REPRINTED FROM
HEALTHCARE DESIGN
SEPTEMBER 2011 • VOL. 11, NO. 9

PATIENTS

FIRST

The Benjamin and Marian Schuster Heart Hospital at Kettering Medical Center

BY RICHARD L. PECK, CONTRIBUTING EDITOR; PHOTOGRAPHY BY ED LACASSE PHOTOGRAPHY

Figure 1

Is "patient-centered" design becoming a cliché? Some say yes, that the term covers everything these days from warmly hospitable to bare minimalist, depending on the tastes (and budgets) of the sponsors. When a leading faith-based healthcare system commits to defining "patient-centered," though, it can take on new meaning.

The motto "patients first" was the driving force behind the design conceived for the Benjamin and Marian Schuster Heart Hospital at Kettering Medical Center, which is one of seven hospitals comprising Kettering Adventist Healthcare in Dayton, Ohio. In keeping with a religious denomination known for its emphasis on personal health and wholesome lifestyles, network administrators pushed for design innovation for "the good of the patient." And they accepted a highly conceptual approach to make it work.

As regular *HEALTHCARE DESIGN* readers know by now, interior designer Jain Malkin, CID, AAHID, EDAC, directs one of the most conceptual design firms in the business. Malkin and her San Diego-based team at Jain Malkin Inc. have become known for incorporating, and even creating, strikingly original features that enliven the patient/family experience. The 130,000-square-foot Schuster Heart Hospital, a multi-service facility that opened in September 2010, is one of the latest examples of this. Challenged by the Kettering system to express traditional human and religious values in the new facility, Malkin borrowed from the widely recognized concept of the five elements of nature—earth, wood, fire, water, and metal—to express the Creation theme that underpins the Adventist perspective. The symmetry with the new five-story structure was perfect; each floor could be designed to invoke a particular element of nature, opening up areas of creativity and imagination within each paradigm.

"Overall, we wanted to create a sense of peace and calmness," says Brenda Kuhn, RN, PhD, Schuster's director of nursing. "The five elements worked well for that, and we complemented this with the layout of the facility, decentralizing nursing into five pods per floor to bring the nurses closer to patients and families (Figure 1)." The challenge for nurses working in the new setting was huge, says Sally Sterzer, RN, BSN, nurse manager for Schuster 3 East. "Our nurses came from traditional nursing units, and we had to think outside the box to create new processes that would work. Everyone got on board because we emphasized that patients come first—everything we did was structured around that," she says.

It was Malkin's charge to create a healing environment using the five elements of nature to provide a setting for patient-centered care, a place of serenity that reduces stress and encourages healing. Through a combination of natural materials, color, and graceful architectural forms, the design offers visual enrichment and distraction. Malkin

Figure 2

and her colleagues, headed up by design principal Michele Woodard, CID, EDAC, along with senior designer Christie Mayer and designer Casscia Murray, LEED AP, interpreted the concept for each floor.

Floor 1 (Earth)

Earth serves as a foundation and grounds us, both literally and figuratively. The lobby/registration/retail and outpatient services spaces (Figure 2) invoke earth in several ways. The lobby features a stone floor and stacked stone walls in selected areas. Earth as a foundational element is also expressed by dramatic crystal tribute pieces that honor Charles F. Kettering and Dr. Benjamin and Marian Schuster, hospital namesake and key philanthropist, respectively. The Creation wall (Figure 3), created by the Malkin team with bronze plaques designed by local artist James DeVries, expresses the event in Old and New Testament language.

Figure 3

"CEO Fred Manchur, who was so inspirational in all of this, had seen the Creation series on the campus of Cedarville University (Cedarville, Ohio) in a setting located on a pond and wanted very much to include them in the new facility. The result was a beautiful piece of art to greet patients and families as they make their way to the main circulation paths of the hospital," Malkin says.

Similarly inspiring to visitors are the wall-mounted tributes to Kettering and the Schusters, both displaying the etched crystal/interactive LED lighting technique developed by Christina Amri and her Amri Studios (see "Flight of Fancy," *HEALTHCARE DESIGN* June 2011, Vol. 11, No.6, pg. 112). Kettering's career as a prolific inventor is well known to anyone familiar with American industrial history.

Figure 4

Figure 5

In brief, as research director for General Motors during the early 20th century, Kettering invented the automotive electric self-starter, colored auto paint (breaking away from Henry Ford's basic black), Freon for air conditioning, leaded gasoline, and the application of magnetism to imaging technology, otherwise known as MRI. His storied career is encompassed in Amri's crystal panels located near the lobby entrance (Figures 4 and 5). A smaller but no less heartfelt Amri tribute has been created for the Schusters, Dr. Schuster being a prominent and widely admired Dayton cardiologist and, along with his wife, philanthropist.

The lobby is designed to appeal to visitors in its overall sweep (Figures 6 and 7) and comfortable seating nooks.

Floor 2 (Wood)

Along with wood paneling near the elevators, this space for 25 interventional cardiology and electrophysiology rooms is highlighted by an undulating wood ceiling—actually, curved pieces of wood interspersed with lighting (Figure 8). Patient corridors are illuminated by square recessed wall lighting so that in no area is a gurney-borne patient forced to stare at blinding overhead lights (Figure 9). Aside from its aesthetic benefit, notes Malkin (whose firm designed much of the facility lighting), the indirect lighting solved a structural problem posed by the ceiling heights due to minimized plenum space resulting from the connection of the newer building to the older hospital. Natural lighting, meanwhile, is introduced plentifully in prep and recovery rooms and the off-stage staff corridor.

Floor 3 (Fire)

This floor devoted to cardiovascular inpatient rooms evokes the warmth and calm of hearth and home. Reds and oranges predominate

Figure 6

Figure 7

Figure 8

Figure 9

in its palette, with faux votive candles (LEDs) displayed in wall nooks (figure 10), blown-glass pendants glowing red in the waiting area, and a flickering "fireplace" of computerized LED lights reflecting off faceted glass marbles set in a custom resin panel. Patient rooms are private and offer the zoned layout—patient, staff, family—that typifies modern design. Large windows frame panoramic outside views and plentiful natural light, with the needed wall space freed up by locating bathrooms inboard, as supported by Manchur.

The patient headwall (Figure 11) incorporates a photo of water lily pads, and, overall, the room is bright and airy. The nursing core on the floor is set-off by tall cylindrical glass vases arranged with colorful silk flowers. This is one of a number of design features patients discover as they ambulate around the corridor. Each of the decentralized nursing pods is a sit-down work area with computers and easy hallway access to supplies, fostering the decentralized approach that Sterzer says the nurses now welcome. Continuing staff unity is promoted by daily staff meetings/prayer sessions, she adds.

The inpatient care floor also has adopted a cutting-edge stance on healthcare carpeting. Despite misgivings by some staff, the third floor corridors are fully carpeted. Acknowledging traditional maintenance and safety concerns about carpet in the healthcare setting, Sterzer notes that today's carpeting is designed to address those concerns while enhancing the patient environment in the process. "I emphasized to nurses and physicians that carpeting the patient unit corridors afforded a much quieter, relaxing patient experience, and both groups very quickly got on board," she says. Malkin echoes her confidence, noting, "No studies have ever shown infectious outbreaks traced to carpet. Schuster's infection control nurse has been very positive about this and is on board with the research."

Floor 4 (Water)

Themed as the perfect element for the birthing experience, the obstetrical floor features a 20-foot-wide, 8-foot-high art wall constructed of layered glass panels depicting a Japanese garden through a mist of rain (Figure 12). Rippled glass simulating rain gives the sense of water droplets. Design principal Michele Woodard says, "This feature was designed in-house, purchasing the photo from an online source, assembling the glass materials, and designing the framing and lighting. The fourth floor as a whole has a

Figure 10

Figure 11

Figure 12. *Photo by Jain Malkin*

blue-green palette and conveys the concept of water as essential to life and as a symbol of new beginnings."

Floor 5 (metal)

Fittingly enough for the orthopedic floor, metal represents strength in its many forms. And what could be more metallic than a 20-foot-wide curtain composed of interconnected links of chain of different metal colors that depict trees against a metal hillside (Figure 13) Senior designer Christie Mayer, with a background in industrial design, was instrumental in developing the special feature elements. "Creating this highly unusual feature was a challenge," Malkin says. "It became one of the most talked-about features in the hospital—it's worked out fantastically well."

Malkin concludes that the effort to conceptualize the interior of a new healthcare facility in such a creative and elaborate manner is well worth it. "Patients, families, and staff have something to look at and respond to wherever they go, and the facility is engaging and calming," she says. "Too often these days I see all-white walls and few design features in patient and staff spaces being offered as 'patient-friendly' design—something I've observed in several new healthcare projects. This might work for a Norman Foster modernist structure, but, in healthcare, white is nothing but institutional, reminiscent of the bland hospitals of the 1950s and 1960s. It's sad, because we have come so far and learned so much since then."

From the client viewpoint, Kuhn notes that patients and staff have expressed great pleasure with their new surroundings, with patient satisfaction running above the 90th percentile in surveys and visitors frequently commenting on how peaceful and attractive they find the various features. "Everyone senses that the patient really does come first here," Kuhn says. **HCD**

Figure 13

REPRINTED WITH PERMISSION FROM THE SEPTEMBER 2011 ISSUE OF *HEALTHCARE DESIGN*. ©2011 VENDOME GROUP LLC. ALL RIGHTS RESERVED.