A STEP-BY-STEP GUIDE TO

Community Based Participatory Research

NMHEC

NEVADA MINORITY HEALTH & EQUITY COALITION

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Who We Are

NMHEC
NEVADA MINORITY HEALTH & EQUITY COALITION

About the Nevada Minority Health and Equity Coalition

The Nevada Minority Health and Equity Coalition (NMHEC), housed within the UNLV School of Public Health, is a partnership of academic, civic, private, and community organizations that aim to address health disparities and inequities in Nevada by building capacity, informing policy, and conducting research.

Our Mission

The mission of the NMHEC is to promote the health and well-being of diverse communities by pursuing research, capacity building, and advocacy that recognizes the unique cultural and linguistic differences of Nevadans.

Our Vision

NMHEC recognizes inequality as a comorbidity and therefore promotes the elimination of preventable health disparities. Our vision of a healthy community is one where:

- All communities have a seat at the table, and diversity and equity are valued.
- Diversity and inclusion within the community is respected and valued by community members, institutions, and policymakers.
- Everyone has equitable access to quality primary and behavioral healthcare and social services.
- Work is conducted in partnership with community members, organizations, service providers, and local, state, and federal government to identify and address the social determinants of health.

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Toolkit Overview

Nothing About Us, Without Us, Is for Us

"This powerful slogan arose from the struggle of people with disabilities in South Africa. It could be the basic operating principle of peoples' struggles all over the world."

Ricardo Levins Morales
https://www.rlmartstudio.com/

What is Community-Based Participatory Research?

Community-based participatory research (CBPR) is a collaborative and equitable approach to research that is carried out in partnership between **researchers** and the **community**. In CBPR, both the researchers and the community have an equal share of power, decision-making, and responsibility of the research being done. Additionally, all partners are actively engaged throughout the entire research process, which includes study design, implementation, analysis, interpretation, communication, and translation of results.[1–3] This approach is a shift from research "on" or "in" communities to "with" communities.

The aim of a CBPR approach is to increase knowledge and understanding about particular issues and then integrate the new knowledge into interventions, programs, or policies that benefit the community.

It is important to note that CBPR is an approach, not a specific research method or design.

Who should use this toolkit?

This toolkit is intended for **stakeholders** interested in conducting health equity research or projects with a focus on building and sustaining community partnerships as a collaborative effort to address **health disparities**. Stakeholders may include community members; community-based organizations; academic researchers; local, state, and federal partners; faith-based leaders; policymakers; or those committed to achieving health equity.

> "Alone, we can do so little; together, we can do so much."

Hellen Keller
American Author, Disability Rights Advocate

How to use the toolkit?

This toolkit serves as a "how-to" guide for those interested in using a CBPR approach to address health disparities. The toolkit breaks down the CBPR process into six phases, which make up the six sections of this toolkit. Each section outlines key concepts related to the phase and then provides an easy-to-follow checklist with key considerations so that the phase can be put into action. Each checklist is divided by overarching goals or activities with action steps that will help to achieve them. Guiding questions and tips are included with each action step to help toolkit users get started. See the **Action Step Checklist Example** below.

Action Step Checklist Example

Overarching goal or activity. A brief description about the importance of this goal or activity in CBPR.

- ☐ **Action Step.**
    - Guiding questions or tips on how to complete this action step.

***IMPORTANT NOTE:* The toolkit presents CBPR as a simplified, step-by-step process to help toolkit readers get started with CBPR work. However, CBPR is not necessarily a sequential, one-size-fits-all process. CBPR is a continuous and dynamic approach that is uniquely carried out each time it is put into action. It is common to frequently revisit and reevaluate actions taken in other phases throughout the implementation of CBPR. Overall, this toolkit should be viewed as a starting point and should be adapted and applied to best fit the partnership.**

CBPR to Foster Health Equity

CBPR is a research approach that integrates the community into every step of the research process. It is a shift from doing research "on" or "in" the community – to doing research "with" the community. This section will cover the foundations of CBPR and how researchers and communities can use **CBPR to foster health equity**.

Learning Objectives

1. **Describe how CBPR can be used in health equity work.**
2. **Describe the phases of the CBPR process.**
3. **State the benefits of CBPR.**
4. **Apply the guiding principles of CBPR.**

CBPR and Health Equity

Health equity is reached when everyone has the fair opportunity to achieve their fullest health potential without limitations or barriers.[4,5] Unfortunately, many people today are not provided the opportunity to achieve their fullest health potential due to the various limitations and barriers built into existing social and political structures. These structures are known as the **social determinants of health** (SDOH), which often impact communities that are historically **misrepresented**, **marginalized**, **stigmatized**, and **under-resourced**.

The SDOH are factors that impact an individual's health, well-being, and quality of life. More specifically, the SDOH influence the availability of options for an individual to improve or maintain their health. There are five key SDOH domains: 1) economic stability, 2) education access and quality, 3) healthcare access and quality, 4) neighborhood and built environment, and 5) social and community context.[6] The unequal distribution of SDOH contribute to the many limitations and barriers that some communities experience, which causes **health inequities** and poor **health outcomes**.

Health equity efforts aim to improve health outcomes by identifying the root causes that enable existing health disparities and inequities within a community, then creating and implementing community-focused interventions that reduce or eliminate those root causes. CBPR is one approach that can be used to develop and implement a health equity effort.

CBPR can achieve health equity through the combination of "knowledge and action for social change to improve community health and eliminate health disparities."[7] Unlike research approaches "on" or "in" communities, CBPR is conducted "with" the community where they share the same level of power and decision-making as the researchers. This balance welcomes the integration of community insight throughout each phase of the research process, thereby recognizing the value that the community brings to research.

An example of CBPR for health equity comes from the Tampa Bay Community Center Network (TBCCN), a collaborative network of partnerships created to reduce cancer health disparities among populations that are medically underserved.[8] TBCCN consists of the National Cancer Institute and 23 community-based organizations which include grassroots, nonprofit, faith-based, health care, and service organizations.[8] The TBCCN used a CBPR approach to lead an effort to address the higher risk and mortality of cervical cancer among Hispanic farmworkers. The reduction of cervical cancer disparities was identified as a community priority. Therefore, TBCCN collaboratively developed and implemented an intervention strategy that would address the barriers to high-quality care through the use of a patient navigator who lived in the community. As a result, TBCCN's work increased the understanding and knowledge of cervical cancer, reduced delays in reporting abnormal Pap smear results, improved the coordination of follow-up care for patients with abnormal results, and reduced cultural, social, and economic barriers to seeking care.[9]

Collaboration with community partners is key to developing strategies that will lead to changes in policies, systems, and environmental factors that contribute to health inequities.

How is the community involved in research?

There are several ways the community can be involved in research (**Figure 1: Community Involvement in Research**), which depends on how engaged they are with the research activities from start to finish. **Community engagement** is defined as "...the process of working collaboratively with and through groups of people affiliated by geographic proximity, special interest or similar situations to address issues affecting the well-being of those people."[10] In research, community engagement will depend on the relationship between the community and researchers, as well as the **research agenda**. It is possible for the community to become more involved in the research as a relationship builds between the community and researchers. As the community becomes more involved, they gain more power, control, responsibility, influence, and ownership of the research. Additionally, the research becomes more **equitable** and **culturally responsive**.

> "CBPR... requires relinquishing one's role as the 'expert' in order to recognize the role of community members as full partners in the learning process."

Barbara A. Israel, DrPH, MPH
Principal Investigator of the Detroit Community-Academic Urban Research Center

Figure 1: Community Involvement in Research

Community Involvement

	Low				High
	Informed	**Consulted**	**Involved**	**Collaborated with**	**Leading**
Approach	*Researcher-Driven Research*	*Community Placed Research*	*Community Engaged Research*	*Community-Based Participatory Research*	*Community-Driven Research*
What it Looks Like	*The researcher sets the research agenda based on a topic of interest.*	*The researcher sets the research agenda based on a topic and community of interest.*	*The researcher sets the research agenda with some community input.*	*The researcher and the community set the research agenda based on mutual interests.*	*The community sets the research agenda based on their interests.*
Research Outcomes	*Advance the science on a topic. Peer-reviewed publications and academic presentations.*				
		Community input strengthens findings and interpretations. Tailored dissemination of research findings into the community.			
			Degree of partnerships strengthens the study design, access, relevance to the community, and ability to translate findings into action.		
				Co-learning bolsters engagement, problem solving, and change.	
					Increase community capacity for research, mobilization, and change.

NOTE: Adapted from Figure 4.2 Spectrum of community engagement in research in Community-Engaged Research for Environmental Justice, Chapter 4: The Community Engaged Research Process by Lucero et al., Luminos. [11]

The Phases of CBPR

The process of CBPR is continuous and repetitious, and not necessarily sequential. Although this toolkit presents the CBPR process as six sequential phases, it is important to note that the actual process is dynamic and fluid. **Figure 2: The Phases of CBPR** depicts the cyclical and dynamic relationship of the six phases discussed in this toolkit.

Figure 2: The Phases of CBPR

Note: Adapted from Figure 1.1 Core Components/Phases in Conducting CBPR in Introduction to Methods for CBPR for Health (Chapter 1) by Israel, B., et al., 2012.[2]

Benefits of Using a CBPR Approach

There are several benefits to using a CBPR approach (**Table 1: Benefits of CBPR by Phase**). In CBPR, the community is directly involved with the research activities, thereby integrating both research and community priorities to facilitate sustainable social change within the community. This approach to research recognizes the value and power a community brings to every phase of the research process.

Table 1: Benefits of CBPR by Phase

CBPR Phase	Benefits
Forming a CBPR partnership	• Brings together individuals with diverse skills, knowledge, and expertise to work towards a common goal. • Provides the community an active seat at the table throughout the entire research process. • Facilitates the (re)building of trust in research among communities who have previously been the subject of research, especially communities that are historically misrepresented, marginalized, stigmatized and under-resourced.[3]
Assessing community strengths, dynamics, and priorities	• Provides a more comprehensive understanding of the context around community priorities and concerns. • Enables the development of culturally responsive research topics that address the priorities of the community.
Designing the research project	• Enhances community member participation in research because the community is an equal part of the research team. • Allows for the inclusion of multiple perspectives to examine the topic of interest. • Promotes **co-learning** and **capacity building**.
Feeding back and interpreting research findings	• Enhances the understanding of the research topic. • Increases **reliability** and **validity** of research results since the findings are interpreted within the context of the community.
Disseminating and translating research findings	• Ensures the community receives the research findings. • Facilitates community ownership of the research findings. • Enables the development of culturally responsive interventions that are long-lasting and bring about positive change for the community.
Evaluating the CBPR partnership and activities	• Creates a foundation for continued collaboration between researchers and the community. • Minimizes barriers to engage in future research projects. • Provides the opportunity to strengthen mutual respect and trust between researchers and the community.

Guiding Principles of CBPR

CBPR is guided by a set of core principles (**Table 2: Guiding Principles of CBPR**), which outline how the partnership will strive to achieve a collaborative and equitable approach to research and action.[2] Although it is important for each CBPR partnership to understand these principles, they ultimately should review and adapt these principles to fit the specific partnership. A project that aligns with its established CBPR principles is more likely to result in effective outcomes.[12]

Table 2: Guiding Principles of CBPR

CBPR Principle	Description
Recognizes community as a unit of identity.	Communities are unique, complex, and based on at least one shared characteristic or **unit of identity**.[2,16] Examples of a community include a family, social group, or neighborhood.
Builds on strengths and resources within the community.	Each member of the partnership brings a unique and valuable set of skills, experiences, resources, social networks, and perspectives to the research process.
Facilitates equitable collaboration and involvement throughout all phases.	Partners participate as equal members throughout all stages of project development and application. **Mutual accountability** within the partnership ensures the equitable share of power and responsibility.
Fosters co-learning and capacity building among all partners.	CBPR is a co-learning process, where there is a "reciprocal exchange of skills, knowledge, and capacity among all partners involved."[2] Co-learning promotes capacity building among partners by improving and expanding tools and resources that enhance their abilities to achieve goals more effectively.[17]
Involves project development using a cyclical and iterative process.	The phases of CBPR are **cyclical** and **iterative**, which means the CBPR partnership will continuously work together to develop and maintain the partnership.[13]
Focuses on relevant problems that are local to the community.	The topics addressed in the CBPR project should be of local interest and relevance to the community.[2] It is essential to take the time to gather community input to understand social, cultural, economic, and political contexts.

CBPR Principle	Description
Finds balance between knowledge and action.	The aim is to generate new knowledge and translate that knowledge into goal-oriented action (such as interventions or policies) that can mutually benefit science and the community.[2]
Shares results and findings in a meaningful way to partners and the community as a whole.	Research results and lessons learned should be shared in useful, understandable, and respectful ways within the CBPR partnership and broadly with the community and other interested stakeholders.
Promotes a long-term process and commitment to sustainability.	CBPR involves a long-term commitment to ensure the partnership is sustainable over time. Ideally, a partnership should continue well beyond one research project or funding opportunity.[2] Sustainable partnerships result from the continuous investment and maintenance of the relationship as well as the co-learning and capacity-building nature of CBPR. All of these components contribute to building networks and broad expertise, which can help provide opportunities for future collaborations.

"There is no one size fits all. We must work country by country, region by region, community by community, to ensure the diversity of needs are addressed to support each reality."

Amina Mohammed

United Nations Deputy Secretary-General

01 | Forming a CBPR Partnership

The first phase in implementing a CBPR approach is **forming a CBPR partnership**. A CBPR approach depends on a mutually beneficial partnership between researchers and the community, which takes time to initiate, nurture, and maintain. This section will cover the significance of partnerships in CBPR, describe the different CBPR partnership roles, and provide an action plan on how to form a sustainable CBPR partnership.

Learning Objectives for Section 1

1. **Describe the importance of partnerships in CBPR.**
2. **Define the key components of an effective CBPR partnership.**
3. **Distinguish between the two main partnership roles of CBPR.**
4. **Outline various strategies to initiate, nurture, and maintain a CBPR partnership.**

The CBPR Partnership

Partnerships are the foundation of CBPR and are a critical driver of both meaningful and impactful research at the community level. The CBPR partnership is fluid, dynamic, varies in pace, and requires a long-term commitment.[14] It is also a **mutually beneficial partnership** where all parties involved uniquely contribute to the project and independently benefit from the project.[15] CBPR brings together individuals or groups with varying expertise, which increases the types of skills brought to the table as well as boosts the credibility, generalizability, and broader relevance of the work.[16]

The two main roles within a CBPR partnership are the researcher and the community (**Figure 3: The Two Partnership Roles of CBPR**). However, it is important to acknowledge these roles are not mutually exclusive. Research partners can have community expertise, and community partners can have research expertise.

Figure 3: The Two Partnership Roles of CBPR

Researcher[14,17]
The partner who brings the research expertise to the table. This individual or team carries the knowledge and skills to conduct research, which includes:

- Framing the research question(s)
- Developing the research methods
- Collecting and analyzing the data
- Interpreting research results

Additionally, the researcher will generally have greater access to funding opportunities that support research.

Most researchers in the CBPR partnership are based in an academic setting, such as a university. However, researchers can also be based in a:

- Community-Based Organization (CBO)
- Federal agency
- Government agency
- Private non-profit agency

Community[14,17]
The partner who brings the community expertise to the table. This individual or team represents the community and carries the knowledge of how the community will benefit from the research activities.

Various individuals or organizations can represent the community in a CBPR partnership, such as:

- Staff and membership of CBOs
- Grassroots organizations
- Residents of a neighborhood or community
- A group of people who share a common trait (e.g., individuals with a certain health condition or individuals who share a common background)

It is important to note that multiple people can fill the community partner role, and each individual can bring varying degrees of community expertise to the table.

Initiating a CBPR Partnership

Developing a partnership is the starting point of a CBPR approach. However, establishing a CBPR partnership can take time, and there is no single way to start. Sometimes the process will begin with the researcher approaching the community or the community approaching the researcher. In other instances, the partnership may already exist. Regardless of the starting point, a handful of components contribute to an effective CBPR partnership (**Figure 4: Components of an Effective CBPR Partnership**). These components are often referred to as elements of **group dynamics** and should be kept in mind as the partnership develops.

Figure 4: Components of an Effective CBPR Partnership

Trust
Trust is the foundational component of any partnership. It is the ability to feel confident and secure that the other partner will carry out actions as expected without intent to harm. It is built up and gained over time based on actions such as being honest, upholding commitments, communicating clearly, showing humility, and participating consistently in partner activities. It is important to note that some communities may have pre-existing mistrust of researchers, which should be a respected boundary.

Open Communication
An effective CBPR partnership will have a continuous and open line of communication where all partners can have an opportunity to contribute their input into the discussion.[18] It is best to identify the most effective mode of communication between partners early-on to establish a platform that allows for **equitable participation**.

Common Interest
Partners should share a common interest, such as a goal, vision, mission, value, or priority. A common interest shared between partners can make it easier to incorporate the demands of the research activities. It also fosters a sense of belonging or common ground,[18] which can provide a baseline for trust and communication within the partnership.

Shared Ownership
Each CBPR partner shares ownership over all aspects of the research, which include the activities, decision-making, and any collected results or data. One partner does not hold sole ownership. Shared ownership assures the community that research activities are conducted appropriately and that an iterative process is in place.

Open-Mindedness
Having an open mind in the CBPR partnership will allow for greater acceptance of alternative perspectives and structures that support trust.[14] An open mind paves the way

to more substantive, creative, and effective solutions. It can also balance the co-learning process as new skills or insights are made available.

Self-Reflection
CBPR partnerships require a long-term commitment, which involves ongoing self-reflection to ensure the sustainability of the partnership. Self-reflection is the process of evaluating one's self or the partnership to identify strengths or areas for improvement.

Forming the Organizational Structure of the CBPR Partnership

In addition to setting goals, a successful CBPR partnership should develop an organizational structure to help maintain the partnership over time. The organizational structure sets the standards for partnership operations, decision-making, and conflict resolution. Common components of a CBPR partnership organizational structure will include partnership leadership, a community advisory board, members, and staff.[15,19] However, depending on the size of the CPBR partnership, not all of these components may be present.

Partnership Leadership

Partnership leadership will serve as the decision-making body for the CBPR partnership and should consist of both researchers and the community. The decision-making body will guide and oversee partnership activities and establish the partnership's operation, decision-making, and conflict-resolution standards. [23] It will also develop the roles and responsibilities of partnership members and staff.

Community Advisory Board

Community advisory boards (CABs) diversely represent the community and provide valuable insight about a variety of community dynamics related to the research activities such as interests, priorities, and concerns.[15] This group can consist of general community members, community-based organizations, business owners, community leaders, parents, and academic partners. The primary function of the CAB is to keep the community's best interest at the forefront of all discussions, agendas, and activities related to the CBPR project.

Members

Members of the CBPR partnership include individuals who are not a part of the decision-making body. The decision-making body will need to define what it means to be a member of the CBPR partnership, as well as the roles and responsibilities that members will hold within the project. Membership can be formal or informal. Regardless of formality, the decision-making body should also establish what benefits members will receive from being a part of the partnership, such as financial compensation or professional development training.[19]

Staff

The last component of the organizational structure of a CBPR partnership is staff, which is the group that provides support to the CBPR partnership. Staff ensures CBPR partnership activities remain on track and are carried out within the designated timeline.[19]

Establishing Goals of the CBPR Partnership

A key aspect of CBPR partnership development is establishing goals. The partnership is more likely to be successful, effective, and efficient if there are clear goals and objectives to work towards. Goals provide direction for the CBPR partnership, drive progress within the research project, and can create a sense of ownership. Additionally, partnership goals help to create healthy boundaries, which are an important practice in facilitating trust among partners. Goals also provide a means to evaluate the partnership over time (see **Section 6: Evaluating CBPR Activities and the Partnership** for more information about partnership evaluation).

Each CBPR partnership is unique, and the goals set by each partnership will depend on the partnership dynamics and priorities of each partner.

Building and Maintaining the CBPR Partnership

Once the CBPR partnership is established, it is essential to nurture the relationship and ensure it is sustainable over time. Continuously building and maintaining each phase of the CBPR process facilitates greater collaboration and more effective pursuance of shared goals. Examples of ways to sustain a CBPR partnership include[2,20]:

- Learning how personal and institutional histories may impact the partnership and research.
- Learning about the broader history of research within the context of the community.
- Following through with commitments by being present at partner events, regardless if it relates to research activities.
- Acknowledging that all members of the partnership bring a unique expertise to the table in addition to their own interests to learn and grow as a part of the partnership process.
- Revisiting expectations and intentions, especially when new groups join the partnership, to ensure an accurate reflection of what it means to be in the partnership.
- Negotiating a research agenda that reflects the partnership's shared goals.
- Providing mentorship to other members of the CBPR partnership if there is interest in learning a particular expertise or skill.

Case Study: Forming a CBPR Partnership

Nevada Minority Health and Equity Coalition #OneCommunity COVID Campaign

The Nevada Minority Health and Equity Coalition (NMHEC) is a partnership of academic, civic, and community organizations that aim to address health disparities and inequities in Nevada by building capacity, informing policy, and conducting research. NMHEC is housed in the School of Public Health at the University of Nevada, Las Vegas.

Shortly after the United States shut down due to the COVID-19 pandemic, the Nevada Minority Health and Equity Coalition was granted funding to conduct culturally-responsive education and outreach regarding COVID-19 risk reduction strategies among the hardest-hit communities in Nevada. In response to this call-to-action, the NMHEC launched the #OneCommunity campaign to reach the following seven communities: Asian, Black/African American, Hispanic/Latinx, Hawaiian/Pacific Islander, Native American, LGBTQ, and individuals who are deaf or hard of hearing.

The NMHEC used a CBPR approach and worked with partners who represent each of the seven communities to ensure the voices of the community and their lived experiences guided the work of the project.

Forming the Partnership

NMHEC has a statewide network that includes community-based organizations that have existing relationships that are built on trust within their communities. The NMHEC recognized a response to the COVID-19 pandemic could not be done alone, and a successful response would require engaging with existing and new partners embedded in the community. Although this COVID-19 response was initially driven by funding, the relative impact of COVID-19 among the seven communities coalesced the NMHEC around the importance of taking on such an effort.

To initiate the partnership formation, the NMHEC distributed a description of the project and the available funding to community-based organizations (CBOs). Those who were interested were asked to submit a brief proposal to indicate how they wanted to be involved and with which focal populations they would serve. Proposals were reviewed and accepted based on an organization's ability to describe how ingrained they are in the community.

Partnership guidelines were established, which outlined what the collaborative partnership would look like for the #OneCommunity campaign and NMHEC's commitment to the equitable share of power, decision-making, and responsibility of the project. The involvement of partners encompassed the collection of data, the development of outreach materials, the determination of outreach methods, and the dissemination of final products. Additionally, all partner organizations received a subgrant for their participation in the project. NMHEC is committed to ensuring an equitable process, which includes the compensation of organizations for their time, commitment, and effort.

Ten community organizations were funded for this project.

NMHEC staff provided high-level support (e.g., scheduling group meetings, helping to create recruitment advertisements, creating outreach materials) so that each organization could focus their efforts on their respective communities. The group as a whole had regular meetings to stay informed of the overall progress on the project and to share information and ideas on how to best move forward. NMHEC staff also held individual meetings with each partner to provide more tailored and technical assistance on all aspects of the project. NMHEC strived to have all partners involved in every project-related decision. However, given the fast-paced nature of the pandemic, it was not always feasible to collectively collaborate on decisions. In these instances, only NMHEC and the CBOs representing the community being impacted would work together to make a decision. These procedures were discussed and implemented at the beginning of the collaboration so all who were involved were aware of and agreed upon the process. To remain flexible and adaptive to the needs of the partnership, NMHEC also encouraged partners to discuss any issues with the partnership structure throughout the project. These procedures set the foundation for the partnership to further develop a working relationship, set expectations, and drive community action.

Many partnerships are driven by funding opportunities, which can make it challenging to maintain consistency, develop strong relationships with the community, and respond to the needs of the community. It is important to frequently assess the needs of the CBPR partnership to determine what additional measures are needed to strengthen overall trust and commitment.

Due to the pandemic, a rapid response was required and this project would not have been a success if NMHEC did not already have an existing network of organizations. Some partners had worked with the coalition for years, while other partnerships were newer. Therefore, NMHEC spent extra time with the newer partners to grow the relationship, which included additional meetings that provided the space to get to know one another and build trust.

An example of NMHEC's newer partnerships include organizations who represent Nevada's tribal communities. Prior to the #OneCommunity campaign, some NMHEC staff had worked with tribal organizations over the years, but the relationship was neither strong nor consistent. Therefore, as the #OneCommunity campaign rolled out, NMHEC made the commitment to invest in their partnerships with organizations who represent Nevada's tribal communities beyond this project. To ensure the sustainability of the relationship, NMHEC prioritizes the partnership over available funding and ensures that the voices of the community are included in all the work conducted by the coalition. This commitment to maintain and sustain the relationship was important to the coalition and to the tribal organizations.

By holding true to this commitment, NMHEC's partnership with some of the tribal organizations have continued to grow and have resulted in collaborations following the #OneCommunity campaign. Currently, the NMHEC hosts a monthly meeting with a group of Nevada tribal partners to discuss the needs of the tribal communities and determine what topics to prioritize for future funding opportunities. The group has grown beyond the original funded partners which now includes representation from a variety of urban, rural, and frontier tribal nations. In addition to the monthly meeting to maintain the partnership, partners have invited the NMHEC to attend two different community powwows, which provided the NMHEC and partners an opportunity to connect beyond the workspace.

While this is a great start, the NMHEC acknowledges that there is still work to do to prove their commitment and trust to the tribal organizations, including growing partnerships with more tribal communities in the state.

Action Steps to Form a CBPR Partnership

There is not a single way in which CBPR partnerships begin. However, there are several strategies that can help initiate the partnership. Use the **Action Step Checklist 1: Initiating a CBPR Partnership** below as a guide to initiate a new CBPR partnership. If a partnership already exists, skip ahead to **Section 2: Assessing Community Strengths, Dynamics and Priorities**.

Action Step Checklist 1: Initiating a CBPR Partnership

Reflect on partnership readiness. Self-reflection is a core component of an effective CBPR partnership, so it is fitting to begin the CBPR process with reflection. This step involves an assessment of resources, strengths, and weaknesses that may impact readiness to engage in a partnership.[18]

- ☐ **Determine your interests.**
  - Where do you want to see change at the community-level?
  - List your mission, goals, values, and principles related to your interests.

- ☐ **Determine your capacity to engage in a partnership.**
  - Evaluate your strengths, weaknesses, and readily available resources to engage in work related to your interests.
    - Resources include time, finances, people, equipment, and space.
  - Does funding exist to address your interests?
    - If funding is available, do you have direct access to it?
    - If funding is not available, is there a way to create funding?
  - Based on your assessment, is there a need for a partnership?
    - If yes, what criteria are needed to fill the partnership role?
    - If yes, are there any individuals or organizations that meet your partnership criteria?
  - If you do not have the capacity to engage in a partnership, reflect on why and determine when you may be ready.

Identify potential partners. Once you have the capacity to engage in a partnership, you can begin searching for potential partners.

- ☐ **Use publicly available resources to look-up potential partners.**
  - Look at existing networks, associations, or leaders who share a common interest or are already engaged in work related to your interests.
  - Consider historical context(s) where applicable.
  -

Take time to get to know your potential partner. After determining your capacity for a partnership and identifying a potential partner, it is time to get to know the partner you may want to engage with in a CBPR partnership. This step can take a considerable amount of time because it requires networking and relationship building.

- ☐ **Participate in activities or events hosted by the potential partner.**
  - Attend community meetings if they are open to the public or if you are invited.
  - Be present and actively engage in the activity or event.
  - If you have the capacity, offer to volunteer for the activity or event to show your support.

- ☐ **Schedule times to meet and get to know the potential partner.**
  - Make the first, or first few, meetings informal so a more meaningful connection and partnership can develop.
  - Try different methods of communication such as in-person meetings, virtual meetings, text messages, and phone calls.
  - Acknowledge any historical experiences that may impact the new and developing partnership.
  - Get to know the mission, goals, values, and principles of the potential partner.
    - Do they align with yours?
  - Openly discuss motivations to begin a new partnership and the mutual benefits that can arise as a result of the partnership.
  - Check out **Appendix A: Tips on How to Establish Trust in a New Partnership** for even more tips.

Establish the CBPR partnership and organizational structure. Once you have spent time genuinely getting to know your potential partner, there will come a time to officially establish the partnership. It is essential to set up accountability strategies within the partnership since shared ownership is another key component of CBPR. An accountable relationship can be formed by determining each partner's individual roles and responsibilities, establishing partnership guidelines, implementing a **decision-making protocol**, and putting procedures in place for conflict-resolution.

- ☐ **Establish the partnership leadership.**
  - Who will guide, oversee, and carry out the work of the partnership?
  - Define roles and responsibilities of the CPBR partnership and any contributing members.
  - Consider if additional staff are needed to carry out the partnership activities.

- ☐ **Create a seat at the table for other key stakeholders.**
  - Determine what voices, expertise, knowledge, and resources need to be at the table.

    - Consider general community members, community-based organizations, business owners, community leaders, parents, or other academic partners.
- Define what it means to be a member of the CBPR partnership.
- What are the benefits of being a member of the CBPR partnership?
    - Financial compensation?
    - Professional development?

☐ **Form a community advisory board.**

- Who will provide community insight regarding the research activities?

☐ **Collaboratively develop goals for the partnership.**

- List out each partner's individual goals, objectives, and expectations.
    - Review each list to determine common goals for the partnership as a whole and individual goals for each partner that can be achieved within the partnership.

☐ **Establish partnership guidelines.**

- Be transparent about expectations of the partnership and process.
- As necessary, develop the following for the partnership:
    - Community Advisory Board Agreement or Project Code of Ethics.
    - Communication Guidelines.
    - Publication Guidelines.
    - Protocol for Student Involvement.
    - Check out **Appendix B: CBPR Resources** for examples of different partnership guidelines.
- Develop a procedure for how decisions will be made and how conflicts will be addressed within the partnership.
    - Consider the procedure for low-stake vs. high-stake decisions.
    - Consider how the partnership will have difficult conversations.
        - Check out **Appendix C: Tips on How to Address Conflict.**
    - Understand that conflict will likely occur in the partnership and welcome the opportunity to address it as a group.
- Begin to think about how the partnership will share findings with the community.
    - See Section 5: Disseminating and Translating Research Findings for more information on approaches to dissemination.

☐ **Create a project timeline.**

- Highlight key times to evaluate project progress and review partnership roles.

Nurture the CBPR partnership. Now that the CBPR partnership is established, it is essential to engage in steps that will nurture the relationship and ensure its sustainability over time. Ensure there is opportunity for all partners to learn, grow, and share throughout the process – which helps build trust. These are steps that should be carried out throughout the entire duration of the CBPR process.

- ☐ **Follow through with your commitments.**
  - Set realistic commitments and only commit to what you can carry out.
  - Be honest about your progress towards the commitment.
  - Clearly communicate any obstacles or issues that may impact your ability to follow through on your commitments.

- ☐ **Engage in genuine ongoing relationship-building activities.**
  - Integrate 'Get to Know You' questions or informal networking time at regularly scheduled meetings.
  - Schedule periodic team building activities.
  - Hold informal gatherings to celebrate successes and accomplishments.
  - Invite partners to non-project related activities.

- ☐ **Keep track of what works within the partnership.**
  - Document and describe partnership successes, weaknesses, and challenges.
    - This step is an important part of evaluating the CBPR partnership, which is discussed in more detail in **Section 6: Evaluating CBPR Activities and the Partnership**.

02 | Assessing Community Strengths, Dynamics, & Priorities

In CBPR, the research focuses on what matters most to the community; therefore, the next phase in the process involves **assessing community strengths, dynamics, and priorities**. This section discusses the importance of understanding the community and how to learn more about the community by conducting a community assessment.

Learning Objectives for Section 2

1. **Describe the importance of understanding community strengths, dynamics, and priorities.**
2. **Determine when a community assessment is necessary.**
3. **Describe the purpose of a community assessment.**
4. **Describe the seven steps of a community assessment.**
5. **Distinguish between the various methods of data collection.**

Understanding the Community

In CBPR, the research focuses on what matters most to the community. Before the CBPR partnership can begin to design the project, the team needs to take time to review their understanding of the community and identify what matters most to the community. The partnership's understanding must go beyond just a list of areas of improvement – it should include a comprehensive understanding of the strengths, dynamics, and priorities of the community.

Strengths are parts of the community that community members believe are advantages when compared to other areas. Examples of community strengths include the knowledge and skills of individual members, the different education or job opportunities, or specific places in the community like a park or recreational area.[18] Community dynamics describe how community members interact with one another, which are influenced by the various social structures of the community. Lastly, priorities are the various conditions, initiatives, or concerns that matter most to the community and what they wish to address.

There are also many benefits to understanding community strengths, dynamics, and priorities, such as[21]:

- Identifying what matters most to the community, which can guide the focused development of the CBPR partnership's research questions.
- Gaining a deeper understanding about the social, structural, historical, and economic contexts and how these factors may influence community priorities.
- Providing input on how to develop effective interventions to address what matters most to the community.
- Connecting available assets, resources, and community strengths to address priorities now and into the future.

One way the CBPR partnership can develop a foundational understanding of community strengths, dynamics, and priorities is through a **community assessment**. An understanding of each of these components will help the CBPR partnership develop a project that is better equipped to address health equity.

Conducting a Community Assessment

In CBPR, the researchers and community partners work together to conduct a community assessment. A community assessment is a systematic way of collecting and analyzing data,[22] and is sometimes called a **needs assessment**. However, a community assessment differs from a needs assessment because of its inclusion of community partners throughout the assessment process and its intentional **strength-based approach**.

The inclusion of community partners brings unique skills, knowledge, and resources into the perspective of the assessment. For example, community partners provide insight about community needs, assets, or concerns; share **lived experiences**; and engage the community at-large in the planning, conducting, and reporting of the assessment.[23] The community partners can also help bridge trust between researchers and the community in order for the assessment to be done. Overall, the community assessment can provide insight about several aspects of the community (**Figure 5: Community Characteristics**) that will build the partnership's understanding of community, strengths, dynamics, and priorities. It can also help the partnership determine how to best use **community assets**, prioritize community needs, and develop a plan of action to make policy, system, and environmental changes.[24]

Figure 5: Community Characteristics

Demographics
The demographics of the community can provide an overview of who makes up the community. Some demographics to consider are age, gender, race and ethnicity, marital status, income, and educational level.

Physical Characteristics
The physical characteristics of a community include its geographical context and infrastructure. Geographical context relates to where the community is located (city and zip code), while infrastructure involves the built components of the community (buildings, roads, and broadband).[21] Safety is also a component of a community's physical presence.

Social Structure
The social structure of a community helps describe the values, beliefs, and attitudes that drive individual behaviors and how members interact with each other. Components of the social structure can include culture, religion, norms, economics, and politics of the community.[25]

History
History of the community reveals valuable information about the traditions and values passed down from generations, the conflicts, and the relations of the people throughout time.[21] It can provide information about critical points in time that may have an influence on the community's physical characteristics, social structure, and current and persistent concerns.

Trusted Messengers
Trusted messengers are organizations or individuals who the community trusts and will turn to for information. A trusted messenger could be a physician, faith-based leader, or a specific community-based organization.[25] These influential groups or individuals can vary by community and age group.

Patterns of Settlement, Commerce, and Industry
These patterns encompass the physical and social environment of the living and working space of the community. It may consist of the natural and built environment, such as the location of industries and stores. The overall safety of the community is also an important aspect.

Community Leaders (Formal and Informal)
Communities may have formally appointed leaders or informal leaders who have become influential and prominent figures through their involvement and contribution to the community. These individuals can be valuable sources of insightful information about the community.

Health Conditions
Health conditions refer to the short- or long-term conditions or diseases that impact the health and overall well-being of a community. Generally, there are underlying root causes, such as social, economic, or political factors, that amplify the burden of a health condition.

This section will outline seven key stages of a community assessment. If the CBPR partnership previously completed a community assessment, then skip ahead to **Section 3: Designing the Research Project**.

1. Identify the Purpose

The first stage in a community assessment is to determine the purpose, which relates to the specific topics or questions the CBPR partnership wants to learn about the community through the assessment. In other words, it is what the CBPR partnership will assess. The purpose can be broad to pertain to the community as a whole, look at relationships between certain community factors, or be specific to a **subgroup** within the community. It is of immense importance to ensure the purpose is within the partnership's capacity.

2. Review Available Information

Next, the CBPR partnership should review the available information related to the purpose of the community assessment. This initial review will help the partnership determine whether an assessment is necessary.

Available information on the specific topics or questions can come from the community partner's existing knowledge about the community or from **secondary data** sources. **Appendix D: Guiding Questions to Understand the Community** provides a handful of questions the CBPR partnership can seek to answer during the review of information, while **Appendix E: Secondary Data Sources** provides a list of existing databases and tools available at the global, national, and local level.

As the CBPR partnership reviews the available information, there are many reasons that would indicate the need to conduct a community assessment, such as:

- There is no available information to answer a particular question of interest.
- There are gaps in the available information that does not fully explain the situation.
- The available information is outdated or may no longer be relevant.
- There are discrepancies in the available information, such as how it was collected, analyzed, or interpreted.
- The available information is inconsistent and does not show a clear pattern over time.

The CBPR partnership should proceed with a community assessment if it is determined to be necessary. In some instances, the available information will provide enough background to plan the project.

3. Plan the Community Assessment

If the CBPR partnership determines a community assessment is necessary, they can begin to create a plan for the community assessment. The plan will outline the scope of the assessment, how to collect the information, the timeline, and who will be responsible for each task. A plan is essential to the assessment because it helps with the prioritization of tasks and maximization of available resources.

First, outline clear and concise **goals** and **objectives** for the community assessment. A goal is a broad statement about a desired outcome, while an objective is a statement about what actions will be taken to reach the desired outcome.[26] Writing objectives using a SMART approach (**Table 3: Attributes of SMART Objectives**) can ensure methods are established to measure the desired outcomes (**Appendix F: Tool to Write SMART Objectives**). The goals and objectives outlined in the plan should cover what **primary data** the partnership will collect through the assessment, how the partnership will collect it, and how the data will be measured and analyzed. At this point, it can be helpful to consult with a statistician to determine which methods of data collection would best meet the goals of the assessment.

Table 3: Attributes of SMART Objectives

S Specific	The statement is clear, precise, and does not use jargon. It includes who is the focus and what will be done.
M Measurable	The statement sets a target and a way to measure progress in achieving it. It answers if the activity is measurable, what will be measured, and how.
A Attainable	The statement is possible to attain with the available resources. This attribute considers how the group will accomplish the objective, what resources are needed, and possible limitations or barriers.
R Relevant	The statement aligns with what the CBPR partnership wants to accomplish.
T Time Based	The statement determines if the time frame is realistic and when the target should be met. It also answers when it will be done and if the time frame is realistic.

In addition to the SMART objectives, the community assessment plan should have a timeline of when to complete activities. It is important to consider any time constraints that may impact the partnership's ability to complete the assessment such as individual schedules, deadlines set by the funders, or other community-related factors. Lastly, the partnership should establish roles and responsibilities for each task to ensure the assessment is completed within the timeline.

A logic model (**Appendix G: Logic Model Template**) can help the CBPR partnership organize and monitor the community assessment plan, which is discussed in more detail in **Section 3: Designing the Research Project**.

4. Conduct the Community Assessment

It is time to conduct the community assessment. There are several methods the partnership can use to collect primary data (**Table 4: Data Collection Methods**), all of which have different advantages and challenges that must be taken into consideration.[27] The method the partnership uses will depend on whether the plan is to gather **quantitative data**, **qualitative data**, or a combination of both. Typically, a mix of quantitative and qualitative data will yield a more in-depth assessment of the community.[28]

Table 4: Data Collection Methods

Type	Method	Description
Quantitative	*Close-Ended Interview, Questionnaire, or Survey*	The process of asking an individual a set of pre-selected questions with pre-selected answer options in-person, over the phone, by mail, or a digital space like an email or virtual interview.[25] Respondents cannot provide a different answer outside of the pre-selected options or details about their answer.
	Experiments	The process of systematically collecting information about the relationship between at least two groups. This process is discussed in more detail in **Section 3: Designing the Research Project**.
	Observations	The process of gathering information about patterns or occurrences without directly interacting with the individual.[25] With this method, it is essential to respect individual privacy.
Qualitative	*Asset Inventory*	The process of asking community members to share what resources, services, and benefits are available in the community and which ones are most useful.[31] These resources can be people, places, services, or events.
	Community Mapping	The process of asking community members to draw a map of the community, highlight places they find to be important, and indicate how often they visit these places.[27] This activity can reveal individual perspectives of the community, as well as potential barriers.[27]
	Community Meeting	Meetings that involve a public gathering of community members in the format of a town hall or public forum. Members will have the opportunity to join the discussion about a community-related need, issue, or concern.
	Focus group	The process of facilitating a group interview that consists of 6-12 individuals to share their thoughts and input on a set of pre-selected topics or prompts. Topics and prompts are open-ended so participants can provide in-depth details about their answers. Additionally, the group setting allows participants to build off each other's responses.
	Open-Ended Interview, Questionnaire, or Survey	The process of asking individuals a set of pre-selected questions in-person, over the phone, by mail, or a digital space like an email or virtual interview.[25] Questions are open-ended and respondents can provide in-depth details about their answers.

5. Analyze and Review the Data

Data from the community assessment needs to be analyzed and reviewed after it is collected and before the CBPR partnership can use it to inform their research project. Methods of data analysis are covered in more detail in **Section 3: Designing the Research Project**.

6. Determine the Priorities

After the data from the community assessment is analyzed, the partnership can review the results to determine the priorities. It can be useful for the partnership to develop a set of criteria that will guide this process, which can include factors like the seriousness, frequency, impact, or perception of the topic within the community.[23] As the partnership determines the community priorities, they should also consider their capacity to address those priorities. Capacity can be driven by the goals of the partnership and the availability of resources at the time, such as funding opportunities.

7. Report the Key Findings

In CBPR, it is critical to share any new knowledge found through the research activities among the partnership, with the community, and with other key stakeholders. Therefore, the last step in the community assessment is to report the key findings. **Section 5: Disseminating and Translating Research Findings** goes into more depth about this process.

Case Study: Assessing Community Strengths, Dynamics, & Priorities

Nevada Minority Health and Equity Coalition #OneCommunity COVID Campaign

The Nevada Minority Health and Equity Coalition (NMHEC) is a partnership of academic, civic, and community organizations that aim to address health disparities and inequities in Nevada by building capacity, informing policy, and conducting research. NMHEC is housed in the School of Public Health at the University of Nevada, Las Vegas.

Shortly after the United States shut down due to the COVID-19 pandemic, the Nevada Minority Health and Equity Coalition was granted funding to conduct culturally-responsive education and outreach regarding COVID-19 risk reduction strategies among the hardest-hit communities in Nevada. In response to this call-to-action, the NMHEC launched the #OneCommunity campaign to reach the following seven communities: Asian, Black/African American, Hispanic/Latinx, Hawaiian/Pacific Islander, Native American, LGBTQ, and individuals who are deaf or hard of hearing.

The NMHEC used a CBPR approach and worked with partners who represent each of the seven communities to ensure the voices of the community and their lived experiences guided the work of the project.

Assessing Community Strengths, Dynamics, & Priorities

Given the nature of the #OneCommunity campaign, it was necessary to assess community strengths, dynamics, and priorities related to COVID-19 to develop interventions that would best suit the needs of each respective community.

The NMHEC partnered with 10 community-based organizations who served at least one of the focal communities with the goal of developing and disseminating culturally-responsive COVID-19 educational materials. However, before educational materials were created or disseminated, the NMHEC and the community partners wanted to hear from each community about how the COVID-19 pandemic impacted their lives, knowledge, beliefs, and concerns. They also sought to understand each community's risk mitigation strategies and first impressions about the potential COVID-19 vaccine. The information collected from each group would be used to inform the development of various educational materials for each of the seven communities and a communication dissemination plan that fits the needs of each community.

NMHEC staff worked with community partners representing each focal population to determine the best and safest method to hear directly from each community. For the project to be a success, it was critical for the partnership to be flexible and adapt methods based on the needs of each population. This approach allowed the partners to proceed with the assessment in a way that was most comfortable for the community while still maintaining trust. Several communities indicated that virtual focus groups or community listening sessions were the safest option during the pandemic. However, some partners determined that sessions would need to be held in person due to a limited or lack of access to digital devices or the internet.

In addition to working with community partners on data collection methods, all community partners were asked to facilitate the community discussions. NMHEC would aid in the discussions as requested. All community partners attended a community-based participatory research training that covered how to facilitate a focus group, recruit participants, and advertise the focus group. After the training, NMHEC staff worked with each partner to develop specific recruitment methods and messages for their community. In addition, while NMHEC staff developed the initial focus group questions that included requirements from the funding source, community partners provided input and revisions to the questions. While the overall concepts were consistent across all populations, language was adapted to ensure that it was culturally relevant and respectful to each community.

Community partners led the recruitment of participants, coordinated registration as desired, and facilitated the focus groups. Two NMHEC staff members were present during each focus group to take notes and provide technical assistance.

Focus groups were recorded and transcribed to accurately report the thoughts and ideas of the participants as presented during the sessions. Sessions that were transcribed in Spanish were later translated into English for the purpose of the data analysis. The constant comparison method was utilized to analyze the data, whereby each theme was compared with existing themes as it emerged from the data analysis. Participant responses for each question were summarized for each group to find commonalities as well as unique experiences among the seven target populations. Summaries were provided back to community partners to review and provide suggestions. Transcripts were also available to community partners to review as desired.

NMHEC staff and community partners worked together to listen to the voices of each community to guide the development of the educational materials as well as the methods used to disseminate the information.

Action Steps to Assess the Community

In CBPR, the interests of the community drive the research, so it is necessary for the CBPR partnership to develop an understanding of the community before developing the research project. Use **Action Step Checklist 2: Assessing Community Strengths, Dynamics, and Priorities** as a guide to learn more about what matters most to the community. If the CBPR partnership already has a sufficient understanding of the community, then skip ahead to **Section 3: Designing the Research Project**.

Action Step Checklist 2: Assessing Community Strengths, Dynamics, and Priorities

Identify the purpose of the assessment. The first stage of the community assessment involves determining the purpose, which relates to the specific topics or questions the CBPR partnership wants to learn more about the community through the assessment.

- ☐ **Determine the purpose.**
  - What key questions do you want to answer with the assessment?
    - Do the questions pertain to the community as a whole, specific relationships between certain factors, or a specific subgroup?
    - Is there a pre-determined purpose outlined by the grant funding?
    - What questions align with the goals of the partnership?
  - What community characteristics do you want to learn more about?

- ☐ **Assess the partnership's capacity to fulfill the purpose.**
  - What questions can the partnership realistically answer?
  - Consider any time constraints, funding, staff, and availability of other resources that are needed to conduct the assessment.

Review the available information. The next stage of a community assessment should be to review currently available information about the community and topic. This information can come from the community partner's existing knowledge or secondary data sources. As the partnership reviews the information, they should identify gaps in the knowledge that they can potentially answer with their assessment.

- ☐ **Review the available information about the community.**
  - Seek to answer the following questions:
    - What are the community strengths?
    - What resources are available in the community?
    - What conditions, initiatives, or concerns matter most to the community?
    - What is the topic of interest?
  - In addition to the questions above, use **Appendix D: Guiding Questions to Understand the Community** to guide the review of information.

- Review existing databases that may provide answers to the questions above (**Appendix E: Secondary Data Sources**).
- Throughout the review, keep in mind the following:
  - When did this information become available?
  - Is the source credible?
  - Within the context of the community, is there anything missing or misleading?

☐ **Determine what gaps exist in the available information.**
- Does the available information adequately answer the questions outlined in the previous action step?
- Keep a list of the existing information gaps.
- If gaps in the information exist, determine which are within the partnership's capacity to answer with a community assessment.
  - What resources are available to conduct the assessment?
  - What challenges or barriers may prevent completion of the assessment?

Plan the community assessment. Once the CBPR partnership determines that a community assessment is necessary, planning can begin. The plan should include goals, objectives, methods, roles and responsibilities, and timeline. Use **Appendix G: Logic Model Template** to organize the community assessment plan.

☐ **Discuss the goals and objectives of the community assessment.**
- Use **Appendix F: Tool to Write SMART Objectives** to draft the goals and objectives of the community assessment.
- What does the CBPR partnership want to learn or what are the key questions to answer through the community assessment?
  - Refer to the knowledge gaps and partnership capacity discussed in the previous action step.
  - Form these into the goal statements.
- What activities need to happen for the CBPR partnership to meet the defined goals?
  - What data needs to be collected?
  - What type of data will be collected?
  - How will the data be collected?
  - Where will the data be collected?
- Consider consulting with a statistician to plan the activities.
- All activities that support the completion of the community assessment should be listed as objectives.

☐ **Determine the timeline for the assessment.**
- What is the time frame for completing the community assessment?
  - Consider time constraints based on individual schedules, funder deadlines, or other community factors.
- Set deadlines for each of the assessment activities.

☐ **Assign roles and responsibilities.**
- Who will be responsible for completing each activity?

Conduct the community assessment. The CBPR partnership can begin the community assessment after the plan is in place. This step is where the CBPR partnership will gain community input in relation to the outlined goals and objectives.

☐ **Collect the data.**
- Use the data collection method selected in the community assessment plan.
- Although data collection will be an assigned responsibility, ensure all interested members of the partnership know how to conduct the data collection.
  - Write a set of detailed instructions.
  - Ensure the instructions are understood by all interested members.

Analyze and review the data. Any time data is collected, it needs to be analyzed before it can be used to inform projects or answer questions. The data analysis should be carried out by a statistician or a member of the CBPR partnership that is trained in data analysis. In CBPR, it is essential for community partners and other key stakeholders to review the analysis to ensure it makes sense within the context of the community. **Section 3: Designing the Research Project** provides more details about data analysis techniques and visualization tools, while **Section 4: Feeding Back and Interpreting the Research Findings** covers the importance of the interpretation of results within the context of the community.

☐ **Analyze the data from the community assessment.**
- The designated individual will conduct the data analysis based on the selected technique and tool.
- See **Section 3: Designing the Research Project** for more details on the process of data analysis.

☐ **Review the results of the community assessment.**
- Do the results answer the original questions outlined in the community assessment plan?

- Do the results make sense within the context of the community?
- Re-analyze the data as necessary based on partner feedback.

Determine the priorities of the community. The CBPR partnership will likely uncover several community priorities based on the review of the existing information and the findings from the community assessment. Community priorities are the various conditions, initiatives, or concerns that matter most to the community. These priorities will drive the focus of the CBPR project, so it is essential for the partnership to also consider their capacity to address the priorities.

☐ **List the community priorities.**

- Based on the review of existing information and the community assessment, what are the conditions, initiatives, or concerns that matter most to the community?
  - A condition, initiative, or concern can be considered a community priority based on its frequency, duration, scope, severity, or perception.
- For each priority, what community characteristics contribute to it?

☐ **Discuss which community priorities are within the partnership's capacity.**

- Which priorities are relevant to the goals of the CBPR partnership?
- Is there funding available to address one priority over another?
- Does the partnership have access to the necessary resources to address the priority?

Report the key findings of the community assessment. In CBPR, it is critical to share findings among the partnership, community, and other key stakeholders. Therefore, the last step of the community assessment is to share the findings.

☐ **Share the key findings of the community assessment.**

- Refer to Section 5: Translating and Disseminating Research Findings for more details on how to share the findings.

Section: 01 Section: 02 Section: 03 Section: 04 Section: 05 Section: 06

03 | Designing the Research Project

The next phase of the CBPR partnership involves **designing the research project,** which occurs after identifying the priority concerns of the community through the community assessment. This section will cover the five key steps of the research process, describe the various research approaches and designs, introduce the logic model, and discuss the importance of data analysis.

Learning Objectives for Section 3

1. **Describe the five key steps of the research process.**
2. **Distinguish between the three common approaches to research.**
3. **Describe common research designs.**
4. **Define the different components of the logic model.**

The Research Project

A research project is a systematic process of collecting, analyzing, and interpreting information to answer a specific research question. This toolkit will describe five key steps in the research process (**Figure 6: The 5 Key Steps in the Research Process**). This overview should provide a baseline understanding of key concepts. However, the research experts in the partnership should work to provide a deeper level of understanding on all five steps to ensure partners are involved in the process.

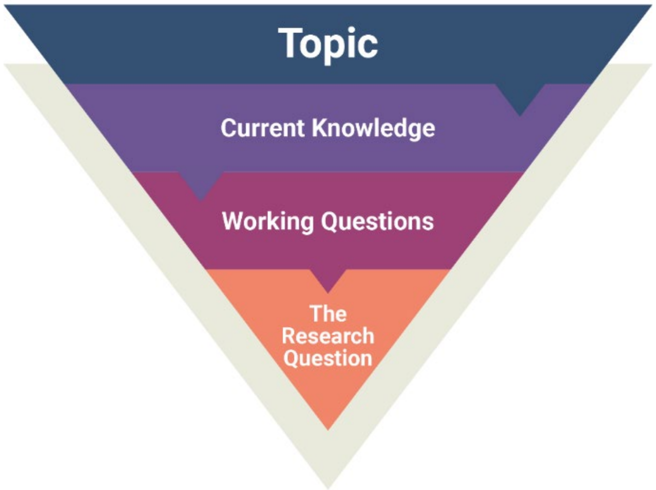
Figure 6: The 5 Key Steps in the Research Process

1. Co-Develop the Research Questions

A research question is what a research project aims to answer. In CBPR, it is necessary for members of the partnership to work together to co-develop research questions to guide the direction of the project. Research questions need to be clear, concise, specific, and within the partnership's capacity to answer.[29,30]

The process of co-developing research questions starts with a broad topic, which is then narrowed down to a question that is clear, concise, and focused. (**Figure 7: The Path to Writing a Research Question**).

Figure 7: The Path to Writing a Research Question



2. Plan the Research Project

After the research questions are selected, the CBPR partnership can begin to plan the project. At this point, it is beneficial for the partnership to consult with a statistician to determine which **research methodology** and **research design** is best for the project. A few factors that will influence the selection of a methodology and design are the research question, the partnership's experience with the different methodologies, and the audience receiving the research findings.[31]

Research Methodology

There are three common research methodologies: quantitative, qualitative, and **mixed methods**. Quantitative research methods use strategies that yield measurable data such as experiments or surveys with close-ended questions.[32–34] The data collected from a quantitative research project can be statistically analyzed. This research methodology can answer the what, where, and when of an inquiry.[33]

On the other hand, qualitative research methods result in nonnumerical data such as narratives, descriptions, and pictures.[32,34] Information in a qualitative research project is collected through open-ended interviews, direct observations, or written documents.[35] This research methodology explores ideas, themes, and patterns, and can also help provide an explanation of results from a quantitative approach.[33] It helps answer what, how, and why of an inquiry.

Mixed methods research is a combination of quantitative and qualitative research methodologies, which involves the collection of both numerical and nonnumerical data within the same project.[36,37] The collection of both types of data within the same project can provide more detail about the relationships or factors related to the research question.[37]

Research Designs

In addition to the three research methodologies, there is an abundance of research designs, which helps to provide a framework for the research project by outlining how the data will be collected, measured, and analyzed.[42] The research design will depend on the research methodology and the variables of interest. **Table 5: Research Designs** outlines a handful of commonly used research designs for each research methodology.

> **"Knowledge is not created by researchers, but rather co-created by the group of community members and researchers."**

Kate Vickery, MD, MSc
Primary Care Physician and Researcher

Table 5: Research Designs[31,37,38]

Quantitative Research	
Correlational	A correlational research design will use statistical analysis to investigate the relationship between two or more variables. The analysis will show the extent of the association between the different variables but cannot determine or prove the cause of the relationship.
Quasi-experimental	A quasi-experimental research design will investigate if there is a cause-effect relationship between two or more variables. The variables will remain in their natural state, and the effects of one variable on another will be measured and analyzed to see if a cause-effect relationship is present.
Experimental	An experimental research design will investigate the cause-effect relationship between two or more variables. This type of design will manipulate or change the variables to determine how those changes affect the other variables. The changes will be measured and analyzed to determine the extent of the cause-effect relationship.
Qualitative Research	
Case study	A case study design will gather in-depth information about an event, activity, or individual. The information collected is typically detailed enough to provide an understanding of the case as it occurs in a real-world setting.
Ethnography	An ethnography design is where a group is observed in their natural environment over a period of time. The purpose of this study design is to gather information about shared patterns, behaviors, or actions within the group.
Grounded Theory	A grounded theory design involves several stages of data collection from various groups. The data is systematically collected and analyzed to draw conclusions about social processes.
Narrative	A narrative design examines how stories are told, explicitly looking at how people perceive and make sense of their experiences.

Phenomenology	A phenomenology design will gather narratives from participants about their lived experience related to a particular phenomenon or experience. This type of study provides deeper insight about certain experiences.
Mixed Methods Research	
Explanatory	An explanatory mixed methods design will first collect and analyze the quantitative data, then the qualitative data. The qualitative data will provide more context about the initial quantitative data.
Exploratory	An exploratory mixed methods design will first collect and analyze the qualitative data, then the quantitative data. Quantitative data is used to test and verify findings from the qualitative data.
Parallel	A parallel mixed methods design is where the quantitative and qualitative data are collected and analyzed at roughly the same time.

The Logic Model

A logic model is a planning tool that clearly outlines the intentions of a project, what it hopes to accomplish, and its potential impact. This tool is commonly used for program evaluation, which is discussed in more detail in Section 6: Evaluating CBPR Activities and the Partnership. However, it is also a beneficial tool to use when planning the CBPR project to ensure members have a clear understanding of the linkages between the process and outcomes. **Figure 8: Components of a Logic Model** briefly describes the common components included in a logic model and **Appendix G: Logic Model Template** provides a blank template.

Figure 8: Components of a Logic Model[44]

Process

The process component of the logic model describes the different components that are needed to complete the project, which include the inputs, activities, and outputs.

- **Inputs**, also known as resources, are the items that will be put into the project, such as materials, funding, staff, and knowledge.

- **Activities** are the actions that need to be completed during the project to accomplish the desired goals. These are also known as objectives and can include actions related to processes, events, products, or services.

- Some logic models will include a column that assigns someone the responsibility of completing a listed activity.

- **Outputs** are the products or results of each activity. These set an expectation and help track progress towards the outcomes, so it is pertinent for these to be measurable.

Outcomes
The outcome component of the logic model describes the desired results of the project. Outcomes, also known as goals, can be categorized as short-term, intermediate-term, and long-term.

- **Short-term outcomes** result in a change in skill, attitude, or knowledge within weeks or months.

- **Intermediate-term outcomes** result in a change in behavior or decision-making process within months or years.

- **Long-term outcomes** result in a change in life conditions within years or decades.

3. Collect Data

Data is the raw information obtained through a study, while data collection is the process of accurately and systematically gathering that information.[39] It is necessary to select appropriate **variables** and measures as well as develop a set of clear instructions to ensure methods are both valid and reliable.

Refer to **Table 4: Data Collection Methods** in Section 2: Assessing Community Strengths, Dynamics, and Priorities for a list of several ways to collect data.

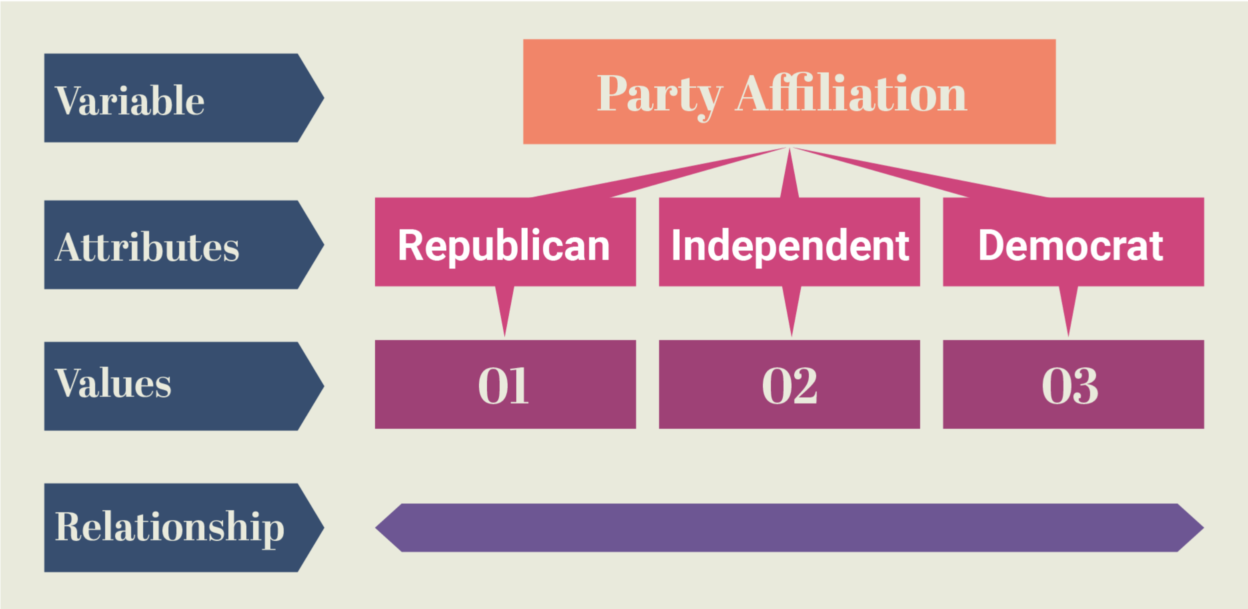
Variables and Measures

Variables are the measurable characteristics of interest observed throughout a research project. They have the potential to change, influence change, or show a relationship between each other. The two main types of variables are **independent** and **dependent**. An independent variable is a variable that is changed in a study. As the independent variable changes, the effects on the dependent variable are observed. For instance, time spent studying (independent variable) causes a change in test scores (dependent variable).

It is also essential to consider the **level of measurement** (also known as scale of measure) of the variables chosen, since that will impact the type of data analysis. Levels of measurement classify a variable based on the relationship between the type of information it describes and the given value.

Figure 9: A Simplified Look at a Level of Measure shows how a variable can take on different attributes and values which are then used to describe a relationship.

Figure 9: A Simplified Look at a Level of Measure



Note: Reprinted from Levels of Measurement in Research Methods Knowledge Base by Trochim, W., n.d.[40]

There are four levels of measurement: **nominal**, **ordinal**, **interval**, and **ratio** (**Figure 10: Levels of Measurement**). Nominal scales do not have a numeric value and represent categories such as gender and eye color. Ordinal scales also do not have a numeric value but do have a specific order, such as finishers of a race or satisfaction level. The third type of measurement is interval, which does have a distinct order of values and a measurable distance between each value. An example of an interval scale is temperature. Finally, the last level of measurement is a ratio. This scale has the same characteristics as an interval as well as an **absolute zero**, such as height and weight.

Figure 10: Levels of Measurement

	Nominal	Ordinal	Interval	Ratio
Description	A variable with a distinct classification, name, or label without a specific value or order.	A variable with a distinct classification, name or label which have a distinct order. However, the distance between each is unknown.	A variable that is quantifiable with a distinct order and a measurable difference between each value, but does not have a "true zero" value.	A variable that is quantifiable with a distinct order, measurable distance between each value, and a "true zero" value.
Examples	Gender Eye Color City of Birth Ethnicity Marital Status	Finishers of a race (e.g., first, second, third...) Level of Satisfaction (e.g., not at all satisfied, partly satisfied, very satisfied) Language ability (e.g., beginner, intermediate, fluent)	Temperature Time Test scores (e.g., SAT, MCAT, GRE) Credit Scores	Height Weight Length Volume
Characteristics	Category, name, or label.			
		Distinct order.		
			Measurable difference between values.	
				"True zero" value.

Note: Information from Nominal, Ordinal, Interval, Ratio Scales with Examples by QuestionPro and Levels of Measurement: Nominal, Ordinal, Interval, and Ratio by Bobbitt, Z. were used to produce Figure 10.41,42

Once the variables of interest are selected, the CBPR partnership will decide what type of **measurement** tool or instrument to use to assess the variables of interest. The tool or instrument can be interview questions, survey questions, an assessment, or a constructed situation. It is particularly important to select an appropriate instrument for the project since it determines the effectiveness of the assessment. If a measurement is already available from an existing study, it is best and highly advised to use it if it is both reliable (consistently measures the intended variable) and valid (accurately measures what is supposed to be measured).

There are several widely used and validated measurements that are available on a variety of topics such as mental wellness, health literacy, housing, poverty, and more. Some of these tools require payment for use while others are free of charge. However, some that are free, the company or author may require the CBPR partnership to send them the study results or any publications that include their measurement.

Measurements may not always already exist, so the CBPR partnership will need to take the time to develop it for the study. It is critical for the partnership to create a measurement that will obtain the desired data, otherwise the data may not adequately answer the research question(s). The development of a measurement can be a complicated task. For this reason, it is essential for the CBPR partnership to ensure they build in time for this process within their project timeline. If the CBPR partnership needs to create a measurement for their particular study, it is important to review and ensure the following:

- Does each question ask what it intended to ask?
- Is the language of each question clear and neutral?
- Will community members understand what the question is asking?
- Is the question sensitive to potential cultural issues related to language?
- Are the response choices clear?
- For scaled items, is the rank order clear? (For example: 1 is “strongly disagree” and 5 is “strongly agree”)
- For items with unranked categories, is the order of possible responses in alphabetical, or otherwise neutral, order?

Once the measurement tool is drafted, it is recommended to pilot test it to check content, clarity, layout, timing, and other factors. The CBPR partnership can pilot test the measurement tool with individuals from the community. Those who test the tool will be asked to complete the questionnaire as well as provide feedback. The partnership can then revise the questionnaire based on the provided feedback. Several pilot tests may be necessary before the measurement tool is finalized and ready for use.

Another consideration when working with diverse communities is to ensure the measurement tool is provided in the language that is most comfortable for them. Some tools have already been tested for validity and reliability in different languages. However, if the measurement tool is unavailable in another language, it may be necessary for the CBPR partnership to translate it. There are several recommendations to ensure the translation of a measurement tool is both valid and reliable. One recommendation is to first translate the questionnaire, preferably by someone who is native to the language or who is an official translator, then have a separate person translate the questionnaire back to the original language. This process is known as back translation, which is a way to check the translation and ensure the new version expresses the same meaning as the original measurement tool. The process of translation is about capturing the original meaning or intent of the measurement, not about simply translating the words verbatim into another language. Therefore, it may require the need to rephrase an entire question to obtain the correct meaning or intent. Overall, the retention of original meaning or intent in the translated version helps maintain the validity of the measure.

4. Analyze the Data

Data analysis is the process of using statistical or logical techniques to draw conclusions or insights about the data, such as relationships, patterns, or trends.[43–45] In other words, it is to show what the data "says". Similar to the continuous cycle of CBPR, data collection and analysis can occur on a somewhat ongoing basis as new insights are discovered. Generally, a statistician or a member of the CBPR partnership that is trained in data analysis will conduct this step.

Data needs to be analyzed before it can be used to inform decisions or answer questions. There are several techniques and tools available to analyze and interpret data. Analysis techniques are the various statistical and logical strategies to analyze data. **Figure 11: Quantitative Data Analysis Techniques** describes a few common statistical tests used for quantitative data analysis. It is important to note that the way to analyze and visualize data will depend on what kind of data was collected as well as the overarching purpose for the data collection.

Figure 11: Quantitative Data Analysis Techniques

Regression[46,47]
A regression analysis estimates the strength of a cause-effect relationship between two or more variables. It can also use existing data to make predictions about another variable.

Cluster[46,48]
Cluster analysis organizes similar data into groups. This type of analysis is typically used to classify the data when there are no prior assumptions about the relationships within the data.

Comparison[44]
A comparison analysis is the process of looking at the similarities and differences between two or more variables. The comparison can be carried out over a period of time to identify patterns or gaps in the data.

Mean, Median, Mode, and Range[49]

Mean, median, mode and range are ways to summarize a quantitative data set.

- *Mean* is where all the values in a set are added together, then divided by the number of values in the set. This term is more commonly known as the average.
- *Median* is the middle-most value in the data set when all values are arranged least to greatest.
- *Mode* is the value that occurs most frequently in the data set.
- *Range* is the difference between the lowest and highest value in the data set.

Aggregation[50]

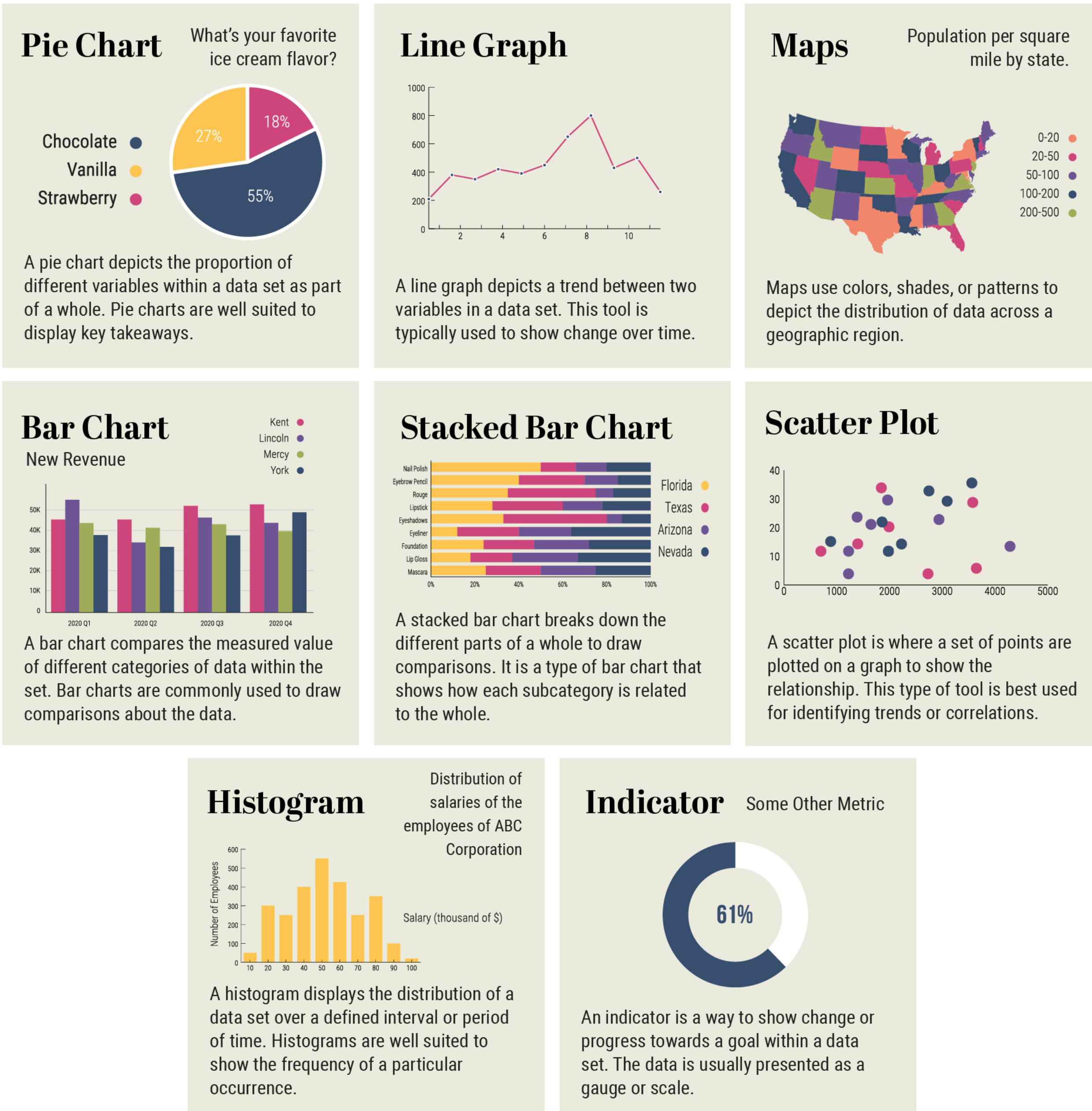
Data aggregation is the process of combining data from various sources and presenting it as a whole. This type of analysis is useful for viewing the big picture.

Disaggregate[50]

Data disaggregation is the process of breaking down aggregate data to obtain more details. Disaggregating data can reveal trends not visible when the data is aggregated.

Figure 12: Data Visualization Tools shows some ways to visualize data. These tools are helpful to use when sharing the results because they illustrate trends, patterns, and outliers.

Figure 12: Data Visualization Tools[51–54]



Qualitative data analysis involves the process of organizing, processing, and analyzing non-numerical data. It is an excellent strategy to use when there is an interest to gain rich, detailed information about an experience or particular phenomenon as well as a powerful strategy to understand complex systems and examine how well programs, policies, and practices work.

Figure 13: Qualitative Data Analysis Techniques outlines six common qualitative data analysis methods. Each method has a different approach to coding, categorizing, and deriving meaning from the data. Therefore, the best-suited method of analysis will depend on the research question.

Figure 13: Qualitative Data Analysis Techniques

Thematic Analysis[55]
Thematic analysis is the method of identifying, analyzing, and interpreting patterns in qualitative data. This technique helps to derive major themes, such as topics and ideas, which are used to summarize and organize data.

Discourse Analysis[56]
Discourse analysis is an approach used to analyze the use of language in social contexts, such as how people use words to understand and share their experiences.

Grounded Theory Analysis[57]
Grounded theory analysis is an inductive approach used to study a phenomenon or process to discover new theories based on the data. Unlike other methods, this approach derives new theories from the data through an iterative process of data collection, analysis, and theory development.

Narrative Analysis[58]
Narrative analysis is the process that researchers use to understand how research participants construct their stories and narratives from their own firsthand experiences.

Content Analysis[59]
Content analysis is used to determine the presence of words, themes, or concepts. The aim of this technique is to quantify words, themes, and concepts and then assess the presence, meaning, and relationship between them.

Interpretative Phenomenological Analysis
Interpretative phenomenological analysis is an approach used to investigate how individuals make sense of their experiences. It explores personal lived experiences in detail by taking into account how people make sense of their personal and social world.

5. Share the Findings

Just like the results of a community assessment, it is essential for the CBPR partnership to share any new knowledge found through the research activities among the partnership, with the community, and with other key stakeholders. Therefore, the last step in the research project is to report the key findings. **Section 5: Disseminating and Translating Research Findings** goes into more depth about this process.

Case Study: Designing the Research Project

Nevada Minority Health and Equity Coalition #OneCommunity COVID Campaign

The Nevada Minority Health and Equity Coalition (NMHEC) is a partnership of academic, civic, and community organizations that aim to address health disparities and inequities in Nevada by building capacity, informing policy, and conducting research. NMHEC is housed in the School of Public Health at the University of Nevada, Las Vegas.

Shortly after the United States shut down due to the COVID-19 pandemic, the Nevada Minority Health and Equity Coalition was granted funding to conduct culturally-responsive education and outreach regarding COVID-19 risk reduction strategies among the hardest-hit communities in Nevada. In response to this call-to-action, the NMHEC launched the #OneCommunity campaign to reach the following seven communities: Asian, Black/African American, Hispanic/Latinx, Hawaiian/Pacific Islander, Native American, LGBTQ, and individuals who are deaf or hard of hearing.

The NMHEC used a CBPR approach and worked with partners who represent each of the seven communities to ensure the voices of the community and their lived experiences guided the work of the project.

Designing the Research Project
The purpose of the #OneCommunity campaign was to develop and disseminate culturally responsive educational materials for seven communities, not to conduct research. Although the purpose of this particular project did not have a research focus and was pre-determined by grant funding rather than stemming from community discussions, ultimately the NMHEC still wanted to apply the principles of CBPR to ensure the community was involved, the process was equitable, and the resulted educational materials were culturally responsive. Also, despite the #OneCommunity campaign not being a research project, the work did result in the development of secondary research questions based on the data collected, which then resulted in coauthored peer-reviewed publications with the community partners. Ultimately, this project illustrates how the principles of CBPR can be used in a community-based implementation project that might also result in data that can be used for secondary research and publication in academic journals as another means to disseminate information.

Action Steps to Design a Research Project

There are several components to consider when designing a research project that follows a CBPR approach. Use **Action Step Checklist 3: Designing the Research Project** as a guide to develop a research question, plan the research project, and analyze the data. All members of the CBPR partnership should be involved with planning the project and should be aware of how and who will execute each step of the project.

Action Step Checklist 3: Designing the Research Project

Co-develop the research questions. The first step in the research process is to develop the research questions. However, in CBPR, both the researchers and the community should co-develop the questions based on their mutual interests. The research questions will set the foundation for the overall research project by determining what the project aims to answer.

- ☐ **Define the research topic.**
  - What are the overarching goals or interests of the CBPR partnership?
    - For a refresher, review the partnership goals that were established in **Section 1: Forming a CBPR Partnership.**

- ☐ **Review current knowledge related to the topic.**
  - Look over the findings from the community assessment.
  - Do a review of current literature.
  - What has already been done before?
  - Are there gaps in knowledge that need to be filled?

- ☐ **Develop a few working questions based on the current knowledge.**
  - Consider questions that will be within the partnership's capacity to answer.
    - What is actionable?
    - What is realistic?
    - What aligns with the partnership goals?
    - What resources are available?
  - Write down all possible questions within the partnership's capacity.

- ☐ **Narrow in on a few clear, concise, and specific research questions.**
  - Review, revise, and refine the questions until they are clear, concise, and specific.
    - Are the questions clear?
    - Are the questions specific?
    - Do the questions ask to answer the 'how' or 'why' of something?

Plan the research project. The next step of the research process is to plan the research project. A plan will provide a focus for the project by defining the methods and outlining project activities from start to finish.

☐ **Choose the research method.**

- Determine the research approach.
  - Will you use a quantitative, qualitative, or mixed methods approach?
    - Consider the project goals and activities.
    - What kind of data will be collected?
      - Quantitative? Qualitative? Both?
- Determine the research design.
  - Consider the project goals and activities again.
  - How much data do you need to collect?
  - How will you collect the data?
  - What is the project time frame?
  - What can the partnership realistically perform in terms of data collection?
  - Refer to **Table 5: Research Designs** for some examples of commonly used research designs.
- Consider a consult with a statistician to determine which methods of data collection would best meet the goals of the research project.

☐ **Build out a logic model to plan the research project.**

- Use the logic model template from **Appendix G: Logic Model Template** as you work on this step.
- Write down the project's purpose.
  - What is the overarching goal of the project?
  - What are the research questions?
- List the project inputs.
  - What resources are needed to complete the project?
    - Resources can include staff, funding, facilities, supplies, and equipment.
  - Are there any resources listed that the CBPR partnership does not have and will not be able to access?
- List the project activities and outputs.
  - What are the actions that will be taken to accomplish the project's purpose and outcomes?
    - Refer to the activities listed during the first action step.
  - What will be the result of each activity?
- List the anticipated project outcomes.
  - What does the CBPR partnership hope the project will accomplish?
    - What are the short-term outcomes?

- What are the intermediate-term outcomes?
- What are the long-term outcomes?

- Assign responsibility for each project activity.
  - Who will be responsible to complete the activity?

☐ **Create a project timeline.**

- Set deadlines to complete each activity.
- Schedule regular check-ins to track project progress.

Collect data. Data collection is the process of gathering information to answer the research question. The plan will briefly outline the what, how, and who of data collection for the project. These steps will go a bit more in-depth on how-to prepare for data collection before it is initiated.

☐ **Determine the variables and measures.**

- What are the characteristics of interest in the research project?
  - Review what each research question sets out to answer.

☐ **Plan the data collection procedures.**

- What information needs to be collected to answer the research question?
- What method of data collection can be used to collect the information needed to answer the research question?
  - Refer to **Table 4: Data Collection Methods** in Section 2: Assessing Community Strengths and Dynamics for a list of several ways to collect data.
- How will participants be recruited?
- How long will data be collected?
  - Until a certain period of time?
  - Until a certain number is reached?
- Write detailed instructions on how the data will be collected so any member of the CBPR partnership can carry out data collection in a consistent manner.
  - Ensure all members of the partnership understand the instructions.

☐ **Create a data management plan.**

- Determine how to organize and store the data.
- Ensure all members of the partnership are aware of how the data will be managed.
- If possible, ensure the data can be routinely backed up to prevent loss.

- ☐ **Start to collect the data.**
  - Record any relevant information related to the process of data collection.
    - If they occur, document any challenges or barriers.
  - Routinely review the data to ensure it is entered correctly.
  - Update the data collection procedures as needed to accurately reflect the actual process.

Analyze the data. Data analysis is the preliminary step to sharing and interpreting outcomes and lessons learned from the project. All members of the CBPR partnership should help determine how the data will be analyzed and be involved in the discussion about the results of the analysis.

- ☐ **Designate an individual or team to conduct the data analysis.**
  - Will the data analysis be conducted by members of the CBPR partnership or an outside party such as a statistician?

- ☐ **Determine what data analysis techniques to use.**
  - Does the data require a quantitative or qualitative analysis?
    - Refer to **Figure 11: Quantitative Data Analysis Techniques** and **Figure 13: Qualitative Data Analysis Techniques**.
  - It is important to note that multiple methods of analysis may be required.

- ☐ **Determine which data visualization tool to use.**
  - What are you trying to see or show with the data?
    - A trend over time? Comparison? Pattern?

- ☐ **Analyze the data.**
  - The designated data analysis individual or team will conduct the data analysis based on the selected technique and tool.

- ☐ **Briefly review the results.**
  - All members of the CBPR partnership should briefly review the data analysis to ensure it answers the intended questions.
    - Re-analysis of data may arise based on partner feedback.
  - A more in-depth review and interpretation of the results will occur in **Section 4: Feeding Back and Interpreting the Research Findings.**

04 | Feeding Back & Interpreting Research Findings

Once the research is analyzed, the next phase in the CBPR process is **feeding back and interpreting research findings**. This section will cover the importance of reviewing research results, interpreting research findings within the CBPR partnership, and discussing broader stakeholder engagement throughout this phase.

Learning Objectives for Section 4

1. **Determine the importance of reviewing and interpreting the research findings within the CBPR partnership.**
2. **Explain how collaboration impacts the interpretation of the research findings.**
3. **Describe the process of feeding back research findings to key stakeholders.**

Feeding Back & Interpreting Research Findings

The data analysis completed in **Section 3: Designing the Research Project** will result in study findings that the CBPR partnership will need to review to ensure accuracy as well as interpret to understand how the results can be used to create change. These concurrent processes are known as **feed back** and **interpretation**, which continue to support the co-learning and capacity-building nature of CBPR.

Feed back involves sharing the results within the CBPR partnership and with other key stakeholders, such as individuals who participated in the research study, to obtain different viewpoints about the accuracy of the results. Essentially, this process ensures the results are correctly understood within the context of the research question and the community. There should be several touch points built into the process for the CBPR partnership and other key stakeholders to provide input. Questions or concerns about the accuracy of the results are welcome since it may mean alternative analytic techniques or additional analyses are necessary to achieve the most accurate results. It is important to honor this process as it demonstrates the commitment that all team members have a voice.

Similar to feed back, the CBPR partnership will engage in interpretation of the results. Interpretation is the process of making sense of the research findings and the broader implications. Consequently, interpretations set a framework for how knowledge can be translated into actionable change. The expertise of the researchers guide the process of interpretation, while the cultural expertise and lived experiences of the community partners enhance the interpretation within the context of the community.

It is expected that interpretations and possible implications of findings can vary among each partner due to differences in skills, experiences, and perspectives. Each of these contextual characteristics contribute to how partners understand outcomes. It is essential for each member to maintain an open mind and to consider the diverse viewpoints and opinions that everyone brings to the table. There are no right or wrong answers. Similarities and differences in interpretations may arise throughout this process, which is a normal and welcomed aspect of CBPR.

Ultimately, equitable collaboration between the researchers and the community adds value and authenticity to the interpretation process, bringing each partner's priorities to the forefront. These steps ensure the members of the CBPR partnership and stakeholders can make sense of the results in relation to the research question and within the community context. The knowledge-building process is powerful and strengthens the CBPR partnership's capacity to respond to and address community concerns. Additionally, the interpretation of the findings helps the partnership set a framework for how to translate the findings into actionable change, which is covered in more detail in **Section 5: Translating and Disseminating Research Findings**.

Case Study: Feeding Back & Interpreting Research Findings

Nevada Minority Health and Equity Coalition #OneCommunity COVID Campaign

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The NMHEC used a CBPR approach and worked with partners who represent each of the seven communities to ensure the voices of the community and their lived experiences guided the work of the project.

Feeding Back & Interpretation

The NMHEC partnered with 10 community-based organizations who served at least one of the focal communities with the goal of developing and disseminating culturally-responsive COVID-19 educational materials. To briefly summarize, before any educational materials were created or disseminated, the NMHEC and the community partners coordinated focus groups to learn more about the different gaps in knowledge, concerns, and beliefs related to COVID-19 and the pandemic, as well as the upcoming COVID-19 vaccines. The information collected from each group would be used to inform the development of various educational materials for each of the seven communities. Focus groups were conducted with each of the seven populations to gather information. These sessions were recorded and transcribed to accurately report the thoughts and ideas of the participants as presented during the sessions. The constant comparison method was utilized to analyze the data, and participant responses were summarized for each focal group to find commonalities as well as unique experiences among the seven communities.

Once NMHEC staff completed the initial summaries of data, they shared the summaries along with the transcript with project partners and individuals who participated in the focus groups that indicated they would like to be updated about the results. Those who received a summary were asked to review it and provide input on whether they agree with the results, a written reflection of their understanding of the information, and to suggest any changes for improvement. Approximately two weeks were given to complete this process, which is typically a very short time frame to ask for this type of task. However, given the rapid nature of the pandemic, this amount of time was appropriate.

Once the summaries of the data were final, the NMHEC project staff and community partners held meetings to determine how to extract the main themes from the data and how those themes would translate into educational materials and outreach methods for each community. Once the educational materials were drafted, the community partners took the materials to small groups within their community to receive additional feedback. That feedback was then used to make final edits to the educational materials.

NMHEC staff and community partners worked together to listen to the communities' voices to guide the development of the educational materials as well as the methods used to disseminate the information. This process is continuous and can occur multiple times throughout a project.

While the main purpose of the #OneCommunity campaign was not research; the same research procedures were used to conduct the needs assessment which provided the information necessary to develop the educational materials and strategies for each community. The needs assessment data analysis from this project followed a similar process of feeding back and interpreting the findings with partners and community members to ensure the results were correctly understood within the context of the community.

Action Steps to Feed Back and Interpret the Research Findings

Feeding back and interpreting the research findings within the CBPR partnership is essential to complete before the next phase of CBPR (Section 5: Disseminating and Translating the Research Findings). Use **Action Step Checklist 4: Feeding Back and Interpreting Research Findings** as a guide to approach the review, interpretation, and feed back of the research findings.

Action Step Checklist 4: Feeding Back and Interpreting Research Findings

Review the research findings and interpretations. After the data analysis is complete, all members of the CBPR partnership should individually and collaboratively review the results and interpretations. A critical step to the process is understanding what the results and outcomes mean in relation to the research question and within the context of the community.

- ☐ **Review the research findings independently.**
  - Use **Appendix H: Research Findings Interpretation Worksheet** to keep track of your thoughts as you work on this step.
  - What do the results mean?
    - To you?
    - In relation to the research question?
    - Within the context of the community?
  - Do the results make sense?
  - Are there any counterintuitive or contradictory findings?
  - Is there an opportunity to re-analyze the data to correct the findings?

- ☐ **Schedule a time to discuss the research findings within the partnership.**
  - Ensure it is enough time to engage in a meaningful conversation about the results.

- ☐ **Collaboratively review the research findings.**
  - All members of the CBPR partnership should have an opportunity to share their thoughts about the results.
  - Actively listen, maintain an open mindset, and practice open communication.
  - Identify common themes or ideas.
  - Ensure all other members of the CBPR partnership understand your interpretation of the findings.
    - Be prepared to elaborate if necessary.
  - Determine why findings are important and what they mean to each member of the partnership.

- Be honest and transparent about all research outcomes, which includes those that are positive or unfavorable.

☐ **If necessary, re-analyze the data.**
- Determine what type of analysis will yield a more accurate understanding of the data.
- Repeat the review process before feeding back the results.

☐ **Consolidate a final interpretation of the research findings.**
- What do the research findings mean?
  - In relation to the research question?
  - In the context of the community?
- Use **Appendix J: Translation of Research Findings Worksheet** to help organize thoughts on how to put the research results into action.

Feeding back the research outcomes to other stakeholders. In CBPR, feeding back the research findings and interpretations of the research project to other stakeholders outside of the partnership is another opportunity to enhance the understanding of the research results within the context of the community.

☐ **Determine what results to feed back.**
- What information would stakeholders want to know?
- Which results are easily explainable?
- Which results would require additional information to explain?

☐ **Determine how to feed back the results.**
- What is the best way to share information with diverse stakeholders?
- How will stakeholders share their reactions and interpretations with the CBPR partnership?

☐ **Share the results with stakeholders.**
- Set a deadline for stakeholders to provide their reactions and interpretations of the research results.
  - Ensure it is a realistic amount of time.
- Continue to maintain an open mind to consider the diverse viewpoints and opinions of all participants.

☐ **Review comments within the CBPR partnership.**
- Discuss how the input impacts existing findings and interpretations.
- Re-analyze the data if needed.
- Adjust findings and interpretations as needed.

05 Translating and Disseminating Research Findings

Research results in the generation of knowledge, but not always action. CBPR differs from other research approaches because it emphasizes the importance of using the results to affect change and sharing the results widely. Therefore, the next phase in the CBPR process is **translating and disseminating the research findings**. This section will cover how to translate research findings into action, develop a dissemination plan, and establish dissemination guidelines.

Learning Objectives for Section 5

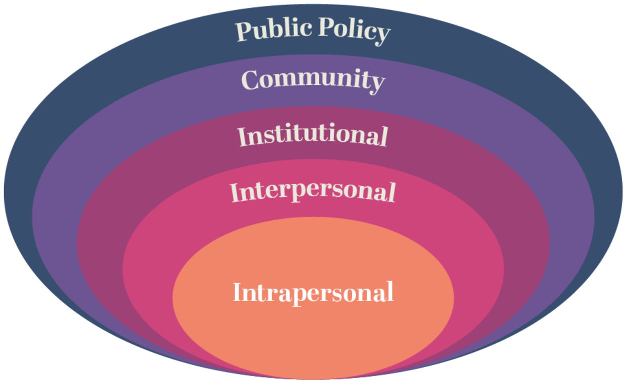
1. **Describe the various levels where research findings can be put into action.**
2. **Describe various strategies to translate research findings into action.**
3. **Define the components of a dissemination plan.**
4. **Describe various dissemination formats.**

Translating Findings into Action

CBPR is committed to bridging the generation of knowledge with action, which means the research findings are integrated back into the community to affect change. This integration of findings is known as **translation**. Translation is the process of taking actionable data and turning the implications of findings into action.

In CBPR, once the research findings are interpreted, it is essential for the partnership to review the implications and determine how to translate the findings into action to affect change within the community. There are two critical parts to translation – the level of influence and the implementation strategy. The level of influence pertains to where the findings can be used to affect change. **Figure 14: The Social Ecological Model** outlines the various levels of influence and what the research findings could potentially change at each level.

Figure 14: The Social Ecological Model



Level of Influence	Research Findings Could Change...
Intrapersonal	Individual knowledge, attitudes, beliefs, or values.
Interpersonal	Relationships or interactions with others, such as friends, families, coworkers, or health professionals.
Institutional	Organizational rules, regulations, policies, structures, or practices.
Community	Relationships or informational networks among individuals, organizations, or other groups.
Public Policy	Laws and policies at the local, state, national, or global level.

Note: Adapted from Table 1. An Ecological Perspective: Levels of Influence in Theory at a Glance: A Guide for Health Promotion Practice (Second Edition) by the National Cancer Institute, 2005.[60]

The implementation strategy describes how the CBPR partnership will apply the research findings to drive change at the selected level of influence. Given the dynamic nature of a community and the numerous factors that can impact it, there are many ways the CBPR partnership could institute change. **Table 7: Strategies to Affect Change** describes a handful of ways research findings can be used to implement change across multiple categories. Also, there is no single or correct route to translate research findings into change.

Table 7: Strategies to Affect Change

Category	Strategy
Advancement in Science	• Increasing the understanding about the root causes of health disparities. • Improving approaches to address health disparities. • Setting the stage for future research.
Environment	• Improving elements in the physical, social, or economic environment.
Policy	• Implementing a new policy which could be a formal or informal law, ordinance resolution, mandate, or regulation. • Revising an existing policy. • Advocating for a new policy or the revision of an existing policy.
Practices	• Improving an existing practice within an organization or community such as the day-to-day procedures or standards of operation. • Establishing a new practice within an organization or community.
Systems	• Developing a new program or service to address health disparities in the community. • Improving an existing program or service which could include increasing capacity, staffing, and financial resources.

Developing a Dissemination Plan

Dissemination is the process of broadly sharing the research findings with others outside of the CBPR partnership, such as the community and other stakeholders. When sharing the research findings widely, it is essential for the CBPR partnership to develop a **dissemination plan** to ensure the information is understandable, respectful, and meaningful for each audience.[61] A dissemination plan is a framework that outlines how the CBPR partnership will share the research findings with various audiences. The plan should outline the purpose of dissemination, the audience, how to tailor the dissemination to the audience, and the time frame.

1. Define the Purpose

Similar to the community assessment, the CBPR partnership needs to determine the purpose of dissemination since it will inform the rest of the plan. The purpose of dissemination relates to what the partnership wants to achieve by broadly sharing the research findings. Some common purposes for dissemination include:

- Raising awareness about the research project.
- Educating stakeholders about the findings from the research project.
- Engaging stakeholders to gather input about the research project.
- Promoting the research findings to emphasize the importance of the research.
- Contributing to a specific field of research.
- Informing future research within a specific field.

2. Determine the Audience

Each audience receives and digests information differently, so it is critical to identify who will receive the information and appropriately adapt the **dissemination products** for each audience. Dissemination efforts can speak to a variety of audiences such as community stakeholders, academics, grant funders, government agencies, policymakers, community leaders, health professionals, or even news outlets.

3. Select a Dissemination Format

The next step in the dissemination plan is to select a dissemination format. There are a variety of dissemination formats and some will reach certain audiences more effectively, so it is important to use a method that will best reach the intended audience. **Table 5: Dissemination Formats** provides examples of digital and non-digital dissemination formats. Digital formats offer a way to share information quickly with an audience, but will be limited to only those who have access to the digital platforms. In some instances, it may be beneficial for the CBPR partnership to utilize a combination of both digital and non-digital formats for one audience. It is also imperative to consider budget and availability of other resources when selecting a dissemination format.

Table 5: Dissemination Formats

Format Type	Examples
Digital	• Announcements via email or text message. • Informational websites or webpages. • Video messaging. • Posts on social media platforms like Facebook, Instagram, Twitter, TikTok, or YouTube. • Virtual meetings such as listening sessions, conferences, webinars, or town halls.
Non-digital	• Academic journals, white papers, manuscripts, fact sheets, policy briefs, or other peer-reviewed publications. • Broadcast media such as television or radio. • Community forums, town halls, meetings, listening sessions, or other events. • Letters to decision makers. • Oral presentations at professional conferences or community events. • Printed materials such as billboards, brochures, direct mail, newsletters, flyers, posters.

4. Tailor the Dissemination Product

Once a dissemination format is selected, the CBPR partnership will need to outline how to tailor the dissemination product for each specific audience. Given that cultural contexts are integral to CBPR, each dissemination product should be inclusive and respectful of the diverse cultures that make up the partnership and audience. Therefore, it is particularly important to ensure the presentation of findings is culturally sensitive when sharing information. **Cultural sensitivity** is defined as having an awareness that cultural differences and similarities exist, which can impact individual learning, values, concerns, and behaviors.[62]

There are several cultural factors to take into consideration:

- **Relevance** relates to what research findings are most important to the audience. An audience is most interested in findings that connect with their primary priorities or concerns. It is not unusual for a research project to result in several research findings, so the CBPR partnership should present the research findings that are relevant to each audience.

- **Relatability** involves the incorporation of the culture representation into the presentation of the research findings. Culture can be included through images, colors, symbols, graphics, or pictures that resonate with the audience. Representation can be achieved by utilizing CBPR partners and community members to provide feedback about its relatability to cultural norms and values.

- **Language** involves the words used to describe the findings as well as the language itself. Dissemination products should be delivered in a way that the audience can easily understand the information. For example, presenting the materials in the primary language of the audience or including a language interpreter at live presentations.

5. Establish a Dissemination Timeline

Dissemination of research findings takes time, so the last step of developing the dissemination plan is to establish a timeline for each of the dissemination products. Research findings should be shared in a timely fashion with the appropriate audiences to ensure the results can be used to impact change. If the CBPR partnership plans to distribute findings via several formats and is constrained by time, it may be necessary to prioritize certain formats over others.

Establishing Partnership Dissemination Guidelines

In addition to the dissemination plan, the CBPR partnership should establish a set of dissemination guidelines. The guidelines will set the partnership's standards for dissemination, as well as hold members of the partnership accountable for their dissemination activities. Guidelines should clearly lay out how the partnership will distribute the responsibility of the various dissemination activities. Some of the most important guidelines for the partnership to discuss are: conference presentations, **coauthorship**, media inquiries, and data requests. These guidelines will vary from partnership to partnership. However, to maintain the equitable and collaborative nature of CBPR, it is critical for all partnerships to at least recognize and credit the contributions of all partners in all dissemination products.[11]

Nevada Minority Health and Equity Coalition
#OneCommunity COVID Campaign

The Nevada Minority Health and Equity Coalition (NMHEC) is a partnership of academic, civic, and community organizations that aim to address health disparities and inequities in Nevada by building capacity, informing policy, and conducting research. NMHEC is housed in the School of Public Health at the University of Nevada, Las Vegas.

Shortly after the United States shut down due to the COVID-19 pandemic, the Nevada Minority Health and Equity Coalition was granted funding to conduct culturally-responsive education and outreach regarding COVID-19 risk reduction strategies among the hardest-hit communities in Nevada. In response to this call-to-action, the NMHEC launched the #OneCommunity campaign to reach the following seven communities: Asian, Black/African American, Hispanic/Latinx, Hawaiian/Pacific Islander, Native American, LGBTQ, and individuals who are deaf or hard of hearing.

The NMHEC used a CBPR approach and worked with partners who represent each of the seven communities to ensure the voices of the community and their lived experiences guided the work of the project.

Translating & Disseminating Research Findings

The NMHEC worked with 10 community-based organizations who served at least one of the focal communities to develop and disseminate culturally-responsive COVID-19 educational materials. Before the educational materials were created and the community partners began outreach, the NMHEC and the community partners coordinated focus groups to learn more about the different gaps in knowledge, concerns, and beliefs related to COVID-19 and the pandemic as well as the upcoming COVID-19 vaccines.

The information collected from the focus groups was actualized by using the results to inform the development of various educational materials for each of the seven communities. Additionally, the data gathered from the focus groups guided the development of the dissemination plan because the communities voiced their preferred methods to receive health information and the sources they trusted.

All of NMHEC's COVID-19 educational materials were developed in partnership with community organizations that represent each of the seven communities. The NMHEC held meetings with community partners to receive input on how to tailor or adapt each educational material for their respective community. The data from the focus groups guided the initial creation of the materials. However, as the educational materials were drafted, community partners would reach out directly to community members to obtain additional feedback to ensure the product was culturally relevant and reflective of the community. To further honor the voice of the community, the NMHEC also worked with local artists from a few of the communities to create additional culturally-responsive educational materials. Overall, this approach was successful due to the continuous revision process to incorporate and actualize the feedback from the community in the final products.

Based on input from the focus groups, community partners, and community members, a variety of dissemination methods were used to distribute the #OneCommunity educational materials, which included but is not limited to:

- Social media (Facebook, Instagram, and Twitter)
- Printed Flyers
- Mailers
- Billboards
- Website
- Webinars
- TV Commercials
- Radio Commercials

The application of a CBPR approach to the COVID-19 response effort proved to be an effective way to create culturally-responsive dissemination products for the communities of focus. CBPR facilitated the development of meaningful partnership collaborations which provided invaluable insight about the needs, concerns, and best ways to reach the community. This approach positioned the NMHEC to develop a more tailored and effective response.

Action Steps to Translate and Disseminate Research Findings

The translation and dissemination of research findings are essential to the CBPR process. These steps help put the research into action, which is not always achieved in traditional forms of research. Use **Action Step Checklist 5: Translating and Disseminating Research Findings** as a guide to translate the research findings into action, develop a dissemination plan, and establish dissemination guidelines.

Action Step Checklist 5: Translating and Disseminating Research Findings

Translate the research findings. CBPR works to balance knowledge with action. Translation of research findings is the process of integrating the results back into the community to affect change. Use **Appendix J: Translation of Research Findings Worksheet** to help organize thoughts on how to put the research results into action.

- ☐ **Review the interpretation of findings.**
  - What are the conclusions, recommendations, or larger implications of the research findings?
  - Revisit the final interpretation of research findings that was discussed in Section 4: Feeding Back and Interpreting Research Findings.

- ☐ **Determine which levels the research findings can be put into action to affect change.**
  - Where along the social ecological model can the research findings be applied to affect change?
    - See **Figure 14: The Social Ecological Model** for the various levels of influence and what the research findings could potentially change at each level.

- ☐ **Determine what action can be integrated at the selected level.**
  - Based on the research findings, what needs to happen to affect change?
  - What strategies can be taken?
    - Systems, practices, policy, environment, or research?
  - Who will directly be impacted by the action, whether it is positive or negative?
  - What steps need to be taken to see the results into action?

- ☐ **List resources needed to complete the action.**
  - What resources are available within the partnership?
  - What resources outside of the partnership are needed?
  - Are other people or organizations needed to mobilize the action?
    - Policymakers, community leaders, healthcare workers, other researchers?

☐ **Translate the results into action.**

- Begin executing the listed steps to put the results into action.

☐ **Develop a plan to disseminate the research findings.** A dissemination plan will set the foundation for the CBPR partnership to disseminate research findings. Use **Appendix I: Dissemination Plan Worksheet** as a resource to help organize the start of the dissemination plan. This plan can be adapted over time.

☐ **Determine the purpose of the dissemination effort.**

- What does the partnership want to achieve by broadly sharing the research findings?
  - Raise awareness about the research project.
  - Educate stakeholders about the findings from the research project.
  - Engage stakeholders to gather input about the research project.
  - Promote the research findings to emphasize the importance of the research.
  - Contribute to a specific field of research.
  - Inform future research within a specific field.

☐ **Identify the key audience.**

- Who is the primary audience that will receive the research findings?
  - Academic researchers, community members, community-based organizations, research funders, policymakers, or health professionals?

☐ **Determine the dissemination format.**

- Consider how your audience obtains information.
  - Do they have access to digital platforms?
- Select a format that will best reach the intended audience.
  - Refer to **Table 5: Dissemination Formats** for a few examples.
- Consider budget and availability of other resources.

☐ **Tailor the dissemination product to the selected audience.**

- Explore which research findings align with the priorities of the audience.
- How can the dissemination product be framed to resonate with the selected audience?
  - Include images, colors, symbols, graphics, or pictures that resonate with the audience.
  - Include visual representation of the audience.
- Consider providing the dissemination product in the primary language of the audience.

    - Ensure the dissemination product is a translation of meaning, not a word-for-word translation from the original language to another language.
    - If the budget allows, hire a language interpreter for in-person presentations.
- Ensure the final product is easily understandable.
- Use clear, inclusive, and respectful language.
- Limit the use of technical language when possible.
- Have individuals who identify with the audience review the dissemination product prior to the presentation to provide feedback on how to further tailor the product.

☐ **Establish a timeline.**

- Do current project activities align with the planned dissemination activities?
- Will the research findings be current at the time of the dissemination activity?
- Consider which components of the project are time-sensitive to communicate.
- Consider the current progress of the project.
- Consider when it would be best to share findings with certain audiences.

Establish dissemination guidelines. Dissemination guidelines set standards for the CBPR partnership to conduct the dissemination activities.

☐ **Determine who is responsible for each dissemination activity.**

- Who in the CBPR partnership is the best to engage with the selected audience?
- Ensure the one responsible is prepared to disseminate the research findings.
    - Provide training, as necessary.

☐ **Determine the ground rules for coauthorship.**

- At a minimum, all members of the CBPR partnership should be recognized for their contributions on each of the dissemination products.
- Consider following the International Committee of Medical Journal Editors'
    - existing framework for determining coauthorship and adapt it to the CBPR partnership, as necessary.
- Begin conversations with communities to discuss publication of work – some may require formal approval.

☐ **Establish presentation guidelines.**

- Who will be selected to present at a conference or event?
    - Will it be a rotating selection process? Pre-determined?
- Will a research and community partner be present at all presentations?
- How will the CBPR partnership handle requests to present?

- ☐ **Determine how to address media inquiries.**
  - How will the CBPR partnership handle media inquiries?

- ☐ **Determine how to address requests to use data.**
  - How will the CBPR partnership handle requests to use project data?

Disseminate the research findings. This step is the actioning of the dissemination plan.

- ☐ **Share the research findings.**
  - Follow the established dissemination plan and guidelines.

06 | Evaluating CBPR Activities & the Partnership

The final phase of CBPR is **evaluating CBPR activities and the partnership**. Similar to the CBPR approach, evaluation occurs continuously and is critical to achieving desired outcomes. This section will cover the importance of participatory evaluation and how to evaluate the CBPR activities and partnership.

Learning Objectives for Section 6

1. **Describe participatory evaluation.**
2. **Define the several types of evaluation.**
3. **Apply strategies to evaluate research activities and the CBPR partnership.**

Participatory Evaluation

Evaluation is a systematic way to assess the effectiveness and efficiency of a project, intervention, program, practice, or policy. It can also recommend improvements. It involves collecting, analyzing, and using information to determine how well the program or policy works and what could improve. Traditional approaches to evaluation often embody a top-down approach in which the evaluation is conducted, developed, and implemented without community consultation or participation. Given that CBPR is equitable and inclusive, it is expected that the partnership will use a **participatory evaluation** approach to evaluate the activities and the partnership.

Participatory evaluation is a collaborative approach where members of the CBPR partnership, the community, and other key stakeholders are included in all aspects of the evaluation process. The inclusion of those who carry out or are directly impacted by the program or policy ensures the values and priorities of the community are realized within the evaluation framework. In addition, it acknowledges that evaluation occurs within a "specific context and is necessarily influenced by the economic, political, historical, and social forces that shape that context."[63] Ultimately, the utilization of a participatory evaluation approach will yield a more accurate perspective of the effectiveness and efficiency of a program or policy because it includes those who are directly involved but are not always heard from during evaluation.

The Evaluation Process

The CBPR partnership can apply a participatory evaluation approach to any type of evaluation effort. Developing an evaluation plan can help clarify details of the evaluation, specifically what will be evaluated, how, and when. **Table 8: Evaluation Plan** provides some guiding questions to support the development of the evaluation.

Table 8: Evaluation Plan

Evaluation Questions	What does the evaluation aim to answer?
Indicators	What measures are needed to answer the evaluation question(s)?
Data Sources	Where will the data be obtained?
Data Collection	How will the data be collected?
Time Frame	What is the time frame to complete activities?
Data Analysis	How will the data be analyzed?
Communicate Results	How will evaluation results be disseminated?
Responsible	Who is responsible for completing each activity?

There are two main categories of evaluation: formative and summative. **Formative evaluation** occurs during the development and early implementation of a program or policy to ensure the activities will be feasible, appropriate, and acceptable.[64,65] By contrast, **summative evaluation** builds on activities and data collected during the formative evaluation and occurs after the implementation of a program or policy to determine how well it met the intended goals.[64] There are several types of evaluation within formative and summative. Needs assessment and **process evaluation** are types of formative evaluation, while **outcome evaluation** and **impact evaluation** are types of summative evaluation. **Figure 15: Types of Evaluation** outlines the several types of evaluation and where each would fall within the CBPR process.

Figure 15: Types of Evaluation

	Formative		**Summative**	
Evaluation Type	**Needs Assessment** Determines the need for a particular program, policy, or partnership.	**Process Evaluation** Assesses the fidelity of the program, policy, or partnership. Determines the degree to which activities are implemented as intended.	**Outcome Evaluation** Measures the results of the program, policy, or partnership and whether the short- and intermediate-term outcomes were met.	**Impact Evaluation** Measures the impacts of the program, policy, or partnership and whether the long-term outcomes were met.
When	During program, policy, or partnership development.	Throughout program, policy, or partnership implementation.	As short- and intermediate-term outcomes occur.	As long-term outcomes occur.
Question to Answer	What is the need and what can be done to address it?	Is the program, policy, or partnership operating as planned?	Is the program, policy, or partnership achieving its objectives?	What impacts did the program, policy, or partnership have?

Note: Adapted from Table 1 and Table 2 in Building Our Understanding: Key Concepts of Evaluation by the CDC's Healthy Communities Program, n.d.[64]

There are several evaluation frameworks available. However, one of the most commonly used is the CDC's framework for evaluation, which depicts six key steps and four core standards of evaluation. These steps for evaluation are outlined in **Action Step Checklist 6: Evaluating Research Activities and the CBPR Partnership**, while the four core standards of evaluation (**utility**, **feasibility**, **propriety**, and **accuracy**) are listed below. An effective evaluation plan will consider each of these standards throughout every phase of the evaluation.

- Utility ensures findings from the evaluation are relevant and useful for all partners.
- Feasibility ensures the scope and methods of the evaluation are realistic.
- Propriety ensures the evaluation is done legally and ethically as well as promotes the welfare of those who are involved or affected by the evaluation.
- Accuracy ensures the evaluation is transparent, comprehensive, justifiable, grounded in data, and draws conclusions that are consistent with the data.

Evaluating the CBPR Partnership

Because of the relative importance of a successful CBPR partnership, it is important to develop a plan to evaluate the partnership within the broader evaluation activities. As mentioned in **Section 1: Forming a CBPR Partnership**, partnerships are fluid, dynamic, vary in pace, and require a long-term commitment. An evaluation of the partnership will assess the successes, weaknesses, and challenges of the CBPR partnership as well as inform decisions and identify areas for improvement as the needs and priorities of the partnership evolve over time. Successful CBPR partnerships will regularly evaluate the partnership to determine its effectiveness and ability to reach partnership goals.

Partnership evaluation follows the same framework as the other types of evaluation, except it aims to answer a question that relates specifically to the partnership. **Figure 16: Sample Partnership Evaluation Questions** provides a list of questions that can be used to evaluate the CBPR partnership.

> **"Research seeks to prove, evaluation seeks to improve."**
>
> **Michael Quinn Patton, PhD**
> Founder and CEO of Utilization-Focused Evaluation

Figure 16: Sample Partnership Evaluation Questions

- Does the partnership adequately represent the community and other key stakeholders it serves? Is there a way to identify gaps in the partnership membership?

- Are partnership meetings successful (i.e. productive, focused, and effective)?

- Is the partnership operating successfully?
    - Are the partnership goals well-defined and communicated? Are there clear roles and responsibilities for partnership leaders and members?
    - Are partners knowledgeable of group process and program priorities?
    - Do any additional workgroups, steering committees, or subgroups function well?
    - Is communication efficient and timely?
    - Is the partnership mutually beneficial to partners? How can the needs and priorities of the partners be better met?

- What proportion of partnership activities are focused on priority strategies?

- Are the partnership members satisfied with the function, progress, and leadership of the partnership?

- Is the partnership on track to accomplish its goals and objectives?

- Do partners find the training provided to be beneficial?

***Note: Adapted from Partnership Evaluation Questions and Activities in Fundamentals of Evaluating Partnerships by the Centers for Disease Control and Prevention, Division for Heart Disease and Stroke Prevention, 2008.*[66]**

Case Study: Evaluating CBPR Activities & the Partnership

Nevada Minority Health and Equity Coalition #OneCommunity COVID Campaign

The Nevada Minority Health and Equity Coalition (NMHEC) is a partnership of academic, civic, and community organizations that aim to address health disparities and inequities in Nevada by building capacity, informing policy, and conducting research. NMHEC is housed in the School of Public Health at the University of Nevada, Las Vegas.

Shortly after the United States shut down due to the COVID-19 pandemic, the Nevada Minority Health and Equity Coalition was granted funding to conduct culturally-responsive education and outreach regarding COVID-19 risk reduction strategies among the hardest-hit communities in Nevada. In response to this call-to-action, the NMHEC launched the #OneCommunity campaign to reach the following seven communities: Asian, Black/African American, Hispanic/Latinx, Hawaiian/Pacific Islander, Native American, LGBTQ, and individuals who are deaf or hard of hearing.

The NMHEC used a CBPR approach and worked with partners who represent each of the seven communities to ensure the voices of the community and their lived experiences guided the work of the project.

Evaluating CBPR Activities & the Partnership

In the #OneCommunity campaign, evaluation methods were established to track activities specific to the campaign and the overall relationship with community partners. To establish clear guidelines and responsibilities, NMHEC staff and community partners collaboratively developed a scope of work with specific deliverables. From the start, the partnership set expectations – such as the agreement of activities, how to measure the activities, and what would be deemed a success. For example, one component of the #OneCommunity dissemination plan included paid digital media advertisements on social media such as Facebook and Instagram. One community partner expressed the importance of WhatsApp to provide rapid communication within their community, so WhatsApp communications were included in their scope of work along with a specified number of messages and metrics needed to meet the deliverable.

At a minimum, the NMHEC and community partners met at least once a month, but given the fast-paced nature of the pandemic, meetings were held more frequently. During these meetings, the partnership would discuss progress towards the outlined deliverables, successes, challenges, reporting requirements, and, as necessary, the need to adjust the scope of work. Additionally, these meetings examined the cultural appropriateness of communication strategies. These discussions allowed for open and honest conversations to adapt project strategies to meet the needs of the community. Partners felt comfortable with discussing their strengths and areas where additional assistance was needed to reach project goals.

NMHEC also had discussions with community organizations to evaluate the quality of the partnership, specifically the examination of long-term strategies to maintain the partnership beyond the #OneCommunity project. For example, as mentioned in the case study for **Section 1: Forming the Partnership**, NMHEC's relationship with organizations who represent Nevada's tribal communities was new. Therefore, as NMHEC met with them about the activities related to #OneCommunity, they also discussed how to sustain the partnership after the conclusion of the project. The group agreed to continue meetings after the conclusion of the #OneCommunity project. Additional members who represent Nevada's tribal communities have since joined the group as a result of the rapport built with trusted and respected tribal organizations and members during the #OneCommunity project. Existing partners and new members have found these meetings to be a safe space to share about areas of improvement as well as the connections to historical root causes within tribal communities. These ongoing meetings support the continuous building of trust, which is essential to aligning the coalition's priorities with community priorities.

As the collaboration grew, the group held intentional discussions about the overall goals of the partnership. For instance, the group discussed if they would remain focused solely on COVID-19 or to expand to other initiatives while trying to balance resources of the existing groups and funding needs. These conversations occurred over several meetings and the group agreed that with limited resources, short-term goals and objectives were needed to move the work forward. However, longer-term goals and activities were also needed in order to seek opportunities for funding and support. These activities, goals, and strategies are regularly tracked to measure the partnership's progress.

This case study demonstrates the importance of including conversations about goals and expectations in partnerships early in the relationship-building process, which in this example, helped to establish transparency and build trust. However, NMHEC still has work to do and plans to continue to monitor the quality of the partnership through open dialogue with partners and, in the future, develop a more formal evaluation process.

Action Steps to Evaluate CBPR Activities and the Partnership

Evaluation activities can be broken down into six steps. These steps should be viewed as a guide that is fluid and adaptable to best meet the needs of the partnership, rather than a rigid process that must occur in order. Use **Action Step Checklist 6: Evaluating CBPR Activities and the Partnership** for key considerations to include throughout the evaluation of the CBPR activities or partnership.

Action Step Checklist 6: Evaluating CBPR Activities and the Partnership

Engage stakeholders. An effective evaluation includes the needs, interests, and perspectives of those involved in the CBPR partnership or its work, so it is essential to include them throughout the evaluation process.

☐ **Make a list of current or potential key stakeholders.**
- Who carries out or is directly impacted by the CBPR activities or partnership?

☐ **Engage with each of the key stakeholders.**
- Discuss various aspects of the CBPR partnership or its work.
- Check out **Appendix K: Evaluation Questions for Key Stakeholders** for a list of questions to ask key stakeholders.

☐ **Review and summarize the key stakeholder discussions.**
- What insights related to the CBPR activities or partnership did the key stakeholders provide?

Describe the program or partnership. Provide a summary of the CBPR partnership and its work, which should include the goals, expectations, activities, and resources. This summary should already be available if a preliminary logic model was completed in Section 3: Designing the Research Project.

☐ **Review the logic model individually and with key stakeholders.**
- Ensure it includes all the key information.
- Ensure all components are clear and understood by all key stakeholders.
- Affirm all components accurately represent the CBPR partnership and its work.

☐ **Write a brief narrative to accompany the logic model.**
- A narrative should explain any nuances not directly captured within the logic model.

Focus the evaluation. After stakeholders are engaged and the program is described, it is time to plan a well-focused evaluation. A focus will lead to a more useful, efficient, and effective evaluation.

- ☐ **Determine the purpose of the evaluation.**
  - What are the questions the evaluation will aim to answer?
  - Consider who is most likely to use the findings from the evaluation and how they will use them.
  - Identify components of the CBPR partnership or its work that needs to be assessed.

- ☐ **Refine or expand the focus of the evaluation.**
  - Consider additional areas of interest, as well as the core standards of evaluation.

- ☐ **Determine the best evaluation design.**
  - What are the evaluation questions?
  - How and when will data be collected?
  - How much money and skills are available to conduct the evaluation?

- ☐ **Start to draft an evaluation plan.**
  - Refer to the process components of the logic model.

Gather credible evidence. Conclusions or recommendations drawn from the evaluation must be backed by evidence, which strengthens the credibility of the evaluation. This step involves the collection of raw data.

- ☐ **Collect accurate and valid data to answer the evaluation questions.**
  - Determine what counts as evidence to address the evaluation questions.
  - Select indicators that will answer the evaluation questions.
  - Determine how to collect the data based on the selected indicators.
  - Establish clear training and procedures to collect data.
  - Establish criteria for when to stop data collection.
  - Monitor the quality of data.

Justify conclusions. Once sufficient data is collected, it can be reviewed and analyzed to draw conclusions and recommendations. Conclusions and recommendations must be justified by the data. This step involves the interpretation of the raw data.

- ☐ **Use an appropriate method to analyze and interpret the data.**

- Consider a consult with a statistician to determine which methods of data collection would best meet the goals of the evaluation.
- Refer to **Section 3: Designing the Research Project** for more information about data analysis.

☐ **Make conclusions or recommendations.**
- Conclusions and recommendations should only be made based on findings that are clear.

Share and ensure the use of the lessons learned. Results of the evaluation should be shared with all of those involved, so the findings can be used for either making project-related improvements or informing decisions. This step is to ensure the evaluation was useful.

☐ **Share all lessons learned with key stakeholders.**
- Share findings in a format that is best for the key stakeholders.
  - Refer to **Section 5: Translating and Disseminating Research Findings** for examples of dissemination methods.
- Present the information in a clear, concise, and understandable manner.

☐ **Use the lessons learned to make improvements or to inform decisions.**
- How can the information from the evaluation be used?

Assess the effectiveness of the partnership. The partnership is the foundation of CBPR, and its ability to function will determine how well it can meet its goals. An assessment of the partnership should occur early on and before any other partnership evaluations.

☐ **Define aspects of an effective and meaningful partnership.**
- Each member of the partnership should do this individually, then discuss collaboratively as a group.
- Establish guidelines on how to measure these aspects.

☐ **Determine how well the partnership utilizes its resources.**
- Are there any resources not being used?
- Are there any resources that are needed?

☐ **Evaluate the group dynamics of the CBPR partnership.**
- Reference **Figure 4: Components of an Effective CBPR Partnership** in **Section 1: Forming a CBPR Partnership**.
- Consider using multiple methods, such as interviews or questionnaires, to collect input from each member of the partnership.

- Are there any areas that need improvement?

☐ **Consider partnership capacity to bring on additional partners.**

- Based on the findings, are there additional skills or expertise needed to meet the shared goals of the partnership?

Assess the partnership's effectiveness to reach its goals. The next point of evaluation within the CBPR partnership is to assess how effective it is at reaching its short- and intermediate-term goals.

☐ **Evaluate the current state of the partnership.**

- What goals or expectations have been met so far?
- What unexpected outcomes have emerged?
- What are the strengths of the partnership that are helping achieve goals?
- What are the weaknesses of the partnership that are hindering progress towards the goals?
- What resources are currently available and are being used in the program to help achieve goals?

☐ **Determine what improvements can be made to reach the goals.**

- Consider the goals that have not yet been met.
  - Why are these goals currently unmet?
  - What needs to be done to meet these goals?
  - Are additional resources needed to meet these goals?

Assess the partnership's progress towards the long-term goal. The last key point of evaluation within the CBPR partnership is to assess the partnership's impact or progress towards the long-term goal. It takes time to develop meaningful and impactful initiatives at the community-level, which means it will be a while before the partnership's long-term impact can be assessed.

☐ **Determine when to conduct the impact evaluation.**

- An impact evaluation should not occur until the CBPR partnership is well-established and matured.

☐ **Determine the partnership's progress towards the long-term goal.**

- What changes should have happened if the long-term goal is met?

☐ **Consider all possible factors.**

- Are there other factors outside of the CBPR partnership that may contribute to the long-term goal?

Conclusion

Community-based participatory research (CBPR) is an invaluable approach to research that facilitates meaningful partnerships among researchers and the community. This toolkit illustrated six phases of the CBPR process to guide a partnership from its formation through the execution of partnership goals and the translation of research into community change. Although the phases of CBPR were presented sequentially, it is critical to note that CBPR is a dynamic and fluid process that may not occur in order. Also, every CBPR partnership and project is unique; therefore, the process may look different between partnerships. Lastly, CBPR requires a continuous investment of time and effort to ensure its success. Those who would like to consider implementing a CBPR approach must be able to make the long-term commitment.

CBPR is an effective approach that works collaboratively with the community to advance knowledge and integrate interventions, programs, or policies to advance health equity and benefit the community.

Glossary of Terms

Absolute zero refers to a variable that can take on a true zero value, such as height or weight. The value of zero is both defined and meaningful. In other words, it is possible for the variable of interest to be absent.

Accuracy[67] is one of the four core standards of evaluation. It is the measure of transparency, comprehensiveness, and justifiability when drawing conclusions from grounded data.

Capacity building[68] is the process of strengthening the knowledge, skills, or resources of an individual or organization to help them more effectively reach their goals.

Coauthorship[11,69] describes how the contributions of each partner will be recognized on the dissemination products. The acknowledgement of individual contributions is an important ethical consideration for the CBPR partnership to discuss.

Co-learning[2,70] in CBPR refers to the reciprocal and collaborative process of sharing skills, knowledge, and capacity among all partners.

Community advisory boards (CABs)[15] diversely represent the community and provide valuable insight about a variety of community dynamics related to the research activities such as interests, priorities, and concerns.[15] This group can consist of general community members, community-based organizations, business owners, community leaders, parents, as well as academic partners. The primary function of CABs is to keep the best interest of the community at the forefront of all discussions, agendas, and activities related to the CBPR project.

Community assessment[22] is the systematic process of collecting and analyzing data to learn more about a community. It is one way to gather more information about community strengths, dynamics, and priorities. In CBPR, the researchers and the community partners work collaboratively to conduct the community assessment. A community assessment differs from a needs assessment because of its inclusion of community partners throughout the process and its intentional strength-based approach.

Community assets[23] are resources that improve the quality of life within a community. Assets can be places, organizations, businesses, or community members.

Community engagement[71] is the process of collaboratively working with a community to address issues that affect their well-being. It occurs on a spectrum based on the community's level of involvement.

Community[14,17,21] refers to a group of people who share one or more common characteristics. The common characteristic could be geographic location, racial or ethnic background, norms, values, interests, economic ties, religion, or even profession. A community can vary in size, and an individual can identify with more than one community. Within a CBPR partnership, the community also refers to a person or organization who brings community expertise to the table and carries the knowledge of how the community will benefit from the research activities.

Continuous variables[72] are a type of numerical variable that can take on an infinite range of values, such as age, weight, or height.

Cultural sensitivity[62] is defined as having an awareness that cultural differences and similarities exist, which can impact individual learning, values, concerns, and behaviors.

Culturally responsive[73] research refers to the respectful and effective recognition of the diverse cultural contexts that may impact the research process. Both the researchers and the community can contribute varying cultural contexts.

Cyclical describes how the phases of CBPR occur in a cycle.

Decision-making protocol[15,18,74] is the procedure of how decisions will be made within the partnership. There are several types of decision-making methods, so partners need to collaboratively decide how they want to make decisions within the partnership before there are any project-related decisions that need to be made.

Dependent variables are the characteristics in a research study that will depend on the independent variable.

Digital divide[75] refers to the unequal access to digital technologies such as the internet, computers, and smartphones.

Discrete variables[72] are a type of numerical variable that can only take on a distinct, countable value, such as the number of children in a family.

Dissemination describes the process of broadly sharing the research findings with others outside of the CBPR partnership, such as the community and other stakeholders.

Dissemination plan is a framework that outlines how the CBPR partnership will share the research findings with various audiences. The plan should outline how the information will be shared in an understandable, respectful, and meaningful way for each audience.

Dissemination products[76] describe how the information will be shared with each audience, such as a journal article, flyer, social media post, or webinar.

Equitable participation[18] is where all members of the partnership have an opportunity to effectively contribute their knowledge, skills, or input.

Equitable[77] research refers to the absence of unfair and preventable differences among groups of people that can occur throughout the research process.

Feasibility[67] is one of the four core standards of evaluation. It is the measure of how realistic a project's scope and methods of evaluation are.

Feeding back involves sharing the results of the analysis within the CBPR partnership and the community to obtain reactions and interpretations about the research findings. It is helpful to receive input from several touch points to ensure the findings are correctly understood within the context of the research question and community.

Formative evaluation[64,65] is a type of evaluation that occurs during the development and early implementation of a program or policy to ensure the activities will be feasible, appropriate, and acceptable.

Goals are broad statements about the desired outcomes of a project.

Group dynamics[18] are the various characteristics that contribute to the structure and function of a group.

Health disparities[78,79] refer to the differences in health outcomes (such as disease, injury, violence, or opportunities to reach optimal health) among different communities. These differences can stem from health inequities, and are intricately linked with the social determinants of health.

Health inequities[80] describe the systematic differences that can lead to health disparities. These differences are avoidable and due to the unfair distribution of health resources.

Health outcomes[81] refer to various measures that can describe the health status of a community. The two overarching measures are life expectancy and quality of life, while other measures are related to health conditions like cancer, diabetes, or stroke.

Impact evaluation[64] is a type of summative evaluation that measures the impacts of the program or policy and whether the long-term outcomes were met.

Independent variables are the characteristics in a research study that are intentionally changed to observe its effects on the dependent variable.

Interpretation refers to the process of making sense of the research findings within the context of the research question and community.

Interval levels of measure have a category, rank, and an equal distance between each value.

Iterative describes how the phases of CBPR repeat over time and that the partnership will develop or make improvements to the process as those phases repeat.

Levels of measurement describes a classification that relates the values that are assigned to the attributes of each variable.

Lived experiences[82] refers to the knowledge an individual directly gains from their own experiences or choices.

Marginalization[83] (also known as social exclusion) of a community occurs when it is not provided the same access to services or opportunities as other communities.

Measurement is the process of describing some variable under study and assigning a value to it.

Misrepresentation[84] of a community refers to the inaccurate or untrue portrayal of the community. It can occur maliciously or unknowingly.

Mixed methods[36,37] is a research methodology that implements both qualitative and quantitative research methods within the same project. This research methodology can provide more in-depth details related to the research question.

Mutual accountability[85] refers to an agreed upon process to hold individual partners responsible for their commitments within the partnership.

Mutually beneficial partnership[74] is where all members of a partnership will uniquely contribute to the project, as well as independently gain from it in a way that is meaningful and beneficial to them.

Needs assessment[86] is the systematic process of collecting and analyzing data to identify and address the needs, also known as "gaps", within a community.

Nominal levels of measure do not have a numeric value, only categories. Examples of a nominal measure are gender, eye color, and city or birth.

Objectives are statements about what actions will be taken to achieve a goal.

Ordinal levels of measure have a distinct classification, name, or label which have a distinct order. However, the distance between each value is unknown. Examples of an ordinal measure are finishers of race (e.g., first, second, third) or level of satisfaction (e.g., high, moderate, low).

Outcome evaluation[64] is a type of summative evaluation that measures the results of the program or policy and whether the short- and intermediate-term outcomes were met.

Participatory evaluation[87] is a collaborative approach to evaluation where members of the partnership, the community, and other key stakeholders are included in the evaluation process. The inclusion of those who carry out or are directly impacted by the program or policy ensures the values and priorities of the community are realized within the evaluation framework. It is an approach that can be applied to any type of evaluation.

Primary data[88,89] refers to data that is directly collected through first-hand experience.

Process evaluation[64] is a type of formative evaluation that assesses how well the program or policy meets its outlined outputs, as well as the quality of the program or policy.

Propriety[67] is one of the four core standards of evaluation. It is the measure of legality, ethics, and welfare of those involved in or affected by the evaluation.

Qualitative data[33] yields nonnumerical information such as words, pictures, and stories.

Quantitative data[32–34] yields information that is numerical or statistical in nature.

Ratio levels of measure have a category, rank, equal distance between each value, and an absolute zero.

Reliability refers to consistency and whether the research methods can produce consistent results over time.

Research agenda refers to a strategic plan to conduct research. The purpose of the agenda is to build out the focus of the team's research program over a span of a few years. In CBPR, the research agenda is based on the mutual interests of the researchers and the community.

Research design[90] describes the framework of the research project and how to collect, measure, and analyze the data. There are different designs based on the research methodology.

Research methodology[91] describes the nature of the data collection methods and techniques of the project. The three common methodologies are quantitative, qualitative, and mixed methods.

Researchers[14,17] are individuals who carry the knowledge and skills to conduct research. They are typically based in an academic setting, such as a university. However, researchers can also be based in a community-based organization, federal agency, government agency, or private non-profit agency.

Secondary data[88,89] is data that already exists. This data was generated or collected by someone else, such as a government institution, healthcare facility, or another organization.

Social determinants of health (SDOH)[6] are intricately linked with health disparities and describe the factors where individuals live, work, and play that can impact their health, well-being, and quality of life. These factors are grouped into 5 domains: 1) economic stability, 2) education access and quality, 3) healthcare access and quality, 4) neighborhood and built environment, and 5) social and community context. Ultimately, SDOH impact the availability of options for an individual to achieve their fullest health potential.

Stakeholders[92] are individuals, organizations, or communities who have an interest in the research or will experience a direct impact from the research outcomes. In CBPR, stakeholders can include community members; community-based organizations; academic researchers; local, state, and federal partners; faith-based leaders; policymakers; or those committed to achieving health equity.

Stigmatization[93] of a community refers to the unjust disapproval of individuals who are part of the community based on an attribute that makes them different from other communities.

Strength-based approach[94] describes a process that focuses on the strengths of an individual or community, rather than the deficits.

Subgroup refers to another group or community that shares an additional unit of identity that is not universally shared within the original community.

Summative evaluation[64] is a type of evaluation that occurs after the implementation of a program or policy to determine how well it met the intended goals.

Translation refers to the process of integrating the research findings back into the community to affect change.

Under-resourced[95] communities are metropolitan areas that have relatively high poverty, low income, and insufficient resources to adequately serve members of the community.

Unit of identity[96] refers to a social or emotional characteristic that is shared among all members of the community. The shared characteristic can be a norm, value, interest, racial or ethnic background, profession, religion, or other connection.

Utility[67] is one of the four core standards of evaluation. It is the measure of relevance and usefulness of a finding.

Validity refers to accuracy and whether the research methods truly measure what it intended to measure.

Variables are the characteristics of a research project that have the potential to change, influence change, or show a relationship between other characteristics.

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Appendix A: Tips on How to Establish Trust in a New Partnership

Tip 1: **Take time to build a genuine connection.** Collaborations are only as effective as our connections, so take time to introduce yourself beyond just your work title and profession. Get to know each other's story – Where did they grow up? What are their favorite hobbies? Do they have any kids? Getting to know one another beyond a title can lay a solid foundation of trust.

Tip 2: **Keep it light and informal.** It can be intimidating to immediately dive into work with a new partner if everything is strictly formal. A dose of informality can create a more welcoming atmosphere where others are willing to engage, which will help foster trust.

Tip 3: **Be flexible.** Unexpected changes and going outside of your norm should be expected as a new partnership develops. Meetings can be postponed last-minute, partners may require a different platform for engagement, or the ask happens outside of regular working hours. A willingness to adjust displays commitment and shows an act trust.

Tip 4: **Be open-minded.** A new partnership will likely introduce you to new ideas, concepts, or methods. They may even introduce you to new cultures. Be willing to listen to new ideas or input from others that may not necessarily align with your perspectives. This willingness to learn can help build trust.

Tip 5: **Be honest.** As the new partnership develops, make sure you give background and share why you are interested in working with the new partner. Share your intentions and be open to discuss possible tensions or historical contexts that could impact the partnership.

Appendix B: CBPR Resources

Source	Resource	Brief Description
Alliance for Research in Chicagoland Communities www.feinberg.northwestern.edu/sites/cch/resources-directory/index.html	***Anti-Racist Community-Academic Research: Reflective Practice Tool***	Aims to support researchers and community-academic research partnerships in learning and implementing strategies to integrate racial equity and anti-racism into their partnerships and activities.
	Applying Racial Equity Lens to Research Engagement: Resource Catalog	An in-progress resource list that contains information about racial equity in research. These resources are more specifically for researchers and community-academic research partnerships.
	Assessing Your Organization's Research Environment and Capacity	A tool for community-based organizations to assess and better understand their perception, use, and thoughts about research.
	Building Healthy Partner Relationships	Provides concepts and questions to consider when building a healthy partnership. It also includes tips on how to address conflicts within the partnership.
	Collaborative Data Analysis	Provides strategies on how to involve all partners in the interpretation of research findings.
	Collaborative Research Dissemination Examples	Provides guidance and examples of dissemination products and activities for community-academic partnerships.
	Developing a Research Action Plan for Your Organization	Provides a step-by-step guide and template on how to develop and maintain a research action plan.
	Discussing and Addressing Challenges in Community-Engaged Research Partnerships	A role-play exercise for a partnership to explore challenges and possible strategies to address them. This activity is meant to be fun.
	Documenting Partnership Roles and Agreements: Memorandums of Understanding and Other Tools	Provides guidance for partnerships on how to discuss and document agreements about partnership roles, structures, and processes.

Source	Resource	Brief Description
	Involving Youth in Research	Provides considerations and recommendations about involving youth in research.
Alliance for Research in Chicagoland Communities www.feinberg.northwestern.edu/sites/cch/resources-directory/index.html	***Preparing for Discussions with Possible Research Partners***	Provides several points to consider before a discussion with a potential partner. It also lists what to prepare and ask during the first discussion.
	Reviewing and Considering Research Requests from Academics	A resource for partners who may have been approached by academics to conduct research. It provides a list of considerations when approached with a research request.
Centers for Disease Control and Prevention www.cdc.gov/dhdsp/docs/partnership_guide.pdf	***Partnership Evaluation Questions and Activities***	A helpful tool that breaks down the fundamentals of evaluating partnerships. Readers should adapt the tools and resources based on their program needs.
Detroit Community-Academic Urban Research Center https://detroiturc.org/resources/detroit-urc-cbpr-tools	***Criteria for Membership***	An example of a partnership's criteria to become a member of the board.
	Close-Ended Survey Questionnaire for Board Evaluation	An example of a partnership's tool to evaluate the board and its benefits, challenges, outputs, impacts, and sustainability.
	Procedures for Dissemination-Related Activities	An example of a partnership's procedures for dissemination-related activities. Other partnerships can use this as a guide or reference to develop their own procedures.
Institute of Translational Health Sciences www.iths.org/investigators/tools-resources/recruitment-resources/	***Recruitment Strategizing Worksheet***	Provides several questions to think about before the recruitment of individuals to participate in research.
Power Through Partnerships: A CBPR Toolkit for Domestic Violence Researchers	***Co-Created CBPR Project Principles and Agreements***	An example of how a partnership adapted the CBPR principles to their partnership.

Source	Resource	Brief Description
cbprtoolkit.org/extras#resources	***Consent to Participate in Research Form***	Provides a guiding template for developing a consent form for focus group participants.
Research for Improved Health: A National Study of Community-Academic Partnerships cpr.unm.edu/research-projects/cbpr-project/research-for-improved-health.html	***Communication Guidelines and Checklist***	An example of a partnership's communication guidelines, which addresses both written and verbal materials. Partnerships can use these as a guide to develop their own guidelines.
Research for Improved Health: A National Study of Community-Academic Partnerships https://cpr.unm.edu/research-projects/cbpr-project/research-for-improved-health.html	***Community Engagement Data Collection Instrument***	An example of a partnership's survey to gather information from partners about the context, dynamics, outcomes, and demographics of the partnership.
	Focus Group Data Collection Instrument	An example of a partnership's guide on how to conduct a focus group. The guide includes a script and questions.
	Interview Guide Data Collection Instrument	An example of a partnership's guide on how to conduct a research interview. The guide includes a script, interview questions, and information about why some questions may be asked.
	Key Informant Data Collection Instrument	An example of a partnership's key informant survey to gather information about a CBPR partnership and its processes.
	Project Code of Ethics and Integrity	An example of a partnership's established set of principles, obligations, and procedures that would guide them achieve their goals and objectives.
	Protocol for Student, Fellow, Pre-Doc, and Post-Doc Involvement in the Research Team	An example of a partnership's protocol on how students can participate on the research team.
	Publication Guidelines	An example of a partnership's guidelines for publications.

Appendix C: Tips on How to Address Conflict

Tip 1: Welcome and address conflict. Although conflict is difficult, it should not be avoided within the partnership. Leaving conflicts unresolved can negatively impact the partnership or create mistrust. Welcome the fact that conflict may occur, and have a plan in place on how to resolve conflicts.

Tip 2: Identify the source of the conflict. If a conflict arises, it can be beneficial to take a moment to identify the source of the conflict. However, it is important not to lay blame, but rather to understand the cause. Is the conflict due to a difference in personalities (personal), a disagreement of ideas (substantive), or a disagreement of methods (procedural)?

Tip 3: Develop a process for addressing conflict. Working through conflicts can oftentimes be tense and lead to disarray. Effectively addressing conflict calls for organizing solid decision-making processes and establishing guidelines on how to address conflict among partners. Such processes should include protocols on how to approach difficult conversations that are issue-oriented and prioritize problem solving.

Tip 4: Clearly communicate. Open communication is likely the number one way to prevent conflict within a partnership. Ensure any decision-making processes or guidelines are agreed upon and understood by all members of the partnership. Also ensure resolutions to conflicts are readily shared with all members of the partnership.

Tip 5: Tackle minor issues before they become major. The pinch/crunch theory of conflict resolution describes the importance of working through minor issues before they spiral into more major ones.[97] A ‘pinch’ is a moment where you address issues that arise before they become major conflicts. The earlier in the process conflicts are addressed, the more likely bigger issues are avoided. A ‘crunch’ occurs when a conflict has gone unresolved and spirals into a bigger issue – challenging the partnership further. In practice, introduce the pinch, describe the behavior, describe how you were affected, describe what you want, and come to an understanding. This can be visualized below:

Introduce the pinch:

Present the situation that raised discomfort(s) or concern(s).

Describe the behavior:

Explain the behavior in observable terms. Avoid accusatory or confrontational language.

Describe how you were affected:

Explain how the pinch affected your feelings and experience.

Describe what you want:

Work through what you’d like and how you believe the pinch can be resolved.

Come to an understanding:

Allow the other party to also share their thoughts, wants, and feelings. After discussion, form a mutual agreement on how to proceed on the situation and how to respond in the future.

Appendix D: Guiding Questions to Understand the Community

Demographics

- ❑ What is the age distribution of the community?
- ❑ What is the gender distribution of the community?
- ❑ What is the racial and ethnic makeup of the community?
- ❑ What is the marital status distribution of the community?
- ❑ What is the education level distribution of the community?

Physical Presence

- ❑ Where does the community live?
    - What city?
    - What zip codes?
    - Is the area urban or rural?
- ❑ What is the population size?
- ❑ What is the infrastructure (roads, bridges, transportation systems, broadband, etc.) like in the community?
    - Is it well maintained?
    - Is it easily accessible?
    - Is it safe?

History

- ❑ Are there any critical points in the community's history?
    - What happened?
    - Who was involved?

Trusted Messengers

- ❑ Who are the influential organizations or individuals in the community?
- ❑ Are there common gathering places or trusted institutions (like schools, churches, or hospitals) in the community?

Social Structure

- ❑ What is the culture of the community?
- ❑ What languages are spoken in the community?
    - What is the primary language?
- ❑ Do community members tend to live in multigenerational homes?
- ❑ Is there a primary religion practiced within the community?
- ❑ What are the norms of the community?
- ❑ What is the overall socioeconomic status of the community?
- ❑ What activities do community members collectively participate in?
- ❑ What are the common communication methods within the community?

Health Conditions

- ❑ Are there any health conditions that disproportionately impact the community?
- ❑ Does the community describe a burden from a specific health condition?
- ❑ What are the underlying root causes?
- ❑ How many people are affected by the health condition?
- ❑ How long has the problem existed?
- ❑ Who does the health condition impact in the community?
- ❑ Do barriers to access health care or other necessary health-related resources exist within the community?
- ❑ Who does the community tend to turn to for health-related information?

Appendix E: Secondary Data Sources

	Source	Dataset	Description
Global	**World Health Organization**	**Global Health Observatory (GHO)** www.who.int/data/gho	Provides health-related data and statistics for the world. Data are divided by theme, such as air pollution, mental health, or noncommunicable diseases.
		International Statistical Classification of Diseases and Related Health (ICD) [icd.who.int/en](icd.who.int/en)	Provides the comprehensive list of diagnosis codes used in healthcare. Although this is not a data base, can be a useful tool when pulling data.
National	**Agency for Healthcare Research and Quality**	**Healthcare Cost and Utilization Project** www.hcup-us.ahrq.gov/	Provides the largest collection of data related to hospital care in the United States.
	American Hospital Association	**Fast Facts on U.S. Hospitals** www.aha.org/statistics/fast-facts-us-hospitals	Provides data from the annual survey of hospitals in the United States.
	Annie E. Casey Foundation	**Kids Count Data Center** datacenter.kidscount.org/	Provides annual data on child health and well-being in the United States. Users can create custom reports for at the national, state, or city level.
	Centers for Disease Control and Prevention (CDC)	**CDC Wide-ranging Online Data for Epidemiologic Research (WONDER)** wonder.cdc.gov/	A database tool that provides access to a wide range of health information available through the CDC.
		Social Vulnerability Index (SVI) www.atsdr.cdc.gov/placeandhealth/svi/index.html	An index that uses certain social factors to determine the social vulnerability of a particular area. SVI calculations are available at the state, county, and census tract level.
		Behavioral Risk Factor Surveillance System (BRFSS) www.cdc.gov/brfss/index.html	Provides data from the annual telephone survey to assess health-related risk behaviors, chronic conditions, and preventative services in the United States.

	Source	Dataset	Description
National (continued)	CDC (continued)	**Youth Risk Behavior Surveillance System (YRBSS)** cdc.gov/healthyyouth/data/index.htm	Provides data from the annual survey to assess specific health-related behaviors among youth and young adults in the United States.
		Chronic Disease Indicator www.cdc.gov/cdi/index.html	A tool that provides uniform statewide data about chronic diseases and risk factors in the United States.
		Disability and Health Data System (DHDS) www.cdc.gov/ncbddd/disabilityandhealth/dhds/index.html	Provides data about the health and demographics of adults with disabilities in the United States.
		National Health and Nutrition Examination Survey (NHANES) www.cdc.gov/nchs/nhanes/index.htm	Contains data from the annual NHANES which assesses the health and nutritional status of youth and adults in the United States.
		National Vital Statistics System (NVSS) www.cdc.gov/nchs/nvss/index.htm	A database that provides information about vital population statistics like births, deaths, and marriages in the United States.
		Web-based Injury Statistics Query and Reporting System (WISQARS™) www.cdc.gov/injury/wisqars/index.html	A database that provides information on fatal and nonfatal injury, violent death, and cost of injury.
		National Environmental Public Health Tracing Network https://ephtracking.cdc.gov/DataExplorer/	A tool to view various environmental health factors across the United States. The tool can display the data either national by state, national by county, or state by county.
	Centers for Medicare and Medicaid Services (CMS)	**CMS Data** https://data.cms.gov/search	Provides direct access to data released by the Centers for Medicare and Medicaid Services (CMS).

	Source	Dataset	Description
National (continued)	**The Commonwealth Fund**	**State Health Data Center** www.commonwealthfund.org/datacenter	A tool that ranks the healthcare system performance of every state in the United States. It also provides state-specific health policy information.
		Health Equity Scorecard www.commonwealthfund.org/publications/scorecard/2021/nov/achieving-racial-ethnic-equity-us-health-care-state-performance	A report that ranks the performance of healthcare systems based on the ability to serve racial and ethnic groups in the United States.
	Education Data Initiative	**Education Data** https://educationdata.org/	A culmination of data reports on topics that relate to the U.S. education system.
	Institute of Education Sciences (IES) of the U.S. Department of Education	**National Center for Education Statistics** https://ies.ed.gov/data.asp	Contains data that addresses school readiness and education from infancy through adulthood.
	Kaiser Family Foundation (KFF)	**State Health Facts** www.kff.org/statedata/	Provides up-to-date data on over 800 health indicators at the state level.
		Disparities State Health Facts www.kff.org/state-category/disparities/	Provides data on demographics, health coverage, health status, and certain health conditions by race and ethnicity or gender.
	National Association of County and City Health Officials (NACCHO)	**Directory of Local Health Departments** https://www.naccho.org/membership/lhd-directory	Provides a list of local health departments throughout the United States. Users can search by state or ZIP code.
	National Opinion Research Center at the University of Chicago	**General Social Survey Data Explorer** https://gssdataexplorer.norc.org	A tool that provides access to data from the General Social Survey (GSS). The GSS looks at trends in behavior, demographics, and opinions among Americans.

	Source	Dataset	Description
National (continued)	**United States Census Bureau**	**Data** https://data.census.gov/cedsci/	Provides data from the decennial census, American Community Survey, and more. It allows users to view data profiles, tables, and maps.
		Data Equity Tools www.census.gov/about/what/data-equity/tools.html	A set of data tools that can help stakeholders understand inequities and enable them to develop data-based solutions.
	U.S. Department of Health and Human Services (DHHS)	**HealthData** https://healthdata.gov/	Provides access to high value health data in an effort to improve health outcomes for all.
	U.S. DHHS - Office of Minority Health	**Minority Population Profiles** https://www.minorityhealth.hhs.gov/omh/browse.aspx?lvl=2&lvlID=26	Provides data profiles about minority populations. The profiles include detailed demographics, language fluency, education, economics, insurance coverage, and health status.
State-Level	**Center for Applied Research and Engagement (CARES), University of Missouri**	**SparkMap Community Assessment Tool** https://sparkmap.org/report/	A tool that can create custom reports on a variety of topics at the county level.
		SparkMap Map Room https://sparkmap.org/map-room/	A tool that can create custom maps on a variety of topics at the county level.
	Centers for Disease Control and Prevention (CDC)	**PLACES: Local Data for Better Health** https://www.cdc.gov/places/	Provides data on various chronic diseases measures by county, place, census tract, and ZCTA.
	The Council for Community and Economic Research (C2ER)	**Cost of Living Index (COLI)** www.coli.org/	Provides quarterly data comparisons about the cost of living from city-to-city. Data is available at the metropolitan statistical area (MSA) and at the county level.
	State Records	**Criminal State Records** https://staterecords.org/criminal.php	Provides criminal record data, which includes the times the individual interacted with the Criminal Justice System.

	Source	Dataset	Description
	University of Wisconsin Population Health Institute	**County Health Rankings and Roadmaps** www.countyhealthrankings.org/	Provides a data snapshot of how health is influenced by the social determinants. Data is available on a variety of topics by county, state, or ZIP code.
Nevada-Specific	**Nevada Department of Health and Human Services (NV DHHS)**	**Office of Analytics – Data Dashboards and Reports Catalog** https://dhhs.nv.gov/Programs/Office_of_Analytics/OFFICE_OF_ANALYTICS_-_DATA___REPORTS/	Provides a list of several data dashboards and reports for the state of Nevada. Topics include behavioral health, child and family services, general health, infectious diseases, and more.
Nevada-Specific	**Rural Health Information Hub (RHIhub)**	**Nevada Resources** www.ruralhealthinfo.org/states/nevada/resources	Provides a list of various data resources for rural Nevada.
Nevada-Specific	**Southern Nevada Health District (SNHD)**	**Disease Statistics, Surveillance and Reports** http://www.southernnevadahealthdistrict.org/news-info/statistics-surveillance-reports/	Provides a list of health-related statistics and reports for Southern Nevada. The list also includes information about various surveillance programs or reports.
Nevada-Specific		**Healthy Southern Nevada** www.healthysouthernnevada.org/	Provides data, resources, and tools to help stakeholders learn more about the health of Southern Nevada.
Nevada-Specific	**Washoe County Health District**	**Data, Publications, and Reports** https://www.washoecounty.gov/health/resources/data-publications-and-reports.php	Provides a list data, publications, and reports related to the health needs of Washoe County.

Important Note: This list of secondary data sources is meant to serve as a reference for potentially available data resources, it is not comprehensive. Also, some sources may release new reports following the release of this toolkit.

Appendix F: Tool to Write SMART Objectives

SMART stands for Specific, Measurable, Attainable, Relevant, and Time Based. If the activities and outputs listed in the logic model encompass each of these parameters, then it will be easier to complete within the project time frame. These parameters help track progress and set a timeline in place.

S Specific	Is the activity specific? Who will be impacted? What do you intend to impact?
M Measurable	Is the activity measurable? What will be measured and how?
A Attainable	How will the group accomplish the objective? What resources will help achieve this objective? What limitations or barriers stand in the way?
R Relevant	Will objective contribute to achieving goal? Is it worthwhile and meaningful to measure this objective?
T Time Based	Is the time frame realistic?

Appendix G: Logic Model Template

Purpose:						
Process				Outcomes		
Inputs	Activities	Responsible	Outputs	Short	Intermediate	Long
	Activity 1:					
	Activity 2:					
	Activity 3:					
	Activity 4:					

Appendix H: Research Findings Interpretation Worksheet

Research Finding	What does it mean or imply?	Is it counterintuitive or contradictory? Explain.

Appendix I: Dissemination Plan Worksheet

Audience	Dissemination Format	Important Considerations	Responsible	Time frame

Appendix J: Translation of Research Findings Worksheet

Research Finding	Interpretation	Level of Action	Action	Resources Needed

Appendix K: Evaluation Questions for Key Stakeholders

Note: Adapted from the CDC Program Evaluation Framework Checklist for Step 1: Engage Stakeholders by the Centers for Disease Control and Prevention, 2018.[98]

- ☐ What are the main outcomes you want to achieve through the partnership?
- ☐ What do you think are the main activities of the partnership?
- ☐ Which of the activities and outcomes are most important to you?
- ☐ To retain your involvement and support, which activities must be implemented effectively and what outcomes need to be achieved?
- ☐ What are the most important evaluation questions at this time?
- ☐ Do you have preferences of how or what type of data is collected?
  - Interviews, surveys, questionnaires, focus groups, etc.
  - Quantitative, qualitative, mixed-methods
- ☐ What resources do you think will be needed to complete this evaluation effort?
  - Time, funds, evaluation expertise, access to respondents, access to policymakers
- ☐ What parts of the evaluation would you want to be involved in?
  - What is the best way to engage you in these steps?
- ☐ How would you like to be updated about the evaluation?
- ☐ How will you use the findings of the evaluation?

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