

The real architects of health care reform

Design project reimagines hospital rooms

By E.J. BOYER
eboyer@bizjournals.com
615.846.4258

Two Nashville companies are at the heart of a national effort to design a hospital room that will transform patient care.

Dubbed “Patient Room 2020,” the latest version of the project is set to be unveiled later this month at the DuPont Corian Design Studio in New York City.

Designed in collaboration by architects, engineers and hospital administrators from national companies, the room prototype integrates technology, architecture and medical processes from the ground up.

Debbie Gregory, a senior clinical consultant at Nashville-based engineering firm Smith Seckman Reid Inc., is a board member and consultant on the project, which is being led by NXT, a South Carolina-based nonprofit that sponsors design innovations to improve health care.

“It’s all about the technology,” Gregory said of Patient Room 2020. “It’s about what could we do in the future, not about what we are doing now.”

The star of the room is a “patient ribbon” — a strip of technology that will replace standard hospital headwalls and more.

The patient ribbon will start at the head of the bed, where a traditional headwall would be, and run up the wall, across the ceiling, and down the opposite wall of the hospital room. By the patient’s head, the ribbon will serve as a power strip for medical devices and patient lines, like a traditional headwall but with added capacity. Above the bed, the ribbon will have built-in lighting and features such as a sound machine that the patient can control to drown out the beeps of medical machines. The opposite side of the ribbon acts as a screen to display a patient’s health vitals and enable virtual visits with family members and remote doctors.

In explaining how the prototype will get into real-life hospitals, Salley Whitman, NXT executive director, said Patient Room 2020 is similar to a concept car.

“Toyota rolls out the latest concept car, but what you see are parts of that car being put into cars that are actually on the road. The end goal is to take the products that are developed through this and get to hospitals,” she said. “The patient ribbon is a really strong component that can be built today. Instead of a renovation replacing all the headwalls, let’s just build the patient ribbon.”



RENDERING COURTESY OF PATIENT ROOM 2020 AND CLEMSON UNIVERSITY

A technology “ribbon” that stretches across the ceiling is a signature feature of hospital rooms of the future, as envisioned in a new hospital room prototype.

The plug-and-play concept behind many of the design features in Patient Room 2020 is where Andrew Quirk, senior vice president of Skanska USA Building’s Nashville-based health care practice, comes into the equation. One of Skanska’s specialties is prefabrication manufacturing.

The patient ribbon is plug-and-play technology, which can save money for hospitals.

“It’s all panelized, so as technology changes, all you have to do is order ... parts for this ribbon, one at a time,” Quirk said.

For Quirk, an architect, the technology — not the design — is what sold him on Patient Room 2020.

“The industry is looking for a solution for patient rooms that was going to respond to the Affordable Care Act,” Quirk said. “[We] didn’t want to just add a flat-screen TV or a big window. It’s about the technology.”

Skanska has been involved with the project for about six months and is volunteering time and resources to help build the New York City prototype. Smith Seckman Reid has been involved on the technology side, introducing the designers to vendors and serving as a sounding board for clinical workflow issues.

To help prevent hospital-acquired infections, Patient Room 2020 incorporates “smart” clinical stations to create a visual cue for hand washing. Through color-coded lighting that is synced with radio-frequency identification badges worn by clinicians (which track their whereabouts), the sink will light up with a red halo whenever a caregiver walks into the room. The red light will turn off only when the caregiver has washed his or her hands, giving the caregiver a visual reminder, but also creating peace of mind for the patient and family.

Other design features include pull-down grab bars in the showers, bathroom doors that can fully open to allow easier access for patients in wheelchairs, pull-down charting stations by patient beds for nurses, and family work stations.

The prototype will be unveiled later this month during New York City’s Design Week, giving partners like Skanska and Smith Seckman Reid the opportunity to share their work with hospitals. “We can start bringing clients in and show it off to them,” Quirk said.

E.J. Boyer covers Nashville’s health care industry and legal affairs.