HEALING GARDEN INSTITUTE

DESIGN & PARTNERSHIP GUIDEBOOK

WORCESTER POLYTECHNIC INSTITUTE
Welcome to the Healing Garden Institute (HGI) Design and Partner Guidebook! Through this guidebook, HGI strives to help our partner understand how our therapeutic garden and activity curriculum bring healing as well as how we will work with our partners to make their goals a reality. In all our partnerships, HGI strives to support communities, families and individuals to achieve optimal health.

The process that HGI uses to design a therapeutic garden and horticultural activities’ curriculum that meets our partner’s needs reflects these values. In our participatory-based design process, we invite the members of our partner organization to play an active role in creating the garden and the accompanying activity offerings.

This guide lays out key details for those who wish to be involved:

1. What does the HGI program look like once completed?
   Therapeutic Garden: Our suggested design elements promote healing and well-being.
   Horticultural Activity Curriculum Design and Facilitation: Inspiring horticultural activity possibilities and day-to-day curriculum to consider.

2. How does HGI work with the partner to implement the above offerings?
   Phases of Development: A step-by-step plan with attached design tools to guide the design and implementation process from start to finish.
Chapter 1 guides the reader through the philosophy and scientific evidence surrounding the use of healing gardens in promoting wellbeing. The following chapters ground this background in how HGI will use these principles to bring the benefits offered by a healing garden to each community they serve. Chapters 2-3 lay out HGI’s mission and workflow when working with partner organizations. Chapters 4-5 introduce the programming brought by HGI. These chapters illustrate both how the activities and design elements work in traditional healing garden programs and some of the ways HGI incorporates these elements into their offerings. Educational staff may wish to peruse the section on the accompanying horticultural activities offered by HGI. Chapter 6 outlines how the actual partnership design process will work, starting from the initial establishment of goals with the partner organization to the evaluation of impact. Staff and volunteers may enjoy reading through the Phases of Development to learn how the design concept will shift to an implementation stage. Therapeutic and maintenance staff can share their respective knowledge about their community and location in Phases 1-3. This final chapter is intended as a step-by-step plan to guide the participatory design process. Tools instrumental for use in the design process are referenced and explained throughout Chapter 6 and are attached in the appendices.
The Healing Garden Institute (HGI) is an organization based in Worcester, Massachusetts. It is founded and lead by Dr. Thidi Tshiguvho, and sponsored by the Worcester Roots Project (WRP). The WRP is a grassroots organization led by adults and youth organizers, advocating for economic, social, and environmental justice (Grassroots Global Justice Alliance, 2019). The HGI consists of three main components – the Therapeutic Garden, the Community Education Center, and the Research Institute. The HGI strives to serve communities in Worcester that are disproportionately affected by chronic disease and help them overcome some of these challenges through the cultivation and consumption of healthy and medicinal plants. The herbs grown in the garden are not intended to replace pharmaceutical drugs and medications but rather to establish a healthier lifestyle that will lower the risk of physical and mental illness, relieve symptoms, and educate the community about natural treatment options and remedies.

HGI aims to partner with human service providers and organizations that serve the elderly, special needs groups, homeless individuals, mental health facilities, domestic abuse shelters and others working with client populations to design a therapeutic garden that fulfills the therapeutic needs of clients. For providers with an existing garden, the HGI works with them to enhance the therapeutic aspects of the garden. HGI is open to working with organizations in Worcester and beyond. HGI's therapeutic garden model strives to expose individuals and families to nature to:

1. Aid with recovery from either physical or emotional trauma
2. Provide meditational space to restore health
3. Motivate healing through demonstration of healing powers and life cycles of plants
4. Expose participants to a garden design and/or gardening activities that aid with cognitive and social skills development.
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According to the American Horticultural Therapy Association (AHTA), a healing garden is a “plant dominated environment... designed as a retreat and a place of respite” (American Horticultural Therapy Association, 2007). Modern healing gardens frequently accompany healthcare facilities but can also be found at memorial sites, community centers, and parks (Marcus and Sachs, 2013).

While all healing gardens share the same overall goal of reducing stress and enhancing well-being, the mechanism for achieving this goal can be presented in different ways. Some visitors derive benefits purely from the design elements of a garden, passively enjoying its atmosphere (Severtsen, 2006). Other gardens offer healing through both their design and the interactive gardening activities possible within them (Marcus and Sachs, 2013). The design of the garden reflects the needs of the patients (Söderback et al., 2004).
The heart of the healing garden concept lies in the evidence-based healthcare design field. This field began recognizing the role of nature in promoting wellbeing in the 1980s with Roger Ulrich’s landmark study on the positive correlation between recovery time and a natural landscape window view (Ulrich, 1984).

Later studies identified more health benefits brought by a natural landscape and the horticultural activities possible within nature, including:

- Reducing stress (Simons et al., 1999) and
- Reducing anxiety (Mooney and Milstein, 1994),
- Increasing attention (Wells, 2000),
- Improving cognitive functioning (Kaplan and Kaplan, 1989),
- Building self-esteem (Harris, 2017; Diamant and Waterhouse (2010) and
- Offering the chance for social interaction (Rugletic et al., 2000; Kam and Siu, 2010).

As more research quantified the impact of nature on health, architects and designers incorporated these findings in the form of healing gardens (Marcus and Sachs, 2013).

Why do Healing Gardens Work?

To be considered “healing,” these gardens possess certain design characteristics that are linked to improving health (Momatz, 2017). The design of a garden reflects the theory behind a healing garden’s effectiveness on improving health. According to Dr. Roger Ulrich’s, the ability of a healing garden to improve health and well-being rested in its stress-reduction mechanisms. He pointed to four elements in healing garden as being key to reducing stress: Providing a sense of control, social support, physical movement, and distraction through nature. He argued that healing gardens allow clients to have autonomy over their activity. This is particularly important as many visitors enter the healing garden with life situations that have stripped them of autonomy, so they may feel as if they lack control (Marcus and Sachs, 2013).
Social support is also vital to reducing stress and improving well-being (Hwang et al., 2009). The garden offers visitors the chance to talk with friends or family in the privacy of a shaded grove or meet new friends through the common experience of the garden. Physical exercise improves physical and mental health (Scully et al., 1999; Biddle, 2016; Penedo and Dahn, 2005). Exercising in a nature setting increases this benefit—as exemplified by the reduction in blood pressure and increase in positive mood (Pretty et al, 2006).

Healing gardens meet this essential element of health as they give visitors the opportunity to stroll along the paths of the garden or engage in more vigorous exercise through tending plants and vegetables. Many visitors also seek to use the garden as a distraction, allowing the garden to function as an escape from their mundane life and daily struggles (Marcus and Sachs, 2013). Architects utilize specific design elements to meet the above criteria of “healing.” These elements will be further explained in Chapter 4: Design Elements.
Restorative gardens refer to healing gardens built with the purpose of restoring well-being but not necessarily within a treatment plan (AHTA, 2016), such as the AIDS Memorial Garden in San Francisco’s Golden Gate Park (National AIDS Memorial Grove, 2020).

While visitors can apply gardening activities, the focus of this restorative garden revolves less around reaching specific goals and more around improving the health of its visitors through its sights, scents, and general atmosphere (AHTA, 2016).

Types Of Healing Gardens

There are many varieties of healing gardens, so it is difficult to organize them into discrete categories. The AHTA (2004) differentiates between two types of healing gardens: Therapeutic and restorative gardens. Even within these two subsections, there is significant overlap, and some gardens incorporate principles of both types, depending on the needs of the target population.

Therapeutic gardens are designed with specific treatment plans in mind (AHTA, 2004), such as the garden serving patients struggling with stress-related illness at the Healing Forest Garden Nacadia in Copenhagen (Stigsdotter et al., 2018).

Often, therapists utilize horticultural therapy, a licensed profession (AHTA, 2016), as part of clients’ treatment plan within the garden. In horticultural therapy, patients improve motor control, coordination, social interaction, mood, and other areas of health through hands-on planting of vegetables or flowers, arranging flowers, trimming plants, observing plant growth or similar activities (Scott, 1997).
CHAPTER 2: THE HGI PROCESS

The HGI process is a multi-step procedure that starts with identifying the beneficiaries and their needs and uses this information to tailor the therapeutic garden model to best fit the community. This system is used to guide a conversation and serve as a starting point in the development of a partnership and explain the different options that this partner can have.
**Step 1: Who can benefit?**

The first step of this diagram is to identify the beneficiaries. It is important to identify the beneficiaries for this garden as it could have an impact on design of the garden as well as the types of activities performed at the garden.

**Step 2: What types of healing?**

The next step is to identify and discuss the ways these beneficiaries will benefit and experience when using the garden. These healing properties experience can vary from person to person but aim to calm and relax the mind.

By discussing these benefits and determining our partner’s goals and expectations, we can frame the therapeutic garden design and activities to best suit the needs of the community.

**Step 3: How does HGI promote healing?**

There are three ways that HGI is going to promote healing - through physical design elements, therapeutic horticulture activities, and our guiding design principles. All provide healing benefits that will complement each other. These benefits will be further discussed in the “Why do healing gardens work?” section of this document.

**Step 3a: Physical Design Elements**

Physical design elements revolve around five main categories: plants, pathways, wildlife, seating, and focal points. Each category is vital to a garden and can be tailored to meet the beneficiaries’ needs and goals. Different plants can be chosen based on their medicinal properties or even just on the colors that they can add to a garden. Lighting, seating and pathways can all have a very therapeutic and relaxing impact on the garden and will be customized for each community.
Step 3b: Therapeutic Horticulture Activities

HGI will be guiding and teaching therapeutic horticulture activities that aid in the healing of the garden. The activities can be split into two categories, interactive and passive.

These activities will be further explained in the section titled “Healing Activities.” Both passive and interactive horticulture activities promote healthy living.

Step 3c: Principles

HGI follows four key principles in our therapeutic garden design: Universal design, outcome-based design, participatory design, and accessibility. All our garden will use a universal design as each one is equitable, flexible, simple and intuitive, easily communicative, safe, comfortable, and appropriate for all to use.

By following the universal design principles, each of our gardens are accessible to all visitors no matter their physical or mental challenges. We follow an outcome-based design as we start by asking the goals of our partner’s program and design the garden with these goals in focus.

To design the garden, we use a participatory process, giving our partner and garden users a voice to add their input.
As introduced in the Chapter 1, healing gardens promote healing through specific design elements. As not all gardens can be considered “healing,” this section will delve more deeply into the characteristics that differentiate a healing garden from an ordinary garden.

HGI will work with the partner organization to select design elements based on the needs of the community and the preference of the partner organization.
The physical design elements of a healing garden are carefully selected to promote stress reduction and other healing properties, based on the needs and goals of the community. These design elements can be split into two categories: the softscape and the hardscape. Softscape refers to the horticultural elements of the design (Beaulieu, 2018). Plants grown at the healing garden can aid in the healing process of various physical and mental ailments. Different plants will assist with different goals. For example, if the focus of the garden is more on aromatherapy and nutrition, one should choose herbs such as lavender or basil (National Garden Bureau, 2020). To uplift and invigorate, one could throw in some bright flowers (e.g., petunias and sunflowers).

Another aspect frequently found in healing gardens is herbal medicine because it contains a wide array of healing properties that can be tailored to fit the needs of the target population. The World Health Organization defines herbal medicine as “naturally occurring, plant-derived substances with minimal or no industrial processing that have been used to treat illness within local or regional healing practices” (Tilburt and Kaptchuk, 2008). The intent of herbal medicine regarding HGI’s healing garden is not to replace any current treatments or to provide medical care, but rather to help guide people in the healing process and potentially enhance current treatment in a holistic and risk-free way.

Hardscape refers to the non-living elements of a garden (Schau, 2019). This includes plants, pathways, wildlife, seating, and focal points. Each element should be designed with accessibility at the forefront, to enable all participants to enjoy the garden to its full extent. The overall design considerations of a healing garden as recommended by the Pennsylvania State University are shown above (Hubbard, 2020).
As introduced in the Chapter 1, one way that healing gardens promote healing is by providing a space for horticultural activities. Garden visitors benefit from the restorative design, but engaging visitors in activities—passive and interactive—offers a fuller therapeutic potential. HGI guides community members to interact with the garden through a tailored horticultural activity curriculum. HGI will work with the partner organization during Phases 1 and 2 to tailor this activity offering list to their needs and implement the activity sessions for the partner’s clients in Phase 3. This chapter introduces the principles supporting HGI’s horticultural activity offerings, example activities, and a sample activity session structure.
General Principles of Therapeutic Horticultural Activities

Following other successful horticultural programs, HGI first collaborates with the partner organization to identify the needs and interests of their target population and determines the goals of their specific program. From the list of potential activities, HGI will modify the activity plan to accommodate different goals - whether they are more focused on reducing stress, enhancing attention, improving motor-control, or stimulating the senses. Many of the activities offer similar benefits for different populations, suggesting that preference and interest are strong factors in tailoring the curriculum.

However, all therapeutic horticulture programs must involve interaction with living plants as this interaction is vital to providing healing benefits (Relf and Dorn, 1995). Social interaction is a large component of many of the horticultural therapy programs. Participants may take responsibility for their own small gardening projects, but the nature of the program is interactive: person-person and person-environment (Hagedorn, 2015). HGI incorporates all these recommendations from the literature into the design of their activity offerings.

Supporting Passive and Interactive Enjoyment

Visitors to a healing garden can partake in two types of activities: Interactive and Passive. Interactive activities refer to activities in which users directly interact with plants through horticultural activities such as planting, weeding, arranging flowers, cooking with plants, making tea with the herbs grown in the garden, etc.

Passive activities refer to observational activities that do not involve physical interaction with the plants in the garden. These activities improve the health of its visitors through the sights, scents, and general atmosphere.

For example, users can walk through the garden independently or admire the view while sitting on a bench. Many of these passive activities can be undertaken independently, so the curriculum programming offered by HGI will primarily lead the community in interactive activities.
How does HGI tailor the activities to different communities?

Activities chosen for workshop material are based on both community goals and preferences. This tailoring of activities will take place in Phases 1 and 2 of the development stages. Here are some suggestions for tailored programming based on our research findings:

**Elderly**: Aids often must be present to help if necessary, as this population may have physical or mental difficulties that prevent them from being able to independently engage in activity.

Some sources suggest setting out plant materials at the beginning of sessions to provide participants with an organized choice as this will allow the participants freedom of choice but also prevent a feeling of agitation if they have issues with memory.

**Intellectual/Developmental Disabilities**: Depending on the level of disabilities, activities should be heavily visual, as abstract concepts are less digestible. Adding visual cues, such as red tape to a material, can help guide the process. Social inclusion is also an important element to consider for this group.

**Mental Illness**: Stress reduction is the most common goal among these programs. The activities varied but freedom of choice was an important element in these programs.

**Substance Abusers**: Goals often include showing a positive leisure activity and providing a purpose/opportunity for achievement.

**Public offenders**: Developing empathy and purpose is often a goal for these programs, so donating food grown in the garden to nearby food pantries can aid in this goal.

**Homeless**: As the homeless often feel as if they have little autonomy, organize the garden in a way that promotes self-efficacy in the form of an unstructured environment where the individuals have freedom and control. Allowing the individuals to select their plants and materials and having open hours for visit will aid in this goal.
Horticultural Activity Session Structure

The following section gives an example of how HGI will lead horticultural activities in the completed garden for community members. While this horticultural curriculum is intended for the clients of the partner organization, HGI encourages staff to join along in the activity session with the purpose of providing the staff with the skills to ultimately lead the activities without HGI’s guidance.

Each activity will be structured with an end goal in sight as taking part in a project from start to finish increases participant satisfaction and confidence. We plan to lead new activities with this structure once a week, for 2-hour sessions.

Each activity session will follow this basic plan:

**Reflection moment** — HGI will guide a meditative moment for the participants in which we will ask participants to reflect for a few minutes on the garden. This moment of reflection collects the group together to start the workshop with an attitude of mindfulness and acceptance.

**Learning moment** — HGI will explain the theoretical understanding behind the activity of the day. For example, if the activity centers around making herbal tea from the garden, HGI will teach participants about the medicinal properties of the various herbs in the garden.

**Activity** — HGI will lead an activity in the garden. These activities take the form of potting, planting, pruning, harvesting, building boxes, decorating, or cooking. Depending on the season, the activity will vary. Wintertime activities may center more around cooking or building boxes, while activities during growing seasons will center around partaking in basic gardening activities.

**Group discussion** — HGI leads a sharing moment at the end of the workshop to discuss what everyone has learned from the activity. How did it make them feel? What did the activity remind you of?
HGI utilizes a participatory design process, encouraging the users and stakeholders to act as collaborators in the design process. HGI values the perspective, knowledge, and skills of its partner organization and the eventual users of its garden.
In this approach, architects involve the participation of the stakeholders and clients in the design process (Faber, 2014).

The term “stakeholder” refers to the key people or organizations involved in funding, organizing, or maintaining the project. “Client” or “user” refers to the members of the community who are not involved in funding or organizing the project but will be using the product of the project, in this case, a garden.

The clients, stakeholders, and landscape architect work together as collaborators in the entire design process.

Regardless of the type or size of the project, the overarching goal in this democratic-style process remains the same: User empowerment (Crewe and Forsyth, 2003).

By involving the users and stakeholders in the design process, the architect gives a voice to the people. Multiple experts in landscape design encourage this participatory approach.

Hester (1998) promotes the benefits of participatory design, arguing that it “enhances a sense of community, helps overcome [lack of environmental involvement], educates the community designer and the client, increases self-esteem of the citizen participants, and shares the joy of creating environments.”

Both the architect and the clients can educate each other. With user input, the final product can more accurately capture the needs of the community as the architect is benefiting from first-person perspective. The process creates community and encourages participation, as involvement creates a shared sense of ownership and pride (Hester 1998).

Carpman and Grant (1993) add that this approach not only creates community but also inspires positivity and excitement about the project. Naomi Sachs and Clare Cooper Marcus, pioneers in the field of evidence-based therapeutic landscape design, champion the use of participatory design in healing gardens. In their research, they have found that gardens designed in that manner offer the most healing benefits and satisfaction to its users.
What does a Participatory Design Process look like with HGI?

The level of stakeholder and client participation varies on a gradient—from check-in points at the start and end of the project to full collaboration and partnership throughout the process—depending on the partner’s preference.

While we would like to incorporate the ideas of every interested individual, some degree of synthesis is necessary, so we find that gathering a core group of 3-4 individuals to work with our landscape architect produces maximum effectiveness in the design process. We will trust the partner organization to identify these members of its community/staff, as they know their community best.

This core group will lead decision making in the type of plants, hardscape, activities, and initial design of the garden in a series of small workshops with our landscape architect. Specialists, such as therapists, may be pulled into the design process at certain points to add expertise.

Periodically, the core group and HGI will present plans and decisions to a larger audience. These checkpoints will occur at times where further feedback is needed to make a final decision on the project. We have assembled a comprehensive set of tools to guide the design process, but this set of tools will be explained in Phase 2.
CHAP**T**ER 6: PHASES OF DEVELOPMENT

HGI breaks the development of a healing garden and its program into four phases. As we utilize a participatory design process, the next four sections will spell out exactly how we plan to work with partner organizations to establish a healing garden and corresponding activity program that is tailored to the needs of its community.

Phase 1: Engage Participants and Establish Goals
Phase 2: Design Garden and Activities
Phase 3: Implement Program and Healing Design Elements to Garden
Phase 4: Enjoy the Benefits and Evaluate Impact on Community
PHASE 1 - Engage Participants and Establish Goals

In this phase, HGI works with the partner to decide on who will be involved in the design process and the goals of the garden model. This stage is essential to the process as goal-setting directs the tailoring of the therapeutic garden model.

- **Engage participants**
  - Partner will identify a core group of 3-4 individuals within their organization that are interested in adding input to the garden design. This group will serve as the core design team and collaborate with HGI.

- **Establish goals**
  - Together, this core group and HGI will determine the goals of the garden. Will the garden be more medicinal, nutritional, or therapeutic? What benefits will the users gain from the garden? The group will present the goals for feedback to other interested community members.

- **Series of workshops**
  - This group will participate in a series of workshops facilitated by HGI to determine the preliminary design of the garden.

Assemble Core Design Group

While the core design group number can vary depending on the partner’s preference, HGI recommends that a diverse group of 3-4 participants are chosen to be deeply involved in the design process.

Identify Needs and Determine Goals

HGI strives to understand how we can best help our partner’s community. We depend on your knowledge of your population to inform decision-making. In Phase 1, we gather information that will be essential to making the therapeutic garden meet the needs of the partner’s community.

HGI will ask guiding questions to facilitate the discussion (Appendix A). Once HGI has worked with the partner to identify the needs of the community, we will work with the community to determine the goals of the therapeutic garden service.

What impact does the partner wish to see the garden having on its community? What benefits do they hope to gain?
PHASE 2 - Design Garden and Activities

After identifying the needs and goals, the core group will begin the design process. This phase has four key steps:

1. Determine and evaluate the space for the garden.
2. Determine potential plants that will be used in the garden.
3. Determine hardscape elements for garden.
4. Determine horticultural activities.

Determine and Evaluate Space

This stage will follow two paths based on if HGI will be enhancing an existing garden or designing a completely new garden:

Building new garden: The core group will determine the space that will be used for the garden and take measurements of the physical space to prepare for the initial design layout.

Enhancing existing garden: HGI and the partner will evaluate what elements should be enhanced in the garden and what activities should be included. HGI will utilize the evaluation tool further explained in Phase 4 to identify which elements need to be changed. Behavioral mapping and staff and participant interviews will be used at this stage. See Phase 4 for further details.

Determine Potential Plants

After choosing a space, the core group will select potential plants to use in the garden. We must consider many elements when choosing the proper plants and herbs for the garden.

HGI will facilitate this section with the Plant Planning Workbook. With this tool, we can compare and search for the plants that would best fit our partner’s garden.

See Appendix B for more detailed instructions on using this tool.
The next step in designing the garden is to look for hardscape elements wanted in the garden. To aid in this selection process, we have the Landscape Portfolio.

This physical book contains example pictures from the winners and finalists of the American Horticultural Therapy Association (AHTA) Therapeutic Garden Award.

In this national contest, AHTA awards winners based on activity program, accessibility modifications, promotion of people-plant interaction, universal design, comfortable and safe settings, perimeters, and placemaking (aiding in the promotion of other activities outside of its original purpose as a garden).

This book provides ideas for the following design aspects of the healing garden: raised beds, accessibility, focal points, water, pathways/hardscape, foliage, seating, wildlife, and overall layout.

Each section has a general description about how different adaptations of this feature can have healing properties, but sometimes notes how different accommodations are best for certain populations. The two pictures on the right are excerpts from the book.

Similar features within each category are also grouped together and explained as needed for the viewer’s ease. Using this book, the participatory design group can begin to select the elements that they want to include in the layout.
Determine Activities

To assemble a list of horticultural activities of interest to the partner, the Garden Activities Workbook will be used. The purpose of this tool is to aid in the participatory design process so the horticultural activities’ plan can be easily assembled. This Excel document contains a list of possible activities on the left with the corresponding benefits, target populations, and designation as a passive or active activity. The sheet is organized to easily match activities based on the partner’s community demographic (i.e., elderly, developmentally disabled) and the benefits requested by the partner. More detailed instructions for use are in the Appendix C.

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Determine Layout

The last step in designing the garden is to create professional landscape sketches of how we want the garden to look. In Appendix D, we have compiled three different sketches made by HGI’s landscape architect, Robert Cabral. Each of the sketches are of a different complexity and budget and serve as examples of what HGI can do. Using the elements from steps one through three, Robert will create a sketch for your future healing garden.
Apply for grants. If necessary, send applications for grants that focus on the target population to further increase the possible budget.

Seek in-kind donations, or donations of goods, from businesses around the area such as Home Depot or Lowe’s. In return, we can offer to provide a written statement acknowledging the contribution so the business can take a tax deduction (Charitable Allies, 2019), and it will provide the store an opportunity to give back to its community.

Once we have gathered information about resources and the design plan, we will create a rough budget in Excel that outlines initial and future expenses.

Cost allocation options will model how HGI and our partner may choose to divide responsibility for various activities required to plan, start, and maintain the garden and support therapeutic garden activities.

PHASE 3 - Implement Program and Healing Design Elements to Garden: Construct Garden

Create Material List
If the garden is outside, we will need to gather soil, seeds, wood for plant beds, etc. If it is inside, we will need to gather the nutrient solution and all materials necessary to carry out our hydroponic design.

Collect Materials
We will find and repurpose any items that the HGI or our partner organization already have. Any way we can find to repurpose existing supplies would be ideal not only to maximize resources, but also to be more environmentally sustainable.

Evaluate and Allocate Resources
Apply for grants. If necessary, send applications for grants that focus on the target population to further increase the possible budget.

Physical Garden Preparation
This process will be led by the HGI, but we welcome volunteers from the partner organization. Either HGI or our partner organization could recruit the volunteers and coordinate their participation. Here we will build either and assemble the garden.

Implement Activities
After the physical garden preparation had taken place, the activity offerings will begin to take place. At least one HGI staff member will be on site for one two-hour shift per week.
PHASE 4 - Enjoy the Benefits and Evaluate Impact on Community

Once all the garden preparation is done, the beneficiaries and all involved may enjoy the garden. The healing process may begin through the horticultural activities and passive enjoyment. However, the work does not stop there as the garden must be maintained and the impact must be evaluated.

Maintain

HGI and the partner organization will need to communicate to delegate the responsibilities of maintenance. HGI is happy to assist, but responsibilities will depend on staff availability (on both ends) and how much user involvement there will be (whether users will be assisting with the watering, planting, etc.). Some of these yearly, monthly, and frequent responsibilities are outlined below.

- Yearly: planting, harvesting, general cleanup, leaf removal, storing furniture, draining water features, refresh gravel and mulch, etc.
- Monthly: fertilizing, pruning, etc.
- Frequently: watering, weeding, trim grass, etc.

Assess

In order to measure its success, the garden’s impact must be continuously evaluated. The tools we will implement to perform this evaluation are derived from a dissertation from Naomi Sachs, a PhD student from Texas A&M University. Sachs discusses a path for evaluating the effectiveness of a healing garden. The tools described by the author will be adapted to suit the needs of HGI as the dissertation is originally intended specifically for healthcare facilities.

She describes four different aspects of the evaluation process called the Healthcare Garden Evaluation Toolkit (including the garden assessment tool outlined in the HGET toolkit), staff and participant surveys, Behavior Mapping Protocol, and Stakeholder interviews. The focus will be on retrieving user feedback so we can adjust the garden program accordingly.
References


References


Appendices

Appendix A - List of Survey Questions

1. What benefits does the community hope to derive from the garden?

2. What are the expectations from the partner organization? In what ways do they expect HGI to bring healing to their community?

3. Does the community hope to engage in activities in the garden or simply enjoy the garden as a restorative space?

4. Are there special accommodations that need to be considered?
   a. Safety?
   b. Tools?
   c. Accessibility to garden (e.g. wheelchairs, walkers, etc.)?

5. If HGI is enhancing a garden rather than building one from scratch, are there specific design elements that need to be restructured?

6. Will this garden be part of structured activity time or will it be accessible at all times for use by the community?

7. If a location is not chosen yet, which location would be the best for a garden?
   a. Consider visibility, accessibility, light.
Appendix B - Plant Planning Workbook

Instructions

For this purpose of creating a healing garden we want to only use plants labeled for HG (healing garden), so we can use the filter tool in column C to select healing garden. Column E shows what type of plant it is: Herb, vegetable, or moss. Column F informs if it is commonly used as a hydroponic. This column can be very helpful if you are trying to build an indoor hydroponic setup. Column G categorizes the plants as perennial or annual. Having annual plants in a raised bed can be very helpful and easier to maintain as you will not have to replant them every season.

Column H details the growing season of each plant. It is important to choose a wide variety of growing seasons, so your garden can have growing taking place at a maximum. Columns K through AA detail the different possible benefits of each plant. It is important to keep in mind that these are not cures to disorders but could have potential benefits. Columns AB through AF explain how each plant is commonly used: Topical, consumed, brewed, etc. Using the information gathered in the document, the core group can determine which plants would be the best fit for the garden.

Appendix C - Garden Activities Planning Workbook

User can navigate to the “Target Population” columns to select the activities that match your community demographic. Next, then users can navigate to the “Benefits” columns to select activities that match benefits of interest. The columns labeled “Use in Activity Session?” and “HGI Staff Needed?” are left blank and will be filled in during the design phase with the partner organization. After finding activities that match all of the criteria, “Use in Activity Session” will be marked as a yes if the partner wishes to add this activity to their assembled list. The “HGI Staff Needed?” will be marked as a yes, depending on the needs of the community at the discretion of the partner organization.