THE HEALING POWER OF NATURE

Taking Sustainable Building to a New Level
Environmental responsibility and adequate health care have become national concerns, with everyone from politicians to corporate CEOs offering their opinions on what should be done. Without question, Americans are becoming increasingly more concerned with the well-being of their bodies and their planet, and this concern has started to manifest itself in everything people do. Sport utility vehicles, once in fashion, have lost favor with many people, giving way to hybrid cars. Some Americans have even begun to seek health care in other countries, citing poor access and high prices here at home. To borrow a phrase from environmentalists, “the situation has reached a tipping point.”

San Francisco architectural firm Anshen+Allen, in conjunction with the Health Care Council (HCC) of IFMA, Skanska and other groups, challenged itself to combine the worlds of health care and environmental stewardship to address not one—but both—concerns. The idea was to create a health care environment that was not only state-of-the-art and responsive to patients’ needs, but also as environmentally friendly as possible. What resulted was the Green Patient Room, a first-of-its-kind health care exhibit utilizing ecologically-friendly design and materials.

The greening of health care
First unveiled at D&D Communications Group’s annual Commercial Construction Show in Chicago, Ill., spring 2007, the Green Patient Room was developed to illustrate how sustainable design practices can improve patient care by increasing efficiency and reducing the anxiety of medical staff, patients and families. The room also serves as an educational tool for health care administrators, showing how they can adopt green practices now, whether large or small.

Anshen+Allen Associate Principal and Health Care Council of IFMA President Gary W. Collins helped usher the Green Patient Room from its infancy stage to reality.

“The Green Patient Room shows how far green you can take a typical patient room,” said Collins. “I am not aware of any 100 percent green patient room. That is largely due to the lack of green products designed for health care settings, but this is changing rapidly, which is why this exhibit is such a great educational tool.

“More and more hospitals are migrating to green products and doing as much as they can afford. It may not happen overnight, but this display will help hospital personnel learn how to update their facilities with the latest in green products, whether they want to undertake a multi-phase remodel or go green one component at a time. The Green Patient Room allows you to see and understand how to plan a remodel or renovation to slowly incorporate green products to fit your budget and time frame,” he said.

What exactly constitutes a Green Patient Room?
When Anshen+Allen and the HCC were first asked to design a green health care exhibit for the Commercial Construction Show, they began the process not by focusing on products, but on principles. They had a vision for what they wanted the Green Patient Room to be. They first wanted a room that would demonstrate green
materials and technologies that are economically viable, readily available and appropriate for use in intensive health care settings. They also wanted a healing environment that improves the quality of life for patients, staff and families based on best practices and evidence-based design. Although some concepts of green focus on the ecological impact of buildings, the Green Patient Room promotes a broad view of sustainability that merges many of the strategies behind evidence-based design with those behind green building.

The Green Patient Room was then built around the seven following principles:

- Do no harm—create a safe and healthy room for the patient using principles of evidence-based design.
- Design the indoor environment to promote the health and well-being of staff and families.
- Provide direct connection to the outdoor environment.
- Promote passive survivability—create a place that can function in the face of disaster.
- Minimize the room’s impact on the natural environment through ecologically sustainable practices.
- Humanize the increasingly intense use of technology in patient care.
- Deinstitutionalize the health care environment.

"A commitment to ecologically-safe design means questioning and redefining the concept of healing," said Collins. “When the hospitals we create are constructed with products that are known to cause cancer, reproductive harm and birth defects, and when the construction process puts the natural environment in ecological imbalance, are we really creating a healing environment? Until we heal the healing environment, how can we expect to heal people within it? These were all issues we had to consider as we moved forward with our exhibit."

Moving forward meant that Collins and his colleagues had to overcome design constraints presented by having to construct a free-standing patient room without a ceiling, as well as find vendors willing to donate an entire roomful of products. The logistics eventually worked themselves out. Vendors that were enthusiastic about showcasing their green products rallied around the concept. What started out as seven progressive design principles was now a tangible patient room.

Maximizing comfort through zones
Part of the innovation of the Green Patient Room is that it’s divided into five unique
zones: the family zone, the terrace, the patient zone, the staff zone and the patient bathroom. Each of these zones is meant to improve patient care by increasing comfort and minimizing stress and disorder.

The family zone’s main purpose is to encourage family stays. Studies show that families who visit frequently and stay longer are more involved in the caregiving process, which helps improve patient well-being and facilitate healing. Family areas are a normal component of modern patient rooms, but this one is different in that the designated area brings the feeling of home to the patient—making families feel welcome and part of the healing environment. Reminiscent of a living room, the family zone features a plasma television, sleeper sofa and an Internet-enabled workspace. Additional amenities could include a refreshment station—complete with a mini-bar—and a personal safe, much like what could be found in a comfortable hotel room. The family zone employs a soft, welcoming aesthetic through lighting, furnishings and artwork to further deinstitutionalize the space.

The terrace provides a visual and physical connection between the patient room and the outdoors. Studies show that patients with views of nature tend to recover more quickly, experience less pain and require fewer medications. The terrace area also helps improve patient health and morale by offering natural lighting and fresh ventilation, which reduces the burden on the hospital’s mechanical and lighting systems. This outdoor connection not only supports patient health and well-being, but also reduces energy use and promotes passive survivability, or continued facility operations in the case of a disaster. Emergency preparedness is quickly becoming a major issue for health care facilities, as Hurricane Katrina demonstrated many of the shortfalls of modern buildings. While a terrace may seem like a luxury, the large area of natural ventilation and daylight could be critical to reducing emergency power loads in times of crisis. Should building systems fail, some level of operability will remain. There is a strong link between passive survivability and sustainability. Many strategies that promote operability during a disaster also save resources and improve indoor environmental quality.

Because a patient-centered atmosphere is critical to a successful healing environment, perhaps the most important area of the Green Patient Room is the patient zone. The patient zone is meant to offer an aesthetically soothing experience that focuses on minimizing anxiety and maximizing comfort. Intimidating medical equipment typically placed on the headwall
above the patient’s bed is discreetly located on one side of the bed, where it is easily accessible to medical staff, yet out of sight of patients and their families.

The patient zone is also designed to provide patients with as much control over their environment as possible. One way this is achieved is through a chair bed—a new concept which data indicates promotes quicker recovery and assists patients in regaining mobility and strength. A chair bed is just what it sounds like. It can be rolled into other areas of the patient room, even the terrace, to increase interaction and improve patient morale.

The patient area features a hospitality-focused aesthetic. Thanks to modern technology, a patient can control many aspects of their room by remote control. The television can enhance the patient’s experience by including concierge services, games and entertainment, access to medical information and art and music displays—programs many health care facilities are experimenting with now. Additionally, a wood-paneled ceiling contributes to a warmer mood and features remote-controlled lighting. Other items such as an armoire and ottoman also enhance the area.

The staff zone is designed to accommodate staff workflow and provide better access to equipment. Its goal is to reduce clutter and support necessary tasks while minimizing negative distractions for the patient. The staff zone employs a dedicated hand sink to promote safety and infection control and a workspace with low-level lighting, as to not disturb the patient. An electrochromatic glass viewing window with varying levels of opacity allows staff to see patients from outside the patient room, while also offering a level of privacy for the patient.

The final zone is the patient bathroom, an area that employs many energy- and water-saving technologies and serves as a conservation model for other rooms in the facility. The goal of these energy-efficient measures is to reduce the building’s ecological footprint, save on utility costs, improve visual and thermal comfort and help support building operations in the face of natural disasters. Incorporating optimized energy- and water-efficiency measures is a good investment, as many changes pay for themselves in less than five years and some are subsidized by local utilities. Many of the strategies employed can easily be accomplished as retrofits, so they can benefit existing buildings, not just new ones.

The family zone offers a hospitality setting featuring artwork, lighting and window drapery, as well as a family work area and ample storage options. The terrace offers an outdoor seating area with a coffee table and plants and features furniture made with recyclable polypropylene. | Photo: Anshen + Allen
In the patient bathroom, low flow-rate faucet aerators, showerheads, toilets and urinals are utilized to reduce water consumption. In the bathroom and throughout much of the bedroom, high-performance lighting, glass and insulation systems utilize natural light to help reduce energy costs. Where natural light isn’t used, compact fluorescent bulbs, T5 fluorescents, electronic ballasts and light emitting diodes (LEDs) are used over traditional incandescent lighting to promote energy efficiency.

Although many strategies are executed primarily in a single zone, some are widespread, such as energy-efficient lighting. Non-toxic materials low in volatile organic compound (VOC) emissions are also used throughout the Green Patient Room to improve air quality and speed patient recovery.

**The challenge becomes a reality**

The result is a cutting-edge health care environment founded on sustainability and evidence-based design principles—meaning the dynamic of the room itself can contribute to patient care and encourage the healing process while reducing the room’s impact on the natural environment.

Suzanne Drake, senior interior designer at Anshen+Allen, was also on the Green Patient Room team.

“We are only now beginning to recognize and study the human body’s subtle interactions with the environment—this is what evidence-based design is all about,” said Drake. “Evidence-based design is still a burgeoning science, so whenever we can demonstrate—with hard data—why we need a design which may cost more up front, it’s an easier decision for the building’s owner to make.”

“Evidence-based design gives us, as designers, instant credibility and it gives building owners peace of mind that they are making the right decision. It’s really opening a new field of study to psychologists, medical researchers and environmental behaviorists. What I’m talking about is a new dialogue between the design world and the world of science,” she said.

The Green Patient Room was featured at IFMA’s World Workplace 2007 Conference & Expo in New Orleans, La., and will be featured in at least six other events throughout 2008, including the Green Hospital Building & Design Conference, the ASHE Planning Design & Construction Conference and the Healthcare Facilities Symposium & Expo. What was once seven principles and a tremendous challenge is now an innovative health care setting that will have a measurable impact on the hospitals of tomorrow. *FMJ*

**About the IFMA Health Care Council**

The IFMA Health Care Council welcomes facility managers working for hospitals and other related organizations. Members learn about the latest innovations in the field, tour health care facilities and network with other professionals. For more information, contact Council Services Liaison Jeannie Nguyen at jeannie.nguyen@ifma.org.