The Healing Power of Design

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ABSTRACT

The CancerFree KIDS and Impact 100 Family Pet Center at Cincinnati Children's Hospital Medical Center is the first pediatric hospital-based facility in the US to reunite patients with their own pets. The program is aimed at inpatients with long-term stays who are well enough to take a journey through the corridors and elevators to the Family Pet Center, which is located immediately outside the hospital building. The research indicates that these visits greatly benefit both patients and family members and that its positive effects have a three-fold benefit. First there is the anticipation of the visit. Then there is the actual visit itself, followed by the joyful memories and storytelling that follows. In this context, the design of the venue where the reunion occurs plays a crucial role. A memorable, inspiring place has the power to enhance the experience and thereby bring value in the psychological uplift that it enables. This paper will discuss methods used for creating a place that enriches this unique experience and can act as a catalyst for healing.

The context

A child reunited with his or her family pet is not in itself a revolutionary idea; however, the notion that a sick child hospitalized for an extended period of time also can enjoy such a reunion is groundbreaking. Jessica Elam, a cancer patient who received care at Cincinnati Children's Hospital Medical Center, inspired the program that makes it possible for patients to receive such a visit. The CancerFree KIDS and Impact 100 Family Pet Center at Cincinnati Children's was championed by Ellen Flannery, the mother of a cancer patient and executive director of CancerFree KIDs. This organization worked with the hospital's Cancer and Blood Diseases Institute to secure a grant from a philanthropic organization, Impact 100, to partially fund the center.

The initial idea consisted of a fabric awning and guest chairs. As the design process progressed, the research indicated that more was needed to enable the center to be a catalyst for healing. The design team presented options showing that the space needed to offer a more memorable experience—a space that provided an escape from the institutional routine. Based on these studies, the hospital made the decision to cover additional costs to build an enhanced shelter.

The program

What is unique about the Family Pet Center is that it allows children to access their own beloved pet in a safe, controlled environment for both the child and the pet. It eases the stress of isolation from everyday hospital life and provides patients with a psychological boost. "Pets are really important in people's lives, especially children," says Dr. John Perentesis, executive codirector, Cancer and Blood Diseases Institute at

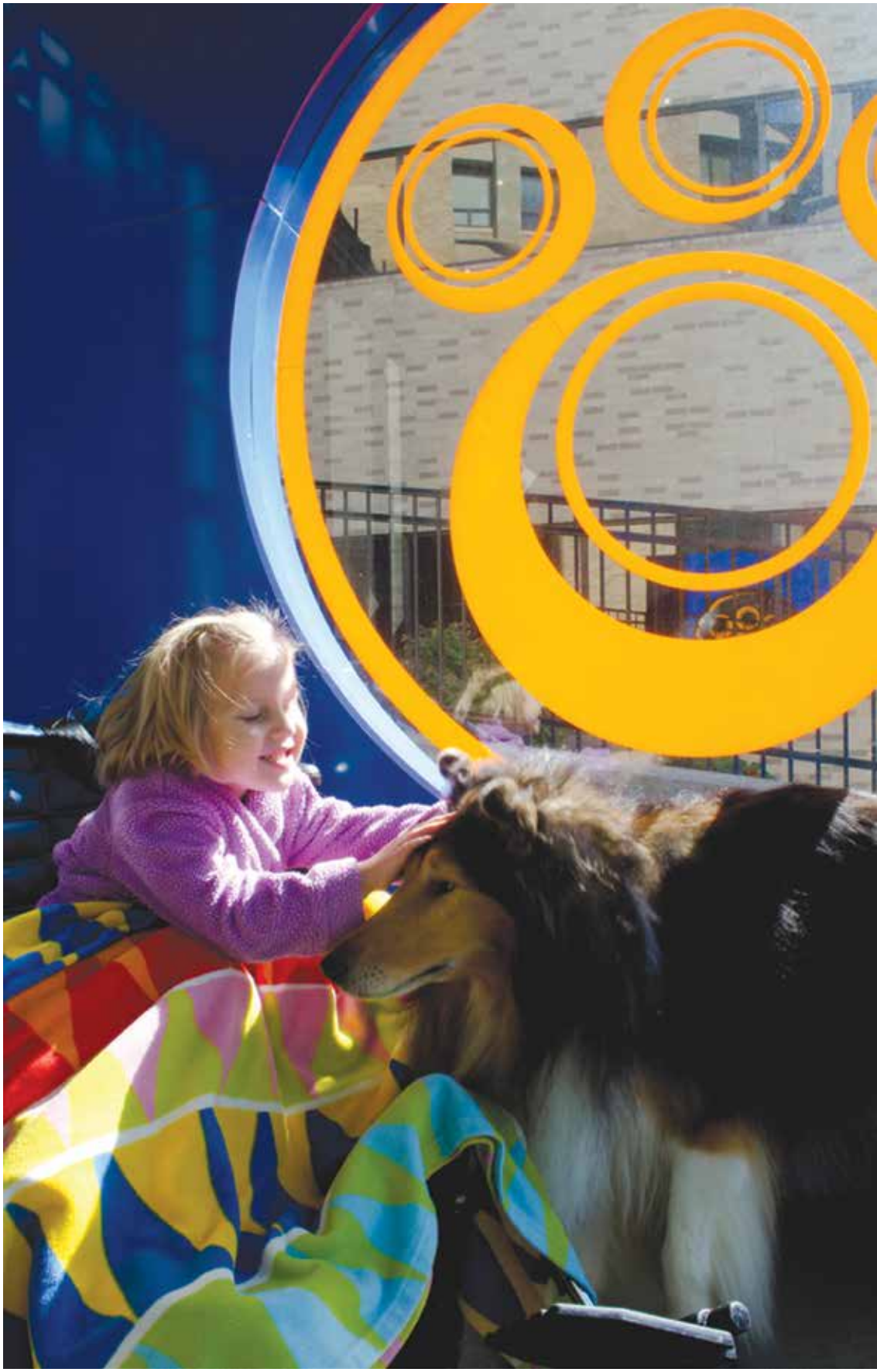
FIGURE 1. The shelter. Image credit: GBBN Architects

Cincinnati Children's. "The interaction between patient and pet can be very therapeutic by bringing joy, comfort, and a positive mindset to those suffering, especially from cancer."

The center is managed by Cincinnati Children's Child Life Department, which is staffed by child life specialists with expertise in working with children and their families to provide emotional support, education, and guidance throughout their stay at the medical center. On the day of the visit, families park in a designated area near the Family Pet Center. A child life specialist brings the child down from his or her room to meet their family pet. Visits last about an hour and can take place any day or evening of the week, including Saturdays and Sundays.

The Family Pet Center opened in September 2013, and the hospital website gives the following directives: "Patients who stay five days or more may be able to have their pet visit if medical staff approves. Dogs and cats are allowed and Infection Control must clear requests for other types of animals. Reptiles are not allowed. Families must answer questions about the pet before visits are approved. Pets should be current on vaccinations and bathed before a visit."

Rachel Adams, certified child life specialist at Cincinnati Children's says, "The greatest impact (as well as my favorite thing) I've seen with the Pet Center is the opportunity we are able to provide for a moment of normalcy in the hospital. One family has commented on how being in the Pet Center is like 'sitting on a park bench,' away from the hospital environment. The joy I've been able to witness when a child sees his or her dog for the first time in weeks is the most moving aspect of my job; it is something I wouldn't trade for



FIGURES 2 AND 3. A visit.
Image credit: GBBN Architects

FIGURE 4. View of research buildings. Image credit: GBBN Architects

the world. Families and patients seem to leave the pet center feeling refreshed and with a new sense of hope."

The research

Animal-assisted therapy (AAT) has been studied as a way to improve mood while reducing stress and pain. This is especially applicable for cancer patients, who deal with both high levels of stress and pain and long hospital stays. Prolonged hospitalization during childhood isolates a child from the familiarity and security of their daily routines and relationships. AAT, on the other hand, contributes to recovery by improving the quality of life for patients and has been shown to lower pain. Lowered pain reduces a patient's dependency on medicines that can incapacitate or isolate him or her mentally. Cincinnati Children's has an existing AAT program that arranges visits to patients in the hospital by dogs that have been preapproved and visit on a regular basis.

The program at the Family Pet Center takes the AAT concept a step further by introducing the patient's own pet and targeting patients with long hospital stays. The power of a pet visit's positive effects begin with the anticipation of the event days in advance, then there is the visit itself and the peak of the experience, followed by the lingering effects of memories or storytelling afterwards. An additional outcome of such a therapy program is that it can provide benefits to parents and other family members too.

Cincinnati Children's researchers decided to focus their initial studies on the effect of the pet visit on mood of the patient and pain experienced. Caregivers will evaluate these factors, and children five years old and older will fill out a short survey as part of a self-evaluation in order to examine the patient's perceptions of their mood and pain change pre and post visit. A researcher will observe the visit and fill out an observation form that will add additional data. Using the information collected and according to their study protocol, researchers "will seek to determine if variables are impacted by factors including patient age, gender, length of hospital stay, length of pet visit, the observed level of physical activity with the pet, and/or the observed level of rapport with the pet." Additionally, data will be collected on the weather and location of the visit within the pet center area. Initial review of existing research and planning for the study has been completed, and Institutional Review Board (IRB) approval has been obtained. The research has begun enrolling patients in the study.

The design

The design of the Family Pet Center was a direct response to the research that underlined the importance of the actual experience and its lingering effects in memory. The hypothesis was that by providing a memorable place to facilitate the reunion, the building could play its part in reinforcing the healing aspects of the visit. This place needed to provide an escape from

FIGURE 5. Concrete imprint. Image credit: GBBN Architects

the institutional routine by being whimsical while still supporting for the practical needs of the visit.

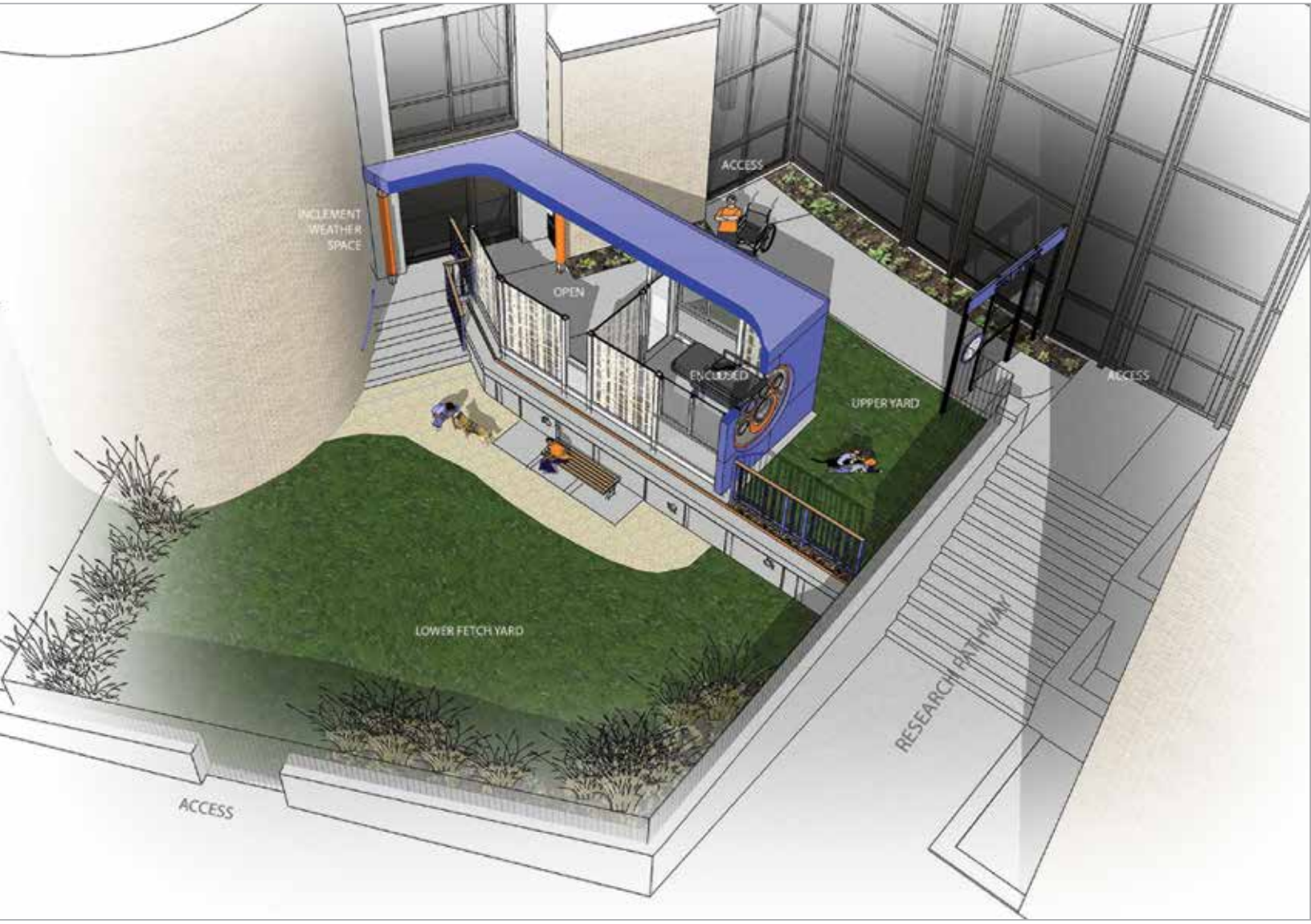
Early in the design process a more privatized, introspective environment was considered, but additional studies revealed that a real reconnection with the outside world and nature would provide a distraction from the child's pain and help alleviate the sense of isolation inherent in a long hospital stay. This direction resulted in a design that aimed at being soothing, playful, and open. Careful consideration of materials, colors, and natural patterns helped shape the end product.

The Family Pet Center consists of a 250 sq. ft., three-sided structure and lawn area. The design concept aimed at evoking a feeling of being at the park or in your own backyard. This experience was reinforced by the various surfacescapes including a hardscape for wheelchairs, stretchers, and general circulation; a greenscape for the tactile and genuine outdoor connection to nature; and a gravelscape, which creates a sensorial interaction in a park-like setting. Inside the shelter is an enclosed area and a semi-enclosed area where kids, pets, and families can meet.

The location was determined by site constraints: A compact site of leftover space adjacent to an existing door at the core of the hospital campus with close vehicular access. One of the advantages of the site is that

FIGURE 6. Explanatory rendering. Image credit: GBBN Architects

This rendering is diagrammatic. It shows shelter roof cut away to allow interior space to be seen. In reality the roof encloses the entire shelter.



it lies on a pathway between the clinical and research sides of the hospital's campus and, thus, dozens of researchers walk past it every day. This location allows it to serve as a visible symbol of the great work they do to improve outcomes for children who suffer from a vast array of pediatric diseases.

The multiple enclosures, play yards, and amenities were planned to allow patients and families to choose their visit experience. This is important because a hospital stay typically means a lack of control over routines and the environment. At the Family Pet Center, people have control over privacy options, as they choose where to reunite with their pet—a fully enclosed visit bay, a partially opened bay, or an outdoor setting. Spaces were designed to be sensitive to the animals and their behaviors for the purpose of reducing their stress and, in turn, facilitating a better experience for everyone. An inclement weather room, located in an adjacent hospital space, was part of the project program. It houses pet and patient supplies and doubles as a back-up space for the visit, as an alternative to rescheduling.

FIGURE 7. The location.
Image credit: GBBN Architects

From a practical point of view, the structure was conceived as a simple shelter with a prefabricated system chosen to address issues of potential relocation, craftsmanship, construction schedule, and cost. The design team researched prefabricated structures, which led to the selection of a bus-shelter manufacturer willing to customize their product to meet the design needs. The vendor's package also included lighting, electric, and heating, in addition to the structure. A major design challenge was integrating this tiny building into the hospital surroundings without creating any building code or life-safety issues that would impede regulatory approval.

The shelter was designed to complement the surrounding campus architecture using a language that relates to neighboring research buildings, which introduce metal panels and glass into the exteriors of the largely brick buildings. It features glass walls and a bright blue metal roof of aluminum composite. The shelter system required no major foundation work. It was installed by surface bolting to a concrete slab. If needed, it could be relocated to a future site should the hospital expand the therapy. As a weather screen enclosure, it also did not require a formal HVAC system; however, it was designed to be passively ventilated in the summer months and overhead radiant units cut through the winter chill.

A huge circular portal brands the center with an orange paw print and the other enclosure walls have patterns that evoke a birch forest and frosted glass; the goal was to help reconnect children to the outside world. The glass graphics also provide shade, privacy, and a light-filled experience. The shelter fabricator designed a cost-effective LED lighting system in a random pattern that creates a star-filled sky inside the shelter. The design supports various ages by delivering an environment that is childlike, but not childish. Subtle details bring a whimsical sense of discovery and a reminder of the center's focus.

The design team saw the design as an opportunity to emphasize a moment of family healing and share it with the researchers passing by. The goal is for the Family Pet Center at Cincinnati Children's to bring joy and healing to many in the years to come.

FIGURES 8 AND 9. The shelter. Image credit: GBBN Architects

FIGURE 10. Bench within the shelter. Image credit: GBBN Architects

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References

Brodie, S., Bnurs, F. B., and Shewring, M. (2002). An Exploration of the Potential Risks Associated with Using Pet Therapy in Healthcare Settings. *Journal of Clinical Nursing,* 444–456.

Davis, L.E. (2013). *Therapeutic Value of Animal-Assisted Therapy for Patients with Cancer.* Retrieved from Chemotherapy Advisor: http://www.chemotherapyadvisor.com/therapeutic-value-of-animal-assisted-therapy-for-patients-with-cancer/article/310891/

Jenkins, M., Ruehrdanz, A., McCullough, A., Casillas, K., and Fluke, J. (2010). *Canines and Childhood Cancer: Examining the Effects of Therapy Dogs with Childhood Cancer Paitents and Their Families.* American Humane Association, Pfizer Animal Health, the Pfizer Foundation.

Kaminski, M., Pellino, T., and Wish, J. (2002). Play and Pets: The Physical and Emotional Impact of Child-Life and Pet Therapy on Hospitalized Children. *Children's Healthcare,* 321–335.

Lefebvre, S.L. (2008). Guidelines for Animal-assisted Interventions in Health Care Facilities. *American Journal of Infection Control,* 78–85.

Reiche, E.M., Nunes, S.O., and Morimto, H.K. (2004). Stress, Depression, The Immune System and Cancer. *The Lancet,* 617–625.

Urbanski, B., & Lazenby, M. (2012). Distress among Hospitalized Pediatric Cancer Patients Modified by Pet Therapy Intervention to Improve Quality of Life. *Journal of Pediatric Oncology Nursing,* 272–282.