

BUILDING HEALING SPACES

| Sita Ananth, MHA |

As I drove up to the entrance of a newly constructed hospital in Oregon recently, what struck me first was not so much the fact that it looks like a luxurious five-star hotel (it was designed in collaboration with a hospitality architect), but more so that it does *not* evoke the feelings of anxiety and fear that you normally feel when you approach a hospital. Let's face it, for most of us, going to the hospital is rarely associated with positive feelings. Entering the two-story atrium lobby lit by natural light and the glowing fireplace makes one feel calm and somehow lifts your spirits. What you notice immediately is that you don't smell the normally ubiquitous fresh paint odor or whiffs of chemicals from the carpeting. Views from the private patient rooms overlook either the nearby winding river or a rooftop garden. Well-chosen artwork on the walls, sculpture, and carved and colored glass panels for the chapel all lend to creating a healing space.

But beyond looking merely at the ambience and aesthetics of the space to enhance patient satisfaction and attract customers, the hospital's architects, designers, and administrators have systematically studied and implemented the elements of what is evidenced to create such a healing space—one that reduces stress and anxiety, promotes health and healing, and importantly, improves patient and employee safety and contributes to cost savings.

So, how does the built environment impact healing? Why should hospitals and healthcare organizations consider this in designing their facilities? What is their return on investment for these initiatives? These are questions that hospital executives are asking themselves as they ponder the costs and benefits of incorporating enhancements to the design and architecture that contribute to the health and healing of patients and staff.

The notion of a healing space dates back to ancient Greece. Temples such as the sanctuary at Epidaurus were built for

the god Asclepius, where ill people went in the hope of having dreams where he would reveal the cures for ailments. Later, in 1860, Florence Nightingale extolled ventilation and fresh air as "the very first canon of nursing," along with elimination of unnecessary noise, proper lighting, warmth, and clean water. In the last several decades, the growth of technological advances, need for infection control, efficiency, and patient safety have caused the architecture and design of these buildings to become stark, noisy, antiseptic smelling, sometimes toxic, and unattractive-looking facilities. However, as the need for hospitals to become more competitive arose, aesthetically pleasing design has provided not only a competitive edge but has become a solid contributor to improving patient and staff satisfaction.

Today, the generally accepted components of a healing space are an architecture that provides access to nature, light, good air quality, and privacy; pleasant or positive distractions; and reduction of environmental stressors such as unnecessary noise, and toxic or harmful substances. In addition to these components, we at the Samueli Institute believe that aroma, music, color, and artwork also help to supplement the optimal healing space.

Although much attention is paid to the medical care patients receive in our healthcare institutions, until recently little attention has been paid to the physical space where they stay for days, possibly weeks. In fact, the very buildings and medical devices we use to treat our patients and residents could contribute to the diseases we are trying to cure, say Mark Rossi and Tom Lent.¹ Evidence-based design, as it is called by the Center for Health Design, is an approach to healthcare design that is anchored in utilizing proven design features that impact patient health, well-being, and safety, as well as employee health and morale.

Jain Malkin, founder of Jain Malkin Inc, an interior architecture and design firm

specializing in healthcare, sees some major trends in healthcare design:

1. Single-bed rooms, which studies have shown to dramatically reduce the number of nosocomial infections, have also reduced the likelihood of medication and other errors, create less noise for the patient, provide better communication from staff to patients and vice versa, offer better accommodation of family, and consistently provide higher satisfaction with overall quality of care. In fact, having enough room for family members to be comfortably accommodated in the room may even contribute to reduced patient falls.
2. "Acuity adaptable" rooms allow for the patient to stay in the same room and receive varying levels of care as needed. This avoids potential dangers caused by patient transfer, such as medication errors, chart loss, etc. At Clarian Partners, Methodist Hospital cardiovascular comprehensive critical care unit (CCCCU) in Indianapolis, they found that, for a 56-bed unit, transporting patients cost them almost \$12 million in wasted dollars.
3. Bathrooms are being built at the head-wall so as to shorten the distance the patient has to walk, hence reducing patient falls.
4. One hundred percent HEPA-filtered air enhanced by ultraviolet sterilization is being used.
5. "Same handed" room orientation—standardization of patient rooms to be identical in layout in spite of the potential cultural and cost barriers—is seen more frequently. At St. Joseph's Community Hospital in West Bend, Wisconsin, contrary to what many think, standardization in room layout and design resulted in overall savings of 10% for a replacement hospital. This has also been demonstrated at several other new hospitals.

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6. Hospitals are increasingly following the Green Guidelines for Healthcare that provides tools and best practices for healthy and sustainable building design, construction, and operations for the healthcare industry. Best practices include incorporating views of nature, reducing chemical use, and greening operations ranging from serving organic food to housekeeping and landscaping protocols.

In fact, says Malkin, evidence-based design is being studied to determine its contribution to amelioration of hospital-based injuries—a “never event” identified by the Centers for Medicare and Medicaid, for which hospitals will no longer be reimbursed.

Although architecture and design substantially contribute to patient and staff safety, efficiency, reduced infections, reduced patient falls, and improve patient and staff interactions, it has been found that music, aroma, and access to nature can alleviate stress for patients, families, and staff. Hospitals are increasingly providing access to green spaces or gardens, which have been proven to reduce stress (reducing blood pressure) and improve patient satisfaction for patients, families, and staff. Even viewing nature and trees has been shown to reduce hospital length of stay and result in fewer medications for patients.

According to the American Music Therapy Association, there is a considerable body of knowledge to support the benefits and effectiveness of music therapy. They have found that music is generally used in hospitals to alleviate pain in conjunction with anesthesia or pain medication. Other benefits of music therapy include elevating patients’ mood and counteracting depression; promoting movement for physical rehabilitation; calming or sedating, often to induce sleep; counteracting apprehension or fear; and lessening muscle tension for the purpose of relaxation, including the autonomic nervous system.

Kaiser Permanente, the nation’s largest not-for-profit health plan that covers 8.7 million lives and operates 32 medical cen-

ters, has been a leader in developing nationally recognized, health-based green building strategies. Safety by Design, a set of principles developed that incorporate worker and workplace safety, patient safety, and environmental safety, has become the rubric for their new facility construction. Christine Malcolm, the senior vice president for hospital strategy and national facilities, says Kaiser’s leaders felt responsible for their almost 160,000 employees, many of whom work for the organization most of their lives, and became committed to ensuring their employees’ health and well-being. Kaiser’s accomplishments over the last five years include phasing out all polyvinyl chloride (PVC) products—a “worst in class” plastic known to cause cancer—such as vinyl gloves, flooring, and carpeting; choosing ecologically sustainable materials for 30-million square feet in new construction; and going digital with imaging, thereby reducing staff exposure to harsh chemicals and heavy metals while eliminating the need to store and retrieve images, saving employees from unnecessary lifting injuries. In fact, Kaiser’s new Modesto, California hospital has been gaining national recognition as one of the greenest healthcare facilities in North America and as a national model for future healthcare construction. Industry-leading features such as rubber flooring that reduces not only slips and falls but does not leach toxins; paint and upholstery that’s free of cancer-causing volatile organic compounds; and a “living” roof to reduce heating costs all contribute to the green building strategy.

When Synergy Health decided to rebuild its outdated St. Joseph’s Hospital in West Bend, Wisconsin, they used the opportunity to design the facility incorporating the best safety practices gleaned from outside of healthcare, including those from aviation, automotive, and aerospace. The design process was based on some key principles—automation as much as possible to avoid human error, visibility of patients to staff, standardization, noise reduction, and patient and family empowerment in the care process. How do these design features benefit patients and care-

givers? In many ways, says Malkin, including reduced infection rates (sinks are placed where the patient can see them and observe whether the caregiver washed his or her hands), medication safety is improved because medications are delivered by tube to the floor and bar coded to match the patient. Also, there is less stress for caregivers in adapting to new locations because rooms are identical and not “mirror images,” patient lifts in every room reduce injuries for the healthcare workers, and sound-absorbing carpeting and ceiling tiles help keep noise levels down.

Listening to Jill Hoggard Green, chief operating officer of Peace Health, describe the design process at their new RiverBend, Oregon, medical campus, it was clear that they were not merely constructing a new building but were transforming the way healthcare was delivered. With clinicians, patients, and families all involved and contributing to the process, there was much organizational and cultural transformation that was happening simultaneously. Nurses were adjusting to redesigned patient rooms and floor plans; patients and families were getting to know their new larger rooms, privacy, and family space; and surgeons were learning how to use the new digital technology and work in the new pods of surgical suites. Clearly, creating a healing space is closely dependent on and intertwined with so many other aspects of an optimal healing environment. Whether it is fostering healing relationships or a healing culture—one cannot succeed without the others.

REFERENCE

1. Rossi M, Lent T. *Creating Safe and Healthy Spaces: Selecting Materials that Support Healing*. Center for Health Design, 2006.

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