



## Just what the doctor ordered:

**Green patient room promises faster recovery, lower costs as well as environmental benefits**

by Don Kreski

Hospitals have much to gain from taking a friendlier attitude to the environment.

According to architect Michael Stack of Anshen+Allen, Boston, studies have shown that a 'greener' patient room design can help people heal faster, increase staff efficiency, and improve the medical center's ability to stay open and productive in the face of catastrophic events, such as the power plant failures that occurred in the wake of Hurricane Katrina. Such a design can also make a difference in a hospital's profitability—which of course is crucial if these institutions are to continue to provide

high level care.

Stack and his team took these concepts and designed a full-scale prototype

that is touring industry trade shows and conventions, including the American Society for Healthcare Engineering National Conference July 20-23 in Washington DC.

"When they go to conventions, hospital planners can see the latest product innovations on display, but they often have a hard time visualizing how everything works together," Stack explains. "Our goal was to create something that would show these new materials and technologies but also demon-

strate how giving patients certain amenities can actually help them heal more quickly and get out of the hospital faster."

Among other innovations, the prototype includes a medical information center built around a 46" Sharp® PN-465UP LCD display.

### **A technology center in every room**

The elimination of paper is part of any green medical plan: by putting patient records on computer hospitals have made great strides in reducing the need not only for hardcopy records but for the physical space to store them and the

extra staff to keep them organized. Anshen+Allen's green patient room takes this process a step farther in eliminating traditional medical charts and replacing them with a networked computer tied to a 46" Sharp display on the wall behind the bed. The high resolution monitor not only shows patient records, but x-rays, MRIs, cardiac scans, and other diagnostic material.

Actually the prototype room includes three flat-panel displays. The second is mounted in the room's family area and is included so visitors can watch TV. A third, mounted across from the patient, is meant mainly for television viewing, but is also tied in to the hospital's computer network for those times when a doctor wants to show the patient an X-ray or cardiac scan, and also when he or she wants the patient to view an informational video.

Stack says the design team placed the main information display behind the patient's field of view for two reasons. "The most important is that medical information can be upsetting to many people and may not promote the healing process. But when doctors visit a patient they often put their clipboard or laptop behind them and then turn away while consulting the records. Even something as subtle as increasing eye contact can help reduce the patient's stress."

The choice of the display itself was also carefully made. "We chose Sharp for several reasons," Stack explains. "Its size and resolution were very important for what the doctors would be viewing. Its fanless architecture was crucial as

well. A lot of these will be critical care rooms, where even something as subtle as a cooling fan will pull in dust and get dirty. And studies show that machinery noise in hospitals adds to the stressful situation for many, and we wanted to reduce the stress as much as possible."

### Evidence based design

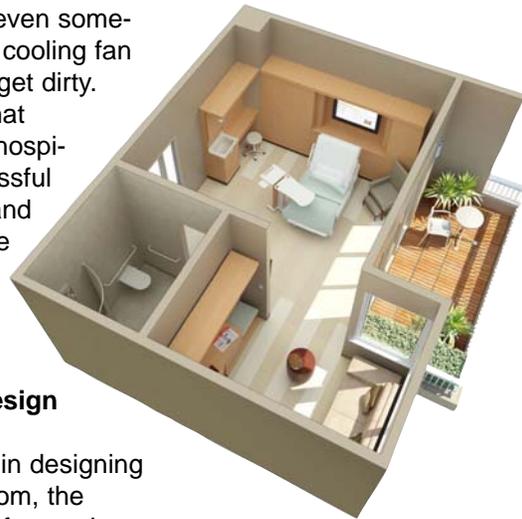
Stack explains that, in designing the green patient room, the Anshen+Allen team focused on research relating the hospital environment to the healing process.

A hospital stay is a stressful experience for most people, he says. "Studies show that natural light, lower noise levels, family presence, and a view of the outdoors all reduce stress, promote faster healing and decrease the need for medications." So the room includes an alcove with a sleeper sofa and work area for family members, minimizes noise and machinery, and even has an open air terrace.

"The terrace may seem idealistic," Stack explains, "but it helps to control solar gain and thus reduces dependence on air conditioning." The availability of fresh air and natural lighting reduce energy costs, and in a regional catastrophe with power outages, they would be crucial in keeping the hospital open.

### Many stakeholders

Stack says every aspect of room's design came out of the research –



even its upscale look. "You'd think people would always choose a hospital based on its care, but that's not necessarily true," Stack explains. "They're patients, but they're customers too, and they do ask, 'is this the kind of room I want to be in?'" That was another reason the team chose the Sharp display.

"With the baby boomers retiring now," Stack explains, "they're going to need more medical attention. Hospitals are very aware that many in this generation have the type of income that if the nicer hospital costs a little more, they're going to go with it."

In the end, Stack and his team set out to build a room that is kinder to the environment, keeps working in a crisis, helps patients heal faster and helps the hospital as well. "We wanted to make sure that the patient, the family and the hospital were all taken care of."