically, the fidelity of training and delivery of the program. This includes understanding the extent to which training of providers and program delivery are done in relation to the program model or protocol. You can also assess how well the intended program is received, is culturally acceptable, and understood by the child and their family.

# NET-WORKS

Now Everybody Together for Amazing and Healthy Kids, or NET-WORKS, was part of the Childhood Obesity Prevention and Treatment Research (COPTR) Consortium. Four NET-WORKS field centers were funded for seven years—two centers focused on obesity prevention and two on obesity treatment. Each center conducted different interventions.

The NET-WORKS Minnesota (NET-WORKS MN) site included three components: primary care, home visit (the main component), and community-based parenting classes. NET-WORKS MN used these three synergistic components to influence parents or primary caregivers to ultimately help children improve their BMI by changing home environments and parenting practices.

Two key process measures were documented in the study database across all the intervention components: the dose delivered (i.e., amount and length of intervention sessions offered) and dose received (i.e., participant attendance and completion of the offered sessions).

NET-WORKS MN put many systems in place to track what was happening, including:

- Tracking which families had no participation after certain time periods and implementing reengagement protocols to figure out how to ensure the intervention worked for these families

- Utilizing reengagement protocols included telephone calls and distributing packets to give families some content when they were not participating in order to bridge active participation in the program

An example of how these strategies can be used to reengage a family over time is shown below:
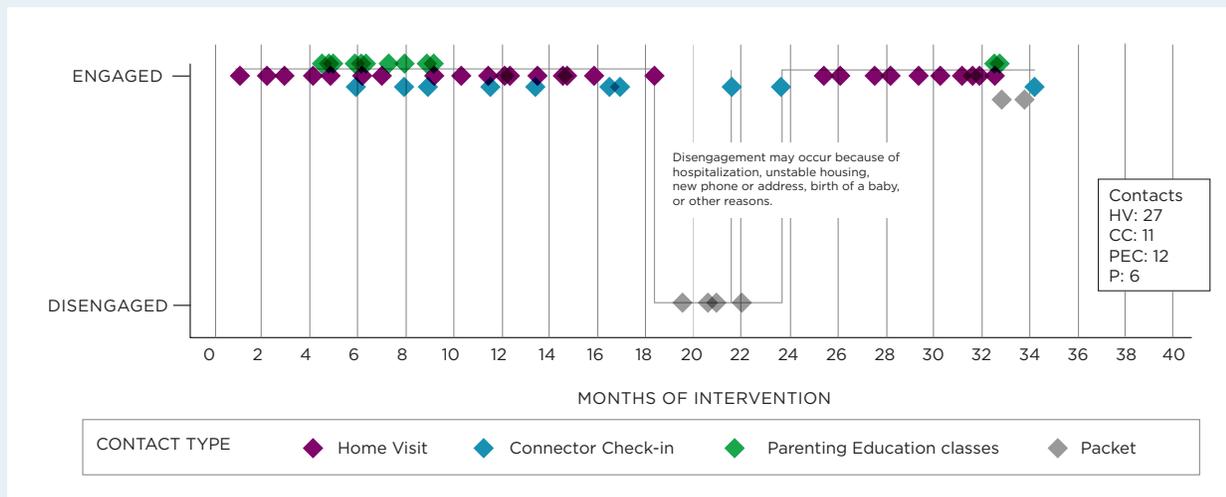


Consequently, NET-WORKS MN was able to reengage families and work with them for enough time over the course of the program to track their progress and outcomes. NET-WORKS MN learned that it is critical to be flexible and responsive to the unique needs of families. This could be accomplished with tracking systems and reengagement strategies that are tailored to specific contexts.

Provider-based measures are important because they can help you monitor the quality and fidelity of your program. You can gather process measures on provider training by tracking the number of training sessions provided and attendance at them as well as the proportion of providers who completed all the training sessions. If resources allow, you can consider conducting a pre-and post-test of provider-based measures to help ensure your program is being delivered as intended. For example, you can test knowledge of program components and delivery recommendations before and after the training. This pre-and post-test design can offer you insights into the effectiveness of your training and suggest revisions to its content and delivery.

There are two approaches to evaluate provider fidelity to program implementation. One approach uses an expert who rates real-time or transcribed intervention sessions using software such as the Roter Interaction Analysis System (RIAS) Software[21,22] or Motivational Interviewing Treatment Integrity coding.[23,24] Another approach relies on a report, usually completed by the parent (in some instances, the adolescent), of what was discussed during a coaching or counseling interaction.[25] Many of these measures capture information on general counseling skills and some focus on specific techniques, such motivational interviewing, which has been shown to be effective in pediatric obesity interventions.[26] These types of evaluation can be expensive and require a skilled rater, so they are usually carried out only in research settings. However, if your program has the resources and capacity to evaluate fidelity in this way, it can offer insights on how to modify program delivery as needed. Alternatively, you may wish to track fidelity to motivational interviewing using a brief form of the

Health Care Climate Questionnaire (HCCQ).[27] The HCCQ has been validated and studied in assessing motivational interviewing for weight management. The brief form of the HCCQ consists of five to seven questions and captures a parent's self-report of the provider's autonomy support and empathy during counseling. Because it only takes 3–5 minutes to complete and does not require trained personnel, it is a very low cost and feasible questionnaire to use.

## How should I select process measures?

You may want to consider how to involve partners and members from your community in determining which process measures to use when your CHWP. By engaging these members and helping them to understand the importance of identifying process measures, you will be able to better choose measures that are meaningful to these important groups. You will also be able to clarify the goals and expectations for your program to your partners and community members, which can improve your program's sustainability of. Furthermore, you will be able to engage in discussions that highlight the value of your program in improving the health of the children you are caring for. In doing so you will be able to define the benefit and value of your program that satisfies your partners and community members. These discussions are ultimately linked to the evaluation readiness steps described in **Section 2: Program Evaluation Overview.**

## If I had to choose, what process measures are ideal for all CHWPs to evaluate?

In summary, process measures that CHWPs may want to prioritize evaluating include:

- Number of referrals or requests to enroll

- Number or proportion of children and families who enrolled after a referral or request to enroll

- Number of sessions attended by each child and family

- Proportion of children and families who completed a prespecified portion, or all of the sessions in your program

- Assessment of provider skill and communication, such as a pre-and post-test skills assessment or the brief version of the Health Care Climate Questionnaire (HCCQ)

- Number of visits to the program web site, or time spent on program web sites

See **Appendix 2** for a summary of these measures. This appendix presents Level 1 and Level 2 measures to facilitate your choice of measure, depending on your capacity and familiarity with evaluation.

## Summary

Process measures are a critical step in understanding aspects of your CHWP that may help or hinder its effectiveness so that targeted improvements can be implemented. Carefully consider which process measures you wish to include and discuss these with your partners. Be sure to include process measures that track key components of your program, including enrollment, attendance, and activities as well as provider skill and communication.

5 **Outcome Measures**

## SECTION 5    Outcome Measures

### What are outcome measures?

Outcome measures are those that show the impact of your intervention on, for example, a health metric. Outcome measures will help you determine the impact of your program's intervention on the children and families who are enrolled.[18] Outcome measures enhance your understanding of the impact of your program on participants, whether positive or negative, by looking at measures such as those related to anthropometry, physiology, and lifestyle and behavior changes. When interested parties think of program evaluation, they are often focused on outcome measures such as weight status improvement, but it is important to remember these measures are only one piece of your evaluation. Some outcome measures, such as change in medication use or health care costs, may not be feasible to assess when programs last a few weeks or even a few months.

### What types of outcome measures are appropriate for CHWPs?

Community-based CHWPs usually have a goal of improving children's weight status or preventing excessive weight gain through changes in diet, physical activity, and sedentary behavior. While weight-based outcomes are important, consider other outcomes as well, which may have an important impact on the health and quality of life of the participants and their families. Some CHWPs also aim to have a favorable impact on physiologic or metabolic, behavioral, or psychosocial outcomes. Funders or other interested parties may also want to see how the program affects other outcomes, such as health care costs.

- **Anthropometric measures** will provide you with information on weight, body size, and body composition. Methods to assess anthropometry commonly include the measurement of height and weight to calculate body mass index (BMI). When deciding which anthropometric measures to include, you may wish to consider:

  » Staff training
  » Cost of equipment
  » Time to conduct measurements
  » Frequency of measurement
  » Privacy
  » Acceptability of measurements
  » Considerations when measuring children with severe obesity or disabilities

For a review of the procedures and considerations when collecting anthropometric measures using the aforementioned methods, refer to **A Guide to Methods for Assessing Childhood Obesity.** (**www.nccor.org/obesityguide**) NCCOR designed this User Guide to assist users in selecting the most appropriate method of measuring adiposity in children when conducting population-level research and/or evaluation on obesity.
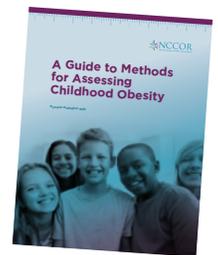


- **Physiological and metabolic measures** may include blood pressure, lipids, glucose, or hemoglobin A1c, as well as effort-based measures such as resting heart rate or heart rate recovery from exercise. Also included are measures of fitness, strength, and motor skill development. Similar to choosing anthropometric measures, your choice of physiological and metabolic measures will require you to consider issues relating to training and equipment.

**Measures of fitness** are evaluated because they can help with setting and achieving fitness goals and priorities.[28] This following tests are proven fitness measures:

- » 12-minute walk
- » Fitness Gram Pacer Assessment
- » Heart rate recovery

**Measures of strength** in children are evaluated to monitor how strength is developed.[29] Examples of strength tests commonly used with children are noted below:[30]

- » Grip strength test
- » Push-up test
- » Plank test

When conducting any effort-based testing, it is important to assess improvements from baseline. It is also important to keep in mind that in many CHWPs, most participants may have normal physiological and metabolic measures at baseline. This could make it more difficult to detect improvements in these measures in a group of children and adolescents during the program or intervention. In some cases, changes in associated health conditions such as asthma, sleep apnea, or diabetes can be assessed. However, it may not be feasible to assess such conditions unless the CHWP has an existing relationship with a primary care office or other health care setting.

- **Lifestyle or behavioral change measures** include changes in nutrition, physical activity, screen time, and sleep. These measures can be evaluated via self-report questionnaires, direct observation, or devices (e.g., accelerometers or pedometers for physical activity). Self-report tools, particularly for diet and physical activity, have limitations that may affect their validity. If using a questionnaire or survey, consider using one that has already been developed and validated.

**Examples of tools to evaluate changes in lifestyle or behavior**

- **5210 Healthy Habits Questionnaire (food frequency/physical activity)**
- **Family Nutrition and Physical Activity Tool (FNPA)**
- **Feeding Practices and Structure Questionnaire[31]**
- **Parenting Style Questionnaire[32]**

- **Psychosocial measures** consider the possible impact of your CHWP on domains of psychological and social functioning among children or teens with overweight or obesity. Self-report measures such as treatment satisfaction that document where the CHWP may have a particular strength or a need for potential improvement may be used as process measures. Psychosocial measures require consideration of who is best suited to report on the outcomes of interest. For younger children (<7 years of age), caregiver report is preferable because child reading levels are limited. Self-report, caregiver proxy, or both may be appropriate for older children, depending on the domains measured.

Health-related quality of life (HRQoL) is a common psychosocial measure. HRQoL examines functioning in the physical, social, emotional, and school domains. Studies report that children and teens with overweight and obesity report significant impairments in functioning relative to healthy weight peers.[33,34] Data suggest that improvements in HRQoL are associated with participation in weight control interventions.[35]

**Examples of tools to evaluate health-related quality of life (HRQoL)**

- **PEDsQL** is a widely used measure of HRQoL.*
- The European **KIDSCREEN** provides QoL measures for children.
- Obesity-specific measures of HRQoL
  - » **Sizing Me Up (self-report) and Sizing Them Up (caregiver-report)***
  - » **Impact of Weight on Quality of Life-Kids (IWQOL-Kids)***

*Fees and/or copyright agreements associated with use.*

- **Self-esteem** is broadly defined as thoughts, concepts, and feelings about oneself.[36] Studies using measures of self-esteem have shown that children with overweight or obesity have lower self-esteem.[37] Low self-esteem is in turn associated with a lower likelihood of successful outcomes after participation in weight management programs. Efforts to improve self-esteem during participation in healthy weight interventions have been found to be associated with improved weight outcomes.[38,39]

**Examples of tools to evaluate self-esteem**

- **Rosenberg Self-Esteem Scale**
- **Self-perception Profile for Adolescents**

- **Other psychosocial measures** that can be assessed include weight-related teasing, depression, anxiety, and concerns with weight, shape, or body image. Weight-related teasing is commonly reported by youth with overweight or obesity. Lastly, weight and body shape are different from body image. Body image is defined as the extent to which weight influences overall feelings about oneself. Evaluating concerns with weight, shape, or body image may be more appropriate for older children and teens.

**Examples of tools to evaluate weight-related teasing and perceptions of weight, shape, or body image**

- **Perceptions of Teasing Scale** (POTS) – Short and easy to use
- **McKnight Risk Factor Survey** – Thorough, but lengthy
- **Children's Body Image Scale** – Asks teens to rate their satisfaction with nine body parts on a Likert scale

When using psychosocial measures, baseline measurement as well as changes over time should be assessed. Also, consider the implications of your assessments from a safety perspective. That is, if the measures you chose provide diagnostic information or assess a specific risk, such as disordered eating patterns, you will need to ensure you have an appropriate plan, staff, and resources for responding in real-time. If you do not, consider not using those measures at all.

- **Cost-related measures** include those deriving from cost analyses and cost-effectiveness analyses. Cost analyses capture the costs included in delivering the intervention (e.g., facilitator or coach time, and space) as well as costs to participants (e.g., travel time, transportation costs, and opportunity costs for lost wages). Cost analyses can be important measures because they will help you and your partners describe what it takes to implement your program. Cost effectiveness analyses assess whether an intervention provides value relative to an existing intervention, such as usual care.

## How should outcome measures be chosen?

You should identify the outcomes of interest to your CHWP. Selecting the best outcome measures to evaluate your program will depend on a variety of factors, including what you and program partners, including funders, participants, and families, would consider as useful outcomes. Once you've identified your outcomes, take the time to evaluate what would constitute "successful outcomes" in your program for involved parties, as this can help you in your deliberations. Finally, try and balance the feasibility and validity of your chosen outcome measures. Practical considerations, including participant and program/interventionist burden, and costs of collecting the measures, can also be important considerations when planning measures for evaluating your study.

## If I had to choose, what outcome measures are ideal for all CHWPs to evaluate?

In summary, CHWPs can prioritize evaluating outcome measures such as:

- Height and weight
- Lifestyle behaviors (healthier food, physical activity, and sleep patterns)

Measures that may require more time and training or have associated costs but are worth consideration include those relating to:

- Blood pressure
- Fitness (resting heart rate, 12-minute walk/run with resting heart rate recovery assessment)
- Brief assessments that are available at no cost and are likely to show improvement:
    - » HRQoL
    - » Self-esteem domains
- Weight-related teasing and perceptions of body image

Please see **Appendix 2** for a summary of these measures. This Appendix presents Level 1 and Level 2 measures to facilitate your choice of measure, depending on your capacity and familiarity with evaluation.

## Summary

Not all potential outcome measures will be relevant for every program. Practical considerations, including feasibility and costs of collecting the measures, can be important when planning measures for evaluating your study. There is a need to balance feasibility and validity in the measures chosen—sometimes methods that are more valid are unavailable, too expensive, or too time consuming to include.

Be sure to set appropriate expectations for your CHWPs leadership and staff, as well as your partners. Your program's goal (e.g., weight gain prevention vs obesity treatment), size, duration, and intensity can also help you to choose appropriate outcome measures. For example, a small treatment-focused program of moderate to high intensity (i.e., ≥ 26 contact hours over 2–12 months) may expect to have a greater impact on weight and other anthropometric outcomes as well as biomedical outcomes such as blood pressure and lipids than a large community-based recreational program targeting obesity prevention.

You may wish to consider intermediate outcomes for which you will be able to detect changes in dietary intake and physical activity levels in addition to changes in weight. Also consider time points at which outcomes will be measured. Often this takes place at the start and end of a program, but it may vary by the type of measure and the goals of the program. Not all outcome measures need to be assessed at all timepoints.

6 **Contextual Factors**

# Contextual Factors

## What are contextual factors?

Contextual factors can have an impact on your CHWP's outcomes but are not necessarily part of the intervention. Contextual factors can be specific to the program itself, to program participants and their families, and even to the communities where participants live. Contextual factors for childhood obesity can be quite complex and encompass all of the individual, societal, and systemic factors that impact a child's weight. Often there are several contextual factors to keep in mind as you evaluate your program. In this section, we'll detail several contextual factors that commonly impact healthy weight programs.

## What types of contextual factors are appropriate for CHWPs to consider?

Research on contextual factors across CHWPs is limited, but a few studies have shown where some opportunities may exist to help facilitate program attendance and completion.[40-43] Attendance is one key factor to help participants in your program meet their goals and ultimately for your program to achieve its outcomes. If participants do not show up, then chances are the program will not be very successful. If attendance is a troublesome spot for your program, look at the barriers to attendance to determine if any may need to be addressed by your program. Other common barriers may be identified and addressed by your CHWP in similar ways (**Figure 3**).

Individual-level contextual factors, or those specific to participants or their parents, are numerous and may include factors such as access to healthy foods and safe places to exercise. Additionally, there may be specific facilitating contextual factors that you may wish to consider since these may help children and families to benefit from your program (**Figure 3**).

## How should contextual factors be chosen for evaluation?

Although contextual factors may play a role in the overall success of your program, some of the contextual factors listed in **Figure 3** may not be appropriate for your program to address. Think about the factors that are most important to your program and then determine which ones you can do something about. If there are factors not in your purview to address, consider connecting participants and their families to services you are aware of within your community instead of taking them on within your program. In this section we share some examples of potential opportunities to assess several personal contextual factors.

## What are opportunities for CHWPs to address contextual factors?

If you conduct an assessment at some point during your program, it may be helpful to ask specific questions vs more open-ended questions and to limit the number of questions you ask. This will help you to focus your questions on factors you can address and help lower participant burden. For example, asking parents *"What is it about the program that has been difficult for you?"* may lead

**FIGURE 3:** Categorization of Contextual Factors

## ATTENDANCE

- Time availability to attend CHWP
- Conflicting schedules and work hours
- Parent attendance
- Parent engagement in behavior change
- Conflicting commitments with school and extracurricular activities
- Hesitancy to attend because of prior unsuccessful weight loss attempts

## TRANSPORTATION

- Lack of transportation or public transportation
- Need for reimbursement for transportation
- Inadequate transportation to safe physical activity outlets for youth

## POTENTIAL ATTENDANCE FACILITATORS

- Offering program session scheduling far in advance
- Providing transportation assistance
- Mapping the frequency and duration of the program onto the academic school year
- Convenient local program location
- Virtual delivery of program can facilitate attendance, scheduling
- Incentives
  » Motivational program leader
  » Monetary incentives or small rewards from program leaders/parents/guardians
- Program structure
  » Group-based
  » Smaller groups
  » Modality, including phone, text or virtual
  » Include the whole family
  » Must be fun to encourage child participation
  » Cultural relevance

## COMMON INDIVIDUAL-LEVEL CONTEXTUAL FACTORS

- Readiness to change
  » Confidence
  » Self-efficacy
  » Importance or concern
- Demographic characteristics
  » Sex/gender
  » Race/ethnicity
  » Income/education

## COMMON INDIVIDUAL-LEVEL CONTEXTUAL FACTORS CONT.

- Health-Related Social Needs
  » Housing instability
  » Food insecurity
  » Transportation
  » Education and health literacy
  » Employment status
  » Neighborhood/community factors
  » Immigration status and legal factors
  » Cultural acceptability
- Individual
  » Mental health
  » Adverse childhood experiences
  » Executive functioning or problem-solving ability
  » Social support (informational, emotional, functional)
  » Family functioning and connectedness
- Social connection with
  » Group leaders and behavioral/health coaches
  » Other group members
- Alignment of program expectations
- Technology for virtual programs
  » Bandwidth/internet access
  » Devices–computer/phone
  » Ability to use program/engage

## COMMON BARRIERS–ACCESS TO HEALTHY FOODS:

- Cost of fresh produce
- Expiration of fresh produce before use
- Family/child exposure and acceptability to variety of foods

## COMMON BARRIERS–EXERCISE:

- Cost of childcare
  » Parents/guardians must pay for childcare for younger siblings in order to take an older child to the gym or other organized activities
- Community factors/safety
- Accessibly to physical activity resources

to answers you can do little or nothing about. However, asking parents something along the lines of *"What about this program has been most difficult: transportation, timing, or location?"* may provide you greater opportunity to address these factors for future programming. Perhaps if you learn timing is an issue, you will work to provide your program at more times during the week or you might offer services like childcare for younger children, so parents do not feel conflicted when taking older children to your program. You may also be able to connect families to a ride-service or other transportation resources in the community to facilitate transportation to and from your program. If you cannot change the timing of your program or offer transportation options, then these items may not be reasonable to ask about; however, understanding these issues may help you engage your partners to identify resources and solutions to address them. Lastly, it is important to identify potential facilitators to any identified barriers. For example, if the cost of transportation or fresh foods is identified, then your program and partners can facilitate connecting participants to voucher or reimbursement programs.

Social determinants of health (SDoH) and health equity are important areas to consider incorporating into evaluation efforts. SDoH encompass both the conditions in which people are born, grow, live, work, and age[44] and the social and economic context that shapes these conditions.[45] Health equity aims to eliminate disparities in health by aiming to ensure disadvantages based on social position or other socially determined circumstances do not exist.[46] In this regard, addressing obesity is an important health equity goal. There are many resources to help your program identify ways to include a healthy equity lens into your CHWP evaluation. For example, a **policy statement** by the American Academy of Pediatrics offers strategies to screen and identify children at risk for food insecurity and provides recommendations on how to connect families to appropriate community resources.[47] Additionally, the Centers for Medicare

and Medicaid Services developed the **Accountable Health Communities Health-Related Social Needs Screening Tool**, the first 10 items of which relate to several social determinant of health domains: housing, food insecurity, transportation, utility help needs, and interpersonal safety. Additional domains include employment and physical activity. This tool can be used as an action item (CHWPs can act on these contextual factors) as well as a data collection tool for evaluation to create supports for future iterations. You will find several resources in **Table 1** that can help your program think about addressing SDoH and health equity issues.

Assessing parents' readiness to change or parents' self-efficacy to address obesity-related behaviors is possible, although it can be difficult to assess. A simple 10-point scale is common and can easily be used in your program. Questions can vary and may include:

- How motivated are you to make healthy changes to support your child's/family's health?

- How important is it for you to make those changes?

- How confident are you to make those changes?

You can also review the following resources on parental support and self-efficacy and determine if they are appropriate for you to incorporate in your program evaluation:

- **Validation of five stage of change measures for parental support of healthy eating and activity**

- **Lifestyle Behaviour Checklist**

- **Development and preliminary validation of the Parent Efficacy for Child Healthy Weight Behaviour Scale**

- **Parent Efficacy for Child Healthy Weight Behavior Scale (PECHWB)**

**TABLE 1:** Select Resources to Help Address Social Determinants of Health and Health Equity

The **Accountable Health Communities Health-Related Social Needs Screening Tool** was developed by the Centers for Medicare & Medicaid Services to help providers conduct assessments to inform patients' treatment plans and make referrals to community services. The first 10 items in the tool are related to SDoH.

**Addressing Health Equity in Evaluation Efforts** helps users integrate health equity considerations into each step of an evaluation.

**Getting to Equity in Obesity Prevention: A New Framework** is a discussion paper that proposes using a framework with a deliberate focus on equity when designing and implementing strategies for obesity prevention.

**Health Equity Resource Toolkit for State Practitioners Addressing Obesity Disparities** aims to increase the capacity of state health departments and their partners to implement effective responses to obesity in populations that are facing health disparities.

**Screen and Intervene: A Toolkit for Pediatricians to Address Food Insecurity** was developed by the American Academy of Pediatrics and the Food Research & Action Center to help providers learn how they can play a critical role in addressing food insecurity. The toolkit includes a validated two-question food insecurity screening tool and provides guidance on how providers can address food insecurity among their patients and families.

**Social Determinants of Health 101 for Health Care: Five Plus Five** is a discussion paper that provides readers with five things to know about SDoH in health care and five things to learn about SDoH in health care.

## Summary

Evaluating contextual factors is complicated, given the different levels at which they can impact program success. Given the numerous contextual factors that can be evaluated, and taking time and costs into consideration, not all factors discussed in this section can be feasibly collected by your program. Contextual factors will be different for every program and can differ among cohorts in the same program. Therefore, ways to address contextual factors will vary. We outlined several key contextual factors for your consideration, but there may be other contextual factors that can impact the success of your program. You may find yourself asking, "How do I address all the potential factors that may affect my program's outcomes?" but do not despair. Instead **prioritize one or two contextual factors** that your program may be able to address and determine the best time during the course of your program to ask these questions. This will also help limit the number of questions you ask of program participants and reduce participant burden. Ultimately, the goal is to assess potentially malleable contextual factors that your program may be able to address.

*i*   **For more information:**

The Institute for Medicaid Improvement conducted a learning collaborative for Medicaid-managed care plans that were running weight management programs. The collaborative produced two toolkits—**Changing the Culture of Health in Childhood Obesity: Implementation Toolkit for Medicaid Health Plans** and **Building a Culture of Health in Childhood Obesity: Overview & Action Plan for Medicaid Health Plans**—which may be helpful to your organization when thinking about contextual factors.

# 7 **Program Sustainability**

## SECTION 7    Program Sustainability

### What is program sustainability?

Many non-profit organizations need to document improved outcomes and demonstrate the impact of interventions in order to show that a particular program is a good investment. This highlights the importance of sustainability planning.

There are many complementary definitions of sustainability. The Center for Civic Partnerships describes sustainability as the continuation of community health or quality of benefits over time.[48] The Substance Abuse and Mental Health Services Administration defines sustainability as maintaining and continuing program services after a funding period is over and ensuring that the organization has become a permanent part of community resources.[49] Finally, the CDC defines sustainability as "a community's ongoing capacity and resolve to work together to establish, advance, and maintain effective strategies that continuously improve health and quality of life for all."[50] More formally, "sustainability capacity [is] the existence of structures and processes that allow a program to leverage resources to effectively implement and maintain evidence-based policies and activities."[51]

### What tools exist to help my CHWP plan for program sustainability?

CDC's **A Sustainability Planning Guide for Healthy Communities** emphasizes the importance of initial buy-in, engagement, funding, and planning for sustainability. This guide provides tools and resources to be used as a stepwise approach to support the sustainability of programs and policies that have been implemented in communities. Additionally, the **Program Sustainability Assessment** Tool (PSAT) is a 40-item self-assessment tool that programs or partners can utilize to evaluate program sustainability. This self-assessment tool offers suggestions for improvements in eight domains.

### What program sustainability domains are appropriate for CHWPs to consider?

The **Program Sustainability Assessment Tool** is based on a framework of eight organizational and contextual domains that can help build the capacity for maintaining your program.[52] These domains offer areas that your program can evaluate. In **Figure 4**, we offer definitions for each PSAT domain and examples of activities that can help your program achieve sustainability planning. For additional examples of activities, visit the **Plan** section of the PSAT. Creating a sustainability plan requires five elements: developing a sustainability goal, developing action steps, identifying and enlisting key partners, identifying resources, and developing milestones.

**FIGURE 4:** Sustainability Domains and Suggested Activities for Building Them

**ENVIRONMENTAL SUPPORT:** A work climate where program champions can secure resources and gather backing and approval from leadership, partners, and the public.

- Conduct an analysis of involved parties and decide who needs to be included to make your program successful and sustainable.
- Identify and include decision makers.
- Develop talking points and a specific "ask" for each involved party.

**FUNDING STABILITY:** An approach to identify and develop consistent funding sources for your program in the long term. This includes building a diverse portfolio of relevant state, federal, and private resources.

- Cultivate your current funding and sustainability source by engaging in discussions that relate your program's success and effectiveness.
- Develop an adaptable funding plan, with short- and long-term goals and diverse funding sources, including federal, state, local, and foundation grants.
- Explore new funding options and marketing and branding strategies.
- Identify potential entrepreneurial activities for your program.

**PARTNERSHIPS:** Goal-oriented relationships with other organizations, leadership, or membership-based groups that can directly impact program success and sustainability.

- Conduct a partner analysis by assessing the different levels of impact, investment, involvement, and commitment of your partners, including community organizations, leaders, and members.
- Develop plans to foster current partnerships and develop new ones to ensure long term viability.
- Maintain regular bidirectional communication and engagement with your partners and other involved parties.

**ORGANIZATIONAL CAPACITY:** The degree to which you have the internal support, knowledge, experience, and financial and physical resources needed to effectively manage your program.

- Assess your program's mission and goals and ensure they align with that of your parent organization.
- Identify and leverage existing organizational resources to support your program, including human and intellectual capital, physical space, and financial resources.
- Identify ways for staff to occupy multiple roles within
- the organization.
- Ensure and maintain ongoing core staff with appropriate training and developmental opportunities.

**PROGRAM EVALUATION:** The on-going process by which the value of a program's inputs and outputs are examined. This includes understanding leadership and staff support and resources, as well as the processes and outcomes that reinforce the mission of the program.

- Assess your organization's and program's readiness for evaluation.
- Identify staff to collect, analyze data, and report findings.
- Understand your program's ability to adjust processes according to evaluation results.
- Regularly review process and outcome data and implement new plans to adjust accordingly.
- Review and share your evaluation with involved parties.

**PROGRAM ADAPTATION:** The process of using the scientific literature and your evaluation data to maintain program effectiveness and meet the needs of participants and involved parties.

- Periodically review the scientific evidence base and adapt your program to new updates.
- Proactively adapt your program to eliminate or modify ineffective components identified by your evaluation.
- Communicate regularly with staff, partners, and your program's participants.

**COMMUNICATIONS:** The activities by which you share your program's objectives, accomplishments, and strategies both internally with staff and leadership and externally with other parties of interest, program participants, media, and the public.

- Dedicate staff to be in charge of internal and external communications,
- Develop a communications plan for all audiences,
- Develop a marketing plan for external partners that conveys goals, successes, and the impact of the program.

**STRATEGIC PLANNING:** An organizational or program activity that helps to develop priorities, identify resources, and harmonizes work towards common goals and objectives.

- Develop a transparent strategic plan that you can share both internally and externally.
- Conduct strategy developed in concert with larger organizational and partner foci.
- Include clear goals and objectives that will help staff and involved parties understand the purpose of your program.
- Include funding and sustainability strategies and propose roles and responsibilities for all involved parties.

# 8 Remote Evaluation of CHWPs

## SECTION 8    Remote Evaluation of CHWPs

Programs may be delivered in an in-person setting, remotely through apps, or through other virtual means. Some programs may use combinations of all of these delivery methods. Regardless of how a program is delivered, the evaluation of a program may face pressures requiring the *evaluation itself* to be conducted using remote methods.

To continue to assess the impact of your program, evaluation must adapt, even when circumstances are beyond your control. This is particularly true of outcome evaluation. You may need to conduct your evaluation remotely, using the support of technologies that support or utilize data downloads (e.g., Bluetooth), videos, or photographs. You may also need to conduct telephone interviews or meet participants and program staff at off-site locations.

> While this toolkit is not focused on the delivery modality of CHWPs, we do want to share some guidance for remote evaluation of programs being delivered by any means. As we continue to learn more from evaluation of CHWPs, we will be sure to update this toolkit. Sign up for the **NCCOR Newsletter** (**www.nccor.org/e-newsletters**) to be notified of updates to the toolkit.

## What is important to know regarding remote evaluation?

Program evaluation is not without challenges, and the same can be said about remote evaluation of CHWPs. While the remote collection of process measures may be similar to current methods (i.e., the counts or proportions of enrollees or sessions attended or completed), collecting outcome measures remotely will likely look different. For example, your program may have had standardized methodology to collect outcomes such as height and weight and measures of fitness

and strength which may not be possible to collect safely in-person. Adjusting to remote data collection needs may strain your limited resources. This also may limit the types of outcomes your program can evaluate.

While remote evaluation adds a layer of complexity, keep in mind that many outcome measures can be evaluated with monitoring devices/ apps or patient self-reported data.[53] A good place to start when determining how to evaluate outcomes remotely is to assess your program's goals and identify how you can continue to achieve those goals in your new context. This may require you to get creative when collecting some outcome measures, but you may find that some data collection may be easier. For example, lengthy surveys or questionnaires on psychosocial outcomes may be less costly and less interruptive when completed online. Previous barriers may transform into opportunities for more robust data collection that can inform different aspects of your program.

Ideally your program will try to use measurements taken at home as well measurements conducted by professionals outside of the home. The best way to gather and monitor data over time may depend on both individual child or family factors as well as contextual considerations.[53] Whatever approach you take, consider which methods will allow you to most easily and cost effectively collect the most valid and reliable measurements. Methods that allow you to collect objective data such as height and weight measured by a trained professional using standardized tools are more reliable even if they are conducted remotely, such as at an outdoor facility in your local community. Parent or participant self-reported weight and height using standardized equipment at participant's homes may be an adequate proxy measure that may also be more acceptable to parents and participants.

# How can I conduct a virtual or remote program evaluation?

When conducting evaluation remotely, there is no one size fits all approach. Your program will have to consider the context in which it is working and what resources are available to determine the best approach. It is recommended that you review all the ideal process outcomes from **Section 4** and outcome measures from **Section 5** to identify which are feasible for your program to collect when conducting remote evaluation. This will help ensure consistency over time within your program from one cycle to the next and allow for comparisons across different programs. Preparing your staff as well as participants and their families for evaluation to occur remotely is critical. Sharing resources, whether paper or virtual, is important. Staff and participants need to know what to expect, but how you share this information will depend on the way your staff and program participants prefer to receive information. You will also need to identify the resources, staff, and materials needed to conducted evaluation remotely. Staff may need to be trained to take measurements outside of the program site using portable technology. You may need to purchase licenses for video sharing technology, not only to implement a program virtually, but also as a way to conduct evaluations. You also need to have a plan for the types of measures you can evaluate remotely.

Height and weight are the most common anthropometric outcome measures collected in CHWPs, and you may find yourself wondering how your program can systematically collect this information in a remote environment. Other measures of interest that may be assessed remotely include those relating to strength or fitness. Some programs have found resources to send equipment to families at home.

**Examples of how CHWPs can collect height and weight data remotely**

- Data collection from well child visits by the child's health care provider (emergent circumstances may make this less feasible)

- Data collection outdoors by staff trained to collect height and weight data following public health guidelines when weather permits

- Home measurement using a digital scale (preferably Bluetooth-enabled) and a stadiometer kit; instructions from a trained professional are provided remotely during data collection

- Home measurements using a digital scale and a stadiometer kit that is telehealth observed by trained professional* or patient sends results via pictures taken with phone camera

- Parent or participant self-reported measurements using standardized equipment

- Parent or participant self-reported measurements using non-standardized equipment

*Examples of protocols for telehealth-observed home measurements are available for sharing (Personal communication Kenneth Resnicow, PhD and Emerson Delacroix, LLP MACP (University of Michigan School of Public Health) March 26, 2021.*

Each of the examples shared in the continuum has contextual limitations that limit the feasibility of obtaining an accurate measurement. Standard guidance should be provided to limit variability. For example, measurements taken at home differ if taken on carpet vs hardwood floors. It is important to aim for optimal reliability, balancing the limitations with the needs of your patients and your programs.

## Summary

Whatever the reason for conducting an evaluation of your program remotely, know that this type of evaluation data can be collected. While telehealth interventions are not new, remote evaluation of these programs is. As virtual or remote CHWPs programs grow, it will be critical to evaluate them to learn about their impact and effectiveness. This may allow more programs to increase their scalability, especially to more rural or remote areas of the country. The availability of remote evaluation may justify conducting these programs in this manner. As more data are collected, we also will be able to better assess the validity and accuracy of these data collection methods, which will support program evaluation. These efforts will be critical to the future of CHWPs.

# 9 Conclusion

**SECTION 9**    **Conclusion**

We have learned how program evaluation is a fundamental component of CHWPs. Evaluating your CHWP can improve its effectiveness, build capacity, and advance population health. When CHWPs like yours use similar measures to evaluate their programs, comparisons can be made to learn about the comparative effectiveness of CHWPs. This can have major implications for improving children's health as programs can learn from one another and determine which interventions work best, when, and why. While the capacity of CHWPs may vary, guidance on the selection of a core set of reliable and feasible measures will allow all CHWPs to evaluate the effectiveness of their programs. Whether you are just getting started or have been evaluating your program for years, we hope this toolkit provides you with the capacity to conduct meaningful program evaluation.

# RESOURCES
**www.nccor.org/tools-evaluating-childhood-healthy-weight-programs/resources-library**

## SECTION 1: INTRODUCTION

- **BMI-for-age growth charts** provide a means of determining weight status for age and gender using BMI.

## SECTION 2: PROGRAM EVALUATION OVERVIEW

- **Section 1 of Chapter 36 in the Community Tool Box** offers additional examples of the ways in which program evaluation can be used.

- CDC's **Framework for Program Evaluation** consists of six connected steps that can be used as a starting point to tailor an evaluation of your CHWP.

- CDC's **Evaluation Guide: Practical Strategies for Culturally Competent Evaluation** provides cultural context for each of the six steps listed above in the CDC Framework for Program Evaluation.

- The Community Tool Box's chapters on **Evaluating Community Programs and Initiatives** provide guidance on how to frame program evaluation.

## SECTION 3: EVALUATION READINESS

- **BetterEvaluation** provides detailed information about evaluability assessments and templates.

- **County Health Rankings & Roadmaps** offer data on health outcomes that may be of interest such as obesity prevalence across communities in the United States.

- **The National Implementation Research Hexagon Tool** is both a qualitative and quantitative resource to assess evaluation readiness.

- **Ready, Set, Change!** is an online decision support tool for assessing organizational readiness.

- **The Wilder Collaboration Factors Inventory** is a set of several online resources, including questionnaires and surveys, that can be used to quantitatively assess the degree and strength of collaboration within an organization.

## SECTION 5: OUTCOME MEASURES

- **A Guide to Methods for Assessing Childhood Obesity** describes six of the most common adiposity assessment methods and key considerations when collecting weight-related outcomes.

- The **5210 Full Health Children Toolkit** contains tips and questionnaires that can be used to gather process measures for a variety of audiences.

- **Family Nutrition and Physical Activity (FNPA)'s screening tool** is an easy-to-use set of questionnaires on healthy behaviors.

- The **Feeding Practices and Structures questionnaire** uses parental self-report to determine feeding and meal practices.

- This **Parenting Style Questionnaire** uses parental self-report to determine parenting strategies.

- The **Rosenberg Self-Esteem Scale** is a brief questionnaire that can be used to assess and track self-esteem of program participants.

- The **Self-perception Profile for Adolescents** is an in-depth survey that can be used to assess perceptions of self-identity in children and adolescents as an outcome measure.

## SECTION 6: CONTEXTUAL FACTORS

- The **Accountable Health Communities Health-Related Social Needs Screening Tool** helps providers conduct assessments to inform patients' treatment plans and make referrals to community services. The first 10 items in the tool are related to SDoH.

- **Addressing Health Equity in Evaluation Efforts** helps users integrate health equity considerations into each step of an evaluation.

- **Building a Culture of Health in Childhood Obesity: Overview & Action Plan for Medicaid Health Plans** provides helpful information when thinking about contextual factors in childhood obesity.

- **Getting to Equity in Obesity Prevention: A New Framework** presents a deliberate focus on equity when designing and implementing strategies for obesity prevention.

- The **Health Equity Resource Toolkit for State Practitioners Addressing Obesity Disparities** provides important resources to implement effective responses to obesity in populations that are facing health disparities.

- **Promoting Food Security for All Children** provides food insecurity screening tools and resources and recommendations for how providers can address food insecurity among the populations they work with.

- **Screen and Intervene: A Toolkit for Pediatricians to Address Food Insecurity** includes a validated two-question food insecurity screening tool and provides guidance on how providers can address food insecurity among their patients and families.

- **Social Determinants of Health 101 for Health Care: Five Plus Five** is a discussion paper that provides readers with five things that are known about SDoH in health care and five things to learn about SDoH in health care.
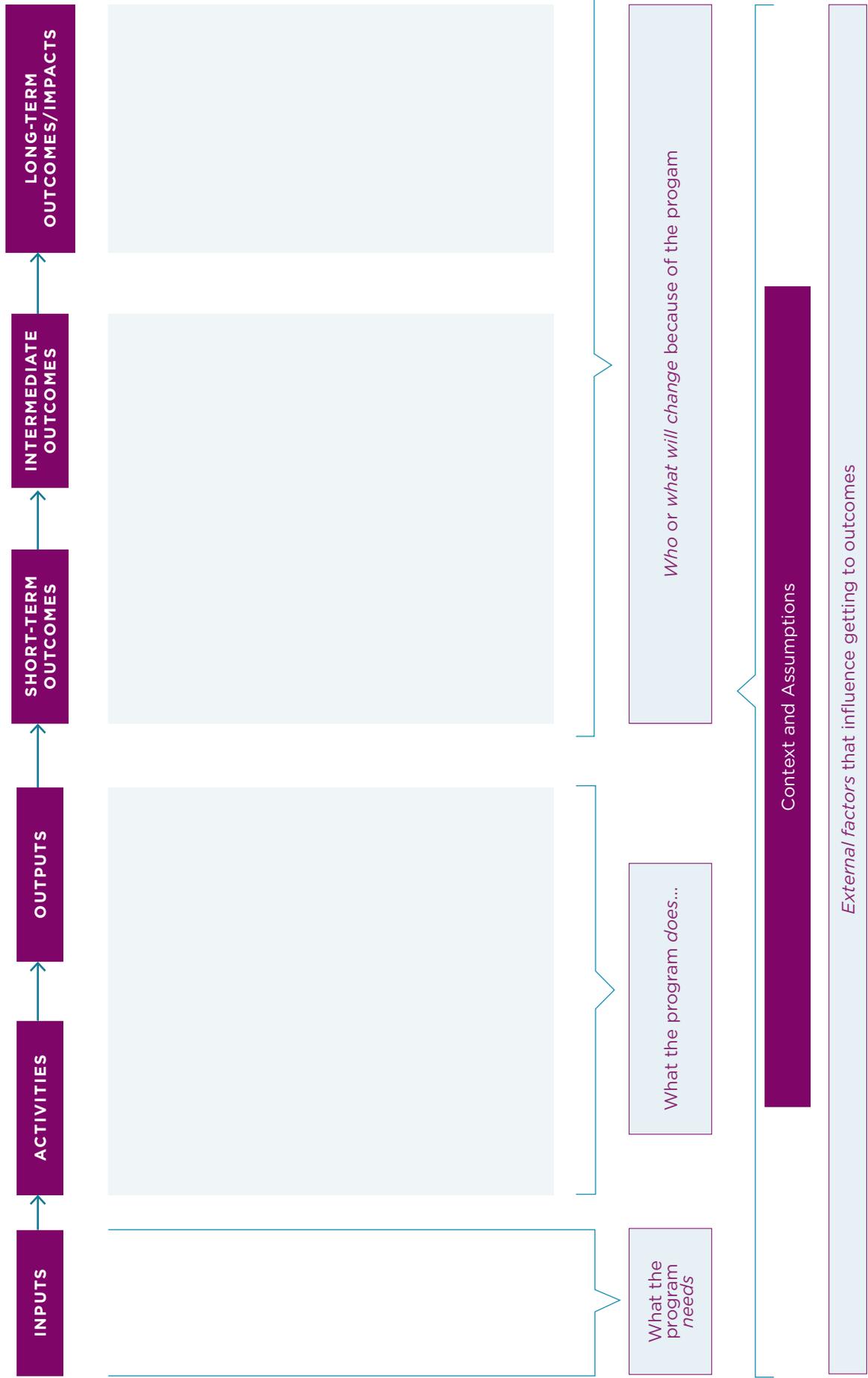
**SECTION 7: PROGRAM SUSTAINABILITY**

- **A Sustainability Planning Guide for Healthy Communities** provides tools and resources to be used as a stepwise guide to support the sustainability of programs and policies that have been implemented in communities.

- The **Program Sustainability Assessment Tool** is a 40-item self-assessment tool that programs or involved parties can utilize to evaluate program sustainability.

- **Planning, Building and Sustaining a Childhood Obesity Program: A Survival Guide** is a useful resource to consult when developing your sustainability plans.

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# APPENDIX 1: LOGIC MODEL TEMPLATE

| INPUTS | ACTIVITIES | OUTPUTS | SHORT-TERM OUTCOMES | INTERMEDIATE OUTCOMES | LONG-TERM OUTCOMES/IMPACTS |
|---|---|---|---|---|---|

*What the program needs*

*What the program does…*

*Who or what will change because of the progam*

Context and Assumptions

*External factors that influence getting to outcomes*

# APPENDIX 2: LIST OF PROCESS AND OUTCOME MEASURES

This Appendix provides suggestions on how to categorize the measures described throughout this Toolkit into two categories based on your capacity, available funding, and familiarity with conducting evaluation. You may choose to begin with those measures listed under Level 1. Alternatively, with greater capacity, funding, or familiarity with evaluation, you may choose measures from Level 2 where applicable.

| TYPE OF MEASURE | LEVEL 1 | LEVEL 2 |
|---|---|---|
| **Process** | Number of referrals, or requests to enroll | |
| | Number of children and families enrolled | Proportion of referred children and families who enroll |
| | Number of sessions attended by each child and family | Proportion of referred children and families who enroll |
| | | Proportion of children and families who completed a prespecified portion of sessions |
| | | Proportion of children and families who completed all of the sessions |
| | | Assessment of provider skill and communication, such as a pre- and post-test counseling skills assessment |
| | | Health Care Climate Questionnaire (HCCQ, brief version) |
| | | Assess health coach or counselor fidelity to program fidelity using the Roter Interaction Analysis System (RIAS) Software or the Motivational Interviewing Treatment Integrity (MITI) coding |
| | Number of visits to the program web site | Time spent on the program web site at each visit |
| **Outcome** | Height and weight, and calculated BMI | |
| | Lifestyle behaviors (food, physical activity, and sleep patterns) | |
| | | Blood pressure |
| | | Fitness (resting heart rate, 12-minute walk/run with resting heart rate recovery assessment) |
| | | Health related quality of life (e.g., **PEDsQL**, **KIDSCREEN**, **Sizing Me Up, Sizing Them Up**, or **IWQOL-Kids**) |
| | | Self-esteem (e.g., Rosenberg Self-Esteem Scale, or the **Self-perception Profile for Adolescents**) |
| | | Weight related teasing and perceptions of body image (e.g., **Perceptions of Teasing Scale**) |

# GLOSSARY

**Accuracy:** Closeness of measured value to a gold standard or known value; it is related to validity.

**Anthropometric measures:** Measures that provide information on weight, body size, or body composition.

**Body mass index:** A person's weight in kilograms divided by the square of height in meters. It can be used to screen for adiposity and related weight categories that may lead to health problems, but it is not diagnostic of the adiposity or health of an individual.

**Childhood healthy weight programs:** A program designed to teach healthy eating and physical activity for children and adolescents with overweight/obesity and their families.

**Childhood obesity:** Body mass index at or above the 95th percentile for children and teens of the same age and sex.

**Childhood overweight:** Body mass index at or above the 85th percentile and below the 95th percentile for children and teens of the same age and sex.

**Communications:** The activities by which you share your program's objectives, accomplishments, and strategies both internally with staff and leadership and externally with other partners, program participants, media, and the public.

**Contextual factors:** Factors that have an impact on the community health weight program's outcomes but are not necessarily part of the intervention. This can be specific to the program itself, to program participants and their families, and even to the communities where participants live.

**Cost-related measure:** Measures that derive from cost analyses and cost-effectiveness analyses.

**Cultural competence:** Ability to understand, appreciate, and interact with people from cultures or belief systems that are different from one's own.

**Effort-based measures:** Measures that assess physical fitness such as heart rate recovery from exercise.

**Environmental support:** A work climate where program champions can secure resources and gather backing and approval from leadership, partners, and the public.

**Evaluability assessments:** A methodical process to decide whether a program has the necessary information, engagement from interested parties, and organizational structure to be evaluated successfully.

**Evaluation readiness:** An organization's ability to successfully assess how well a program was implemented, how successful that project was, and the determinants of the degree of success or failure.

**Feasibility:** The degree of being easily done.

**Funding stability:** An approach to identify and develop consistent funding sources for your program in the long term.

**Health equity:** Ensuring that everyone has the fair and just opportunity to be as healthy as possible

**Lifestyle or behavioral change measures:** Measures that assess changes in nutrition, physical activity, screen time, and sleep.

**Logic model:** A tool to help you plan, describe, manage, and evaluate your program.

**Organizational capacity:** The degree to which you have the internal support, knowledge, experience, and financial and physical resources needed to effectively manage your program

**Organizational readiness:** How well an organization is prepared to undertake an evaluation by way of operations, resources, and work culture and attitudes toward evaluation.

**Outcome measures:** Measures that will show you the impact of your intervention.

**Partnerships:** Goal-oriented relationships with other organizations, leadership, or membership-based groups that can directly impact program success and sustainability.

**Physiological and metabolic measures:** Measures that convey information about an individual's body functions such as blood pressure, lipids, glucose, hemoglobin A1c, as well as effort-based measures such as heart rate recovery from exercise.

**Process measures:** Measures that focus on different aspects of your program's delivery and activities such as enrollment, setting, transportation, participation, readiness to change, and mastery of skill.

**Program adaptation:** The process of using the scientific literature and your evaluation data to program effectiveness and meet the needs of participants and involved parties.

**Program evaluation:** The on-going process by which the value of a program's inputs and outputs are examined.

**Program sustainability:** The ability to continue providing community health services or benefits over time, even after a funding period is over.

**Program-based measures:** Measures that describe the program such as enrollment, attendance, and program activities.

**Propriety:** The state of quality of conforming to conventionally accepted standards of behavior or morals.

**Provider-based measures:** Measures that help you understand the process that supports your program's delivery.

**Psychosocial measures:** Measures that assess the possible impact of the program on domains of psychological and social functioning among children or teens with overweight or obesity.

**Remote evaluation:** Assessment of a program using the support of technologies such as data downloads, videos, photographs, telephone interviews, and meeting at off-site locations.

**Self-esteem:** Broadly defined as thoughts, concepts, and feelings about oneself.

**Social determinants of health:** The conditions in the environments where people are born, live, learn, work, play, worship, and age that affect a wide range of health, functioning, and quality-of-life outcomes and risks.

**Strategic planning:** An organizational or program activity that helps to develop priorities, identify resources, and harmonizes work toward common goals and objectives.

**Utility:** The state of being useful or beneficial.