

Horticultural Therapy In Every Hospital

By Andrew Zeiger

On my medical school rotations at Nemours Children's Hospital in Wilmington, DE, I am within steps of nature. Near the front entrance sits the 200-acre formal garden-inspired Nemours Estate. Healing and memory gardens pepper the hospital grounds. Planted vegetables line walkways and pictures of vegetables dot nutrition posters.

Surprisingly, patients, families, and hospital workers have limited—if any—engagement with these natural spaces. Why? No entity there is trained to safely and effectively marshal these resources. They have no registered horticultural therapist (HTR) on staff.

With 30-35 million hospitalizations in the U.S. every year,¹ an aging population with high chronic disease burden,² burnout among hospital workers at record levels,³ and ever-rising hospital costs,⁴ it is clear that hospital care is exceedingly stressful for patients, families, workers, and the health system.

Two recent indices of horticulture-related activities in healthcare settings^{5,6} suggest that there are 148 horticulture sites or activities across the 6100+ U.S. hospitals.¹ However, with just 19

HTRs working in hospitals in 2022 among the 213 total credentialed, the impact horticultural therapy (HT) has on U.S. hospitals today is minimal.⁷

HT has the potential to help usher in a new age of hospital medicine. It is time for a focused effort from the AHTA community to better incorporate nature into hospitals.

Ideally, health systems function to provide high value care⁸ (defined as quality of care divided by cost) by intervening in pathogenesis (disease and loss of function) and promoting salutogenesis (healing and health creation).⁹ Guiding principles to achieve this encompass the “quadruple aim”: optimize individual patient care, population health, and healthcare team wellbeing while reducing costs.¹⁰

Patient care

Every hospitalization is an opportunity to improve a patient's connection with nature. HTRs can maintain an interactive green ecosystem within the built environment of the hospital. The HTR can help patients and families learn about and contribute to ecosystem growth and maintenance, thus creating a hospital community

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Strategic objectives toward a horticultural therapist in every hospital

Research and collaboration

1. Systematically index the current nature ecosystem of all 6100+ U.S. hospitals. Publish the process and results openly online.
2. Understand successful examples of horticulture activities/HT in hospitals today.
3. Generate an economic pitch with accountants/economists on cost-saving benefits and plans for implementation.
4. Formulate individualized plans for every hospital, with particular focus on inclusion of that hospital's local neighborhood community.
5. Collaborate with research organizations to standardize HT interventions based on type, length, and frequency.
6. Establish a network of HT across all hospital sites where data on safe practices, new programming ideas, and recruitment can be shared and incorporated into hospitals.
7. Create an online database of HT interventions with research outcomes that can be tracked longitudinally by hospital HTRs.
8. Consult legal advice for HTRs practicing in hospitals.
9. Convene longitudinal goal-setting and execution meetings between the AHTA-led HT community and hospital stakeholders on HT interventions in hospitals.
10. Present HT research at national and regional medical conferences.
11. Publish HT research in medical journals.

living symbiotically with nature. By negating some of the stress of hospitals, patients and families may have increased satisfaction, wellbeing, and faster healing.

Population health

Chronic disease is a major contributor to inpatient hospitalization, most commonly from septicemia, cardiovascular disease, osteoarthritis, pneumonia, and diabetes mellitus.¹¹ HTRs could partner closely with nutrition departments, as nutrition interventions may help manage chronic disease through improved diet quality and food security.¹² HTRs can augment patients' engagement with physical, occupational, and mental health services. Teaching nature concepts may help patients emotionally process their hospital experience. Additionally, the HTR could connect patients with resources to maintain their connection with nature following discharge.

Healthcare team wellbeing

More than half of hospital workers report symptoms of burnout and other mental health challenges.³ It has been shown that hospital workers taking breaks in gardens have greater improvements in exhaustion and depersonalization than when taking breaks

anywhere else.¹³ HTRs maintaining hospital nature ecosystems could help workers greatly by providing areas of respite. HTRs could actively work with hospital workers and trainees using portable garden carts or within natural spaces. Additionally, patients engaging nature alongside hospital workers could foster the therapeutic relationship.

Reducing per capita costs

With health care expenditures increasing nearly fourfold as a percentage of our gross domestic product since the 1960s,⁴ efforts to decrease costs are necessary for national stability. One solution, implementing "value-based health care", involves interdisciplinary teams of caregivers who together design and deliver comprehensive solutions.¹⁴ HTRs, as members of that interdisciplinary team, could advocate for horticulture-related interventions. Research shows that nature exposure can decrease length of hospitalization after surgery, yielding reduced costs.¹⁵ A recently published budget impact calculator can be used by hospitals to estimate the potential economic value of investing in hospital green space to counter burnout.¹⁶

Hospital environments have changed dramatically over the past century with attention now on health promotion and value based care. The time is ripe for a focused effort from the HT community to bring nature into every hospital. 🌿

About the author: Andrew Zeiger

Andrew (Andy) Zeiger is a medical student at Sidney Kimmel Medical College who has begun coursework at the Horticultural Therapy Institute and received multiple grants to investigate primary care provider attitudes and horticultural therapy practices with youth. Andy, whose long-term goal is to create a pediatrics clinic on a nature site that marries modern medicine with early and consistent nature exposure, has published in the AHTA Magazine, served as a member of the AHTA working group on credentialing, and will be presenting at the 2023 AHTA annual conference.

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AHTA community

1. Begin an HT community listening campaign to ensure as many voices are included.
2. Establish minimum standard wage and work conditions for hospital-based horticultural therapists.
3. Continue to work toward higher credentialing of HTRs from registration to board certification, as this will strengthen reimbursement options. Concurrently advocate at federal level for reimbursement of HT from Medicare/Medicaid.
4. Determine how HT programming/department would be paid within hospitals and/or health systems.
5. Consider additional HTR role of working with nutrition departments to champion patient's nature and nutrition inpatient-to-outpatient continuity of care.
6. Recruit from populations with people who might find meaning being employed in HT, such as young people in college, healthcare workers, those seeking second or third careers, and retired individuals.
7. Advocate at medical schools and other allied health profession training institutions about the health impact of nature & related interventions.
8. Initiate a capital-raising campaign with particular focus on philanthropists who support hospitals and/or nature spaces.
9. Seek out public, private, or non-profit grants available.

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plants together in skilled and innovative ways, can contribute much to expanding awareness and stamping out “plant blindness.” As experts point out, when a child is repeatedly presented with opportunities to grow and care for plants alongside a knowledgeable adult mentor, those encounters become a reliable predictor of a person’s interest in and scientific understanding of plants later in life.

Horticultural therapists are already highly mobilized in delivering quality horticultural therapy (HT) programming that grows the people/plant connection. While many HT professionals already work with youth, can more programs be developed and implemented that reach additional groups of younger people? Can existing HT youth programs be enhanced with the innovative resources offered by Seed Your Future? Can HT professionals who focus on other population groups add a dimension to their work by reaching out to the youth population?

Every child deserves to experience and understand the amazing power of plants. Join the movement. 🌱

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About the author: Kelly Warnick, BA, Juris Doctor, AAS Horticulture, and Certificate in Horticulture Therapy

Kelly has a multi-faceted background in greenhouse, garden center, landscape design, and floriculture settings, as well as evidence-based outcomes and legal advocacy. She is currently completing her internship for HTR credentialing with the Chicago Botanic Garden.

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