

The Victorian Kitchen Gardens at Homewood Health Centre Guelph, Ontario

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CASE STUDY HIGHLIGHTS

- * Homewood Health Centre is situated on 50 acres on the banks of the Speed River
- * Over 150 patients per week participate in Horticultural Therapy classes
- * Victorian Garden designed to meet patients' emotional and psychological needs
- * Collaboration of kitchen staff, grounds department, horticultural therapy volunteers essential to success of program
- * Modest production (39.82 kg) generated significant enthusiasm from staff and patients
- * Ongoing garden operations funded entirely by internal support
- * Demonstrates the effectiveness of small gardens that are easily replicable in constrained spaces



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PROJECT OVERVIEW

Homewood Health Centre, located in Guelph, Ontario, is one of the largest mental health and addiction facilities in Canada. Homewood offers nine programs that focus on addiction, eating disorders, posttraumatic stress, dementia, depression, mood disorder, and anxiety. In addition to working with a number of outpatient groups, the facility is equipped with beds for 300 patients (Homewood Health Centre, 2012a).

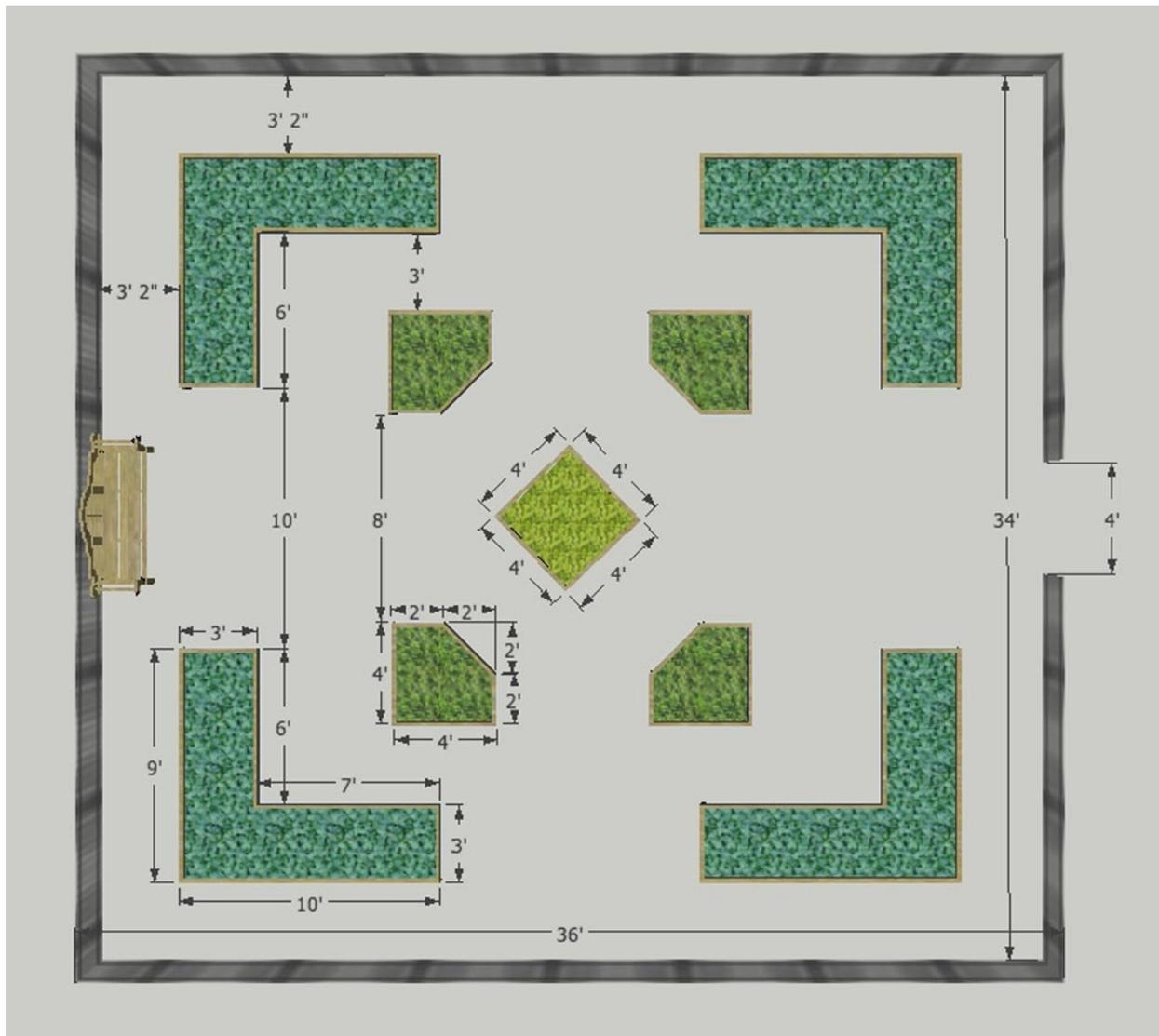
Programming at Homewood is diverse, from individual and group treatment sessions, to crafts and a range of recreation activities. Homewood also has one of the longest running horticultural therapy (HT) programs in the Canada. HT recognizes “the positive benefits of the interaction between people and plants and gardens to improve cognitive, physical, social, emotional, and spiritual wellbeing” (CHTA, 2015). The HT department offers a range of activities, from plant propagation and seed starting, to botanical prints, and a variety of gardening activities.

Becoming a Project SOIL pilot site in 2014 was a natural extension of existing Homewood HT department work. The vegetable garden project at Homewood has the potential to become a powerful new therapeutic tool for patients, where one can experience growing, harvesting, and finally consuming the food they have cared for.

History

The Homewood Retreat (as it was originally called) was opened in 1883. During its first forty years of operation all food needs were supplied by a large onsite farm, which included a herd of Holstein cattle (Homewood Centennial Committee, 1983). In 1922, a new hospital administrator deemed the farm to be unprofitable and began the process of phasing the farm out, culminating in the sale of the cattle in 1924 (Homewood Centennial Committee, 1983). Post World War 2, Homewood made a modest return to farming and began to raise chickens with the help of Guelph’s Ontario Agricultural College (Homewood Centennial Committee, 1983). Seventy years after this initiative, Homewood is once again returning to its agrarian roots.

The city of Guelph is an ideal location for a new food production pilot project. Guelph has a rich agricultural heritage and although the city has grown substantially since it was founded in 1827, one need only drive a few minutes out of town before encountering farmland. Guelph has become a hub of agricultural research, and a weekly farmers market attracts growers from across southern Ontario. Unlike most municipalities in the province, homeowners are permitted to raise chickens on their properties, and a stroll through residential areas reveals dozens of homes that have converted their front lawns to kitchen gardens.



In 2012 Homewood was approached by Project SOIL to become one of its five pilot project sites investigating the potential of food production on institutional land. Although the Homewood grounds are largely devoted to existing programming, there are still large areas suitable for farming. The HT department was tasked with undertaking the three year project, with the following phases: the first year focused on the development of the garden; the second year on monitoring outcomes; and the third year on the potential expansion of the garden. Goals for the produce grown in the garden include use in the Homewood kitchen; HT program use; and donation of any surplus to the Guelph Food Bank.

The garden design was a critical component of the project. Top priority was given to creating an environment where both the patient's emotional and physical needs were met. Another key consideration was respecting the Victorian heritage of the Homewood grounds. The final design solution is both functional and aesthetically pleasing.

Designed in a potager (kitchen garden) style, the garden is intended to evoke a feeling of 'a day in the country.' Nine raised beds constructed from 4"x4" ties are arranged in a geometric pattern with generous space around each to allow for ease of movement when groups of people are working in the garden. The combined beds have a total of 224 square feet of growing space. A low fence (34'x36') with mesh panelling surrounds the garden perimeter, allowing patients to easily see both over and through the structure—an important design consideration to prevent patients from feeling confined.

Another essential component of the project was the selection of appropriate crops. Plants that were both easy to start from seed and hardy enough to withstand being handled frequently were chosen. Setting individuals up for success is critical for the HT program staff and ensures that patients experience a sense of hope and feeling of accomplishment through the activity.

Tomatoes were the largest crop grown in the garden with a total of 20 plants. Beefsteak, cherry, green zebra and yellow pear were among the varieties grown. In addition to brassicas (six cabbages and four Brussels sprouts) there were seven pickling cucumber plants, eight green and yellow beans, 13 pepper, and three zucchini plants.

In addition to the plants started from seed, salad greens and herbs were purchased for planting. Two of the smaller beds and four large pots were planted with bib and leaf lettuce, radicchio, spinach, and Swiss chard. The bed at the heart of the garden contained Italian and curly leaf parsley, as well as basil, dill, and rosemary.

PROJECT RESOURCES

Human Resources

Homewood Health Centre has a wealth of internal resources. Currently the facility has a complement of 650 staff, ranging from psychiatrists, physicians, nurses and pharmacists to social workers and a selection of therapists (2012b). Other departments that were integral in the development of the garden include management, communications, human resources and environmental services (housekeeping, maintenance and grounds department). The Homewood Research Institute is also located on site and its aim is to improve outcomes of mental health and addictions treatments and services (Homewood Health Centre, 2012c).

Two full-time and one part-time registered HT therapists make up the HT Department at Homewood. Although from diverse academic backgrounds, each has formal education in horticulture and experience working in a range of health care facilities. Department head Tamaura Proctor was responsible for producing a business plan to secure internal funding, and also gave a number of presentations to interested staff and administration about the vegetable garden initiative. The design of the garden was developed in a collaboration between the HT therapists, a volunteer landscape architecture student, and in consultation with Homewood's CEO.

The garden design was made even more real by 3D renderings produced by a University of Guelph Bachelor of Landscape Architecture student. The student, a volunteer in the department at the time, produced drawings of the concept (using SketchUp), in addition to dimensioned plan drawings that were then used in the garden's construction.

As part of Homewood's participation in Project SOIL, a research assistant was assigned to help with the vegetable garden project. In addition to conducting research for the pilot project case study, the student spent 15 hours per week on site working in the vegetable and therapy gardens and assisting with general departmental duties.

Currently there are 28 volunteers working in the HT department. Their combined annual hours contribute the equivalent of one additional full time employee. The HT department is popular with Homewood volunteers; some have been with the department for more than 15 years. Volunteers provide program support (set up, assisting with patient programs and clean up) and plant care (watering and pest control) in the conservatory, as well as floral arrangements for the cafeteria and themed HT department displays.

Over 150 patients per week participate in HT classes. Although health and safety regulations restricted patients from assisting with the garden construction, two groups were able to contribute by spreading mulch between the garden beds. The HT department's seed starting program provided the biggest opportunity for patients to become involved with the garden in 2014. The program involved months of work, germinating seeds and transplanting seedlings into progressively larger pots as they matured. Harvesting of the produce was primarily the responsibility of staff, although individual patients and volunteers also assisted.

In addition to the support from within the HT department, the vegetable garden project has also received a great deal of support from the grounds, kitchen and communications departments. The construction of the garden could be handled internally, since the grounds department is comprised of a skilled team with expertise in construction, horticulture and landscape management. The grounds staff has also been generous in providing ongoing crop management consultation.

The Homewood kitchen's involvement in the vegetable garden has also been a critical component of the project. Kitchen staff have been incredibly helpful providing the HT department with sanitized containers for harvesting produce, as well as weighing and washing the produce after harvest, and incorporating the vegetables into their meal plan.

The communications department manages all media regarding Homewood and was responsible for preparing a press release about the vegetable garden project. In order to protect patient privacy, photography is prohibited on site, so the communications department has been responsible for all photography of the vegetable garden.

Infrastructure Resources

The Homewood Health Centre is an amalgamation of six late nineteenth/early twentieth century manors now expanded and connected by corridors (Perkins, 1999). The HT department, located in the main hospital complex, is the base for all HT programs. The department includes a conservatory where programs are held and plants can be grown year round. A second teaching area adjoining the conservatory contains office spaces, a washroom, and kitchenette where produce harvested from the garden is washed before being brought to the Homewood kitchen.

Generous grounds surround the buildings and are enjoyed by patients, staff and the surrounding community alike. Formal walkways run through the property as well as smaller trails and paths that cut through the woods. In addition to open expanses of lawn punctuated by garden beds, there are a number of recreational areas including a baseball diamond, tennis, and volleyball courts.

The HT department has its own therapeutic garden planted with a variety of colourful annuals, perennials, and fragrant herbs. In addition to providing HT staff with plant material for their programs, the garden is also used as an outdoor classroom for a variety of HT programs. The garden is in close proximity to a number of facilities. A small shed located in the garden contains wheelbarrows, rakes, shovels, hoes, cultivators and a variety of hand tools for use in the garden. Adjacent to the shed is a large gazebo, which is used as an outdoor classroom and is ideal for seeking shelter from inclement weather. Washroom facilities are also available in a nearby clubhouse building. Conveniently, the new vegetable garden is located next to the therapeutic garden (approx. 10m apart) allowing shared access to these facilities.

A wide range of vehicles and equipment is available through the grounds department. The HT department also has a dedicated golf cart with a small flatbed, which is useful for carrying heavier loads to and from the garden.

Natural Resources

Homewood Health Centre is situated on 50 acres of land (Homewood Health Centre, 2012c) on the banks of the Speed River. The difference in elevation from the hospital complex at the top of the hill down to the river is “an approximately 15 meter fall in two distinct terraces” (Perkins, 1999, p 294). Although both terraced levels have generous open spaces, there are few flat open areas that are not already used in programming. In addition, much of the area is sloped, densely wooded or used for formal plantings.

The area south east of the existing therapy garden is relatively underused and as such was selected as the location for the vegetable garden. The space is ideal as it receives full sun, and can take advantage of the existing irrigation system, which draws from the municipal water supply. A site-wide problem with the irrigation system during the growing season meant that the vegetable garden was watered by hand with a hose hooked up to a faucet in the neighboring therapy garden (a manageable task given the garden’s small size). Once the issue is resolved a separate water line will be added to the vegetable garden.

The newly constructed garden beds were filled with over nine cubic meters of triple mix soil and crops were watered with fertilizer in mid-June and again in mid-July. No other inputs were used to supplement the soil, and weeding and pest control was done manually. Mulch that was produced on site by the grounds department was used to line the pathways between the beds.



Financial Resources

All funding for the vegetable garden was sourced internally. Proctor was responsible for producing a business proposal that secured both one-time funding for the garden construction as well as an annual sum allocated to garden supplies and maintenance. An application for additional funds was submitted to cover unexpected labour costs as well as the cost involved with securing a water source for the garden.

Generating revenue from the sale of produce is not a realistic goal at this time. The primary focus of the project for the HT staff is the garden's therapeutic benefit to patients. Because of the garden's small size, only a fraction of the seedlings started in the conservatory were actually planted, and the remaining plants were given away or sold. Selling the extra plant seedlings could potentially become a means of generating revenue in the future.

Community / Social Resources

Year one of the vegetable garden project was solely focused on strengthening internal connections at Homewood. Communicating the work of the HT department to the rest of the organization has been a priority for Proctor since becoming department head in 2013. The new vegetable garden has been an excellent vehicle for making connections within the rest of the organization.

The vegetable garden has also allowed the HT department to take steps towards connecting with the larger community of Guelph. Following a press release from Homewood's communications department, the garden received positive local media attention from the Guelph Mercury newspaper and CJOY AM—highlighting both the Homewood vegetable garden project as well as the broader Project SOIL initiative.

Future Community Connections

Food Banks

Although one of the original goals of the vegetable garden program was to donate produce to a local food bank, the garden yield was much lower than expected and all harvested produce was delivered to the Homewood kitchen. If garden expansion occurs in the third year of the project, perhaps this connection with a local food bank could be revisited. Alternatively, certain harvests could be designated specifically for food bank use.

University of Guelph

The HT therapists have expressed interest in fostering stronger connections with the University of Guelph. Both the vegetable garden project and the work done by the HT department would offer post secondary students (from a variety of disciplines) an excellent opportunity to observe a working therapeutic garden and gain a better understanding and appreciation for Horticultural Therapy. The HT department would be open to both class visits and student placements.

To the outside observer, it would seem that Guelph is becoming a hub for Horticultural Therapy in Canada. In addition to one of the longest-running HT programs in the country at Homewood Health Centre, this small city now hosts the Canadian Horticultural Therapy Association, as well as another institutional HT program (at St. Joseph's Health Centre) and The Julien Project at the Ignatius Jesuit Centre—the latter inspired by the founder's internship and research with Homewood's HT program.

Resources Needed to Sustain the Project

Without the support from HT and other Homewood departments, the vegetable garden project would not be possible. The cooperation of the Homewood kitchen staff is critical for the project's ongoing success. In order to incorporate the small harvests from the vegetable garden, kitchen staff have to be willing to invest the extra time it takes to wash and process produce.

Collaboration with the grounds department is also vital as—in addition to constructing the vegetable garden—the grounds staff responded to a number of maintenance requests from the HT department throughout the year.

Volunteer support is also invaluable for the day-to-day operation of the HT department and its program, and gives the HT therapists more time to focus on program delivery, development, and administrative duties.

CONSTRAINTS

In order to use produce for patient and staff consumption, the vegetable garden was required to comply with Public Health and Safety guidelines. This included ensuring that the garden was fenced, that no animal manure was applied to the beds, and that only potable water was used for irrigation. A site inspection was conducted by Public Health to ensure that all of the above criteria were met.

Stringent guidelines are also in place when harvesting produce. Gloves were required to be worn at all times during harvesting. Once the produce was brought to the HT department, gloves were removed, and hands washed with soap before reapplying a new pair of gloves. The HT department was also responsible for an initial wash of the produce to remove soil and debris before being sent to the kitchen where it is washed two additional times. Public Health also required that patients and staff be notified when produce grown on site was incorporated into the meals. The kitchen has taken responsibility for this step by writing an announcement on the cafeteria white board.

SUCSESSES

Horticultural Therapy

The Victorian Kitchen Garden permits patients to participate in a seed to table experience. The opportunity to connect to nature and experience the benefits of being outside, working with plant material and participating in meaningful work—and the therapeutic milieu created by working in the garden—supports the patients' own growth and wellness.

Proctor sees the interdepartmental connections that were forged through the vegetable garden project as being one of the biggest successes of the garden. The project was well received and supported by Homewood staff and management alike, which gave the HT staff an opportunity to work more closely with both the kitchen and grounds departments.

Another major success of the 2014 season has been the produce making it to patients' plates. The kitchen has received nothing but positive feedback about the produce, and patients expressed excitement about eating something that was produced on-site. While herbs and salad greens dominated the early harvest, towards the end of August, the weekly harvest began to average 10kg as more of the zucchini, cucumbers, cabbages, and tomatoes began to ripen. In total 39.82 kg of produce was harvested in the 2014 growing season.



CHALLENGES OVERCOME

Construction of the garden in 2014 was delayed until June. In order to help the process along the HT department offered to plant the garden beds on the grounds, which freed up the grounds department to focus on the vegetable garden construction. During the construction it was discovered that there was a gas line running under the area that needed to be located before a fence could be erected. While the issue of the gas line location was being resolved a temporary fence created from landscaping fabric was assembled.

<http://projectsoil.ca>

Despite the delay, little if any of the growing season was lost, as seeds were germinated in the HT conservatory at the beginning of March, 2014. Ontario's growing season also experienced a late start due to the harsh winter and cooler spring, which worked to Homewood's advantage.

Both cabbage and Brussels sprouts were affected by cabbage butterfly caterpillars. Row netting was used to cover the crops, followed by a taller tent structure—to accommodate the Brussels sprouts' vertical growth. Because netting was only added after the vegetables began to exhibit damage from the caterpillars, the cabbage and Brussels sprouts were monitored and caterpillars were removed manually.

In mid-July, the zucchini began to develop what appeared to be squash blossom end rot. Thankfully, towards the end of the month some zucchini began to develop that did not seem to be affected by the rot, leading the HT staff to believe that variability in weather was the cause, not a nutrient deficiency.

The 20 tomato plants began to exhibit some issues with their foliage in mid-July. Leaves at the bottom of the plants began to yellow and develop dark brown spots, indicating early blight. Diseased leaves were removed and secateurs were sterilized with alcohol wipes after each use. The leaves were then disposed of in the garbage to avoid contaminating the vegetable garden compost.

Although the majority of the tomatoes were in the raised beds, some were grown in plastic containers. These plants seemed to exhibit even poorer health. In addition to early blight, some of the plants developed blossom end rot indicating calcium deficiency (Miller, Rowe & Riedel, n.d.), while others developed purple discoloration on their leaves, an indication of phosphorus deficiency (Newman & Pottorff, 2014).

Early blight prevention will be a major consideration for the 2015-growing season. In addition to rotating the crops, a mulch of straw or black plastic will be applied to the soil to prevent spores from splashing onto the plants, helping to prevent the spread of the blight. Certain varieties of tomatoes are also touted as being more resistant to blight and will be considered over this year's varieties (all of which seemed to be susceptible).

Although there were initial concerns about the small quantity of produce being delivered to the Homewood kitchen, the kitchen staff members were happy to incorporate the produce into whatever was being prepared (e.g. shredding a zucchini in to a salad), or alternatively keeping produce refrigerated until they were able to make use of it.

Programming in the vegetable garden cannot take place unless the weather is fair. Unfortunately the rainy spring and summer limited patients direct involvement with the garden. Because harvest times were variable and yields were relatively small, organizing large groups to come and harvest produce was also a challenge. The HT staff also acknowledged a need to develop clearer procedures around patients' interaction with the gardens to insure that health and safety guidelines were being met.

RELEVANCE TO OTHER PROJECTS

Although many institutions may have their sights set on allocating a larger area to production, the small size of the Homewood vegetable garden has meant that there has been very little strain on the HT department in terms of additional work hours. For organizations and communities who are constrained in terms of property size or human resources, this small-scale vegetable garden project is ideal and easily replicable with minimal investment.

Online Resources

Website

<http://www.homewoodhealth.com>

Media

<http://www.guelphmercury.com/news-story/4633908-homewood-garden-part-of-food-production-project/>

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