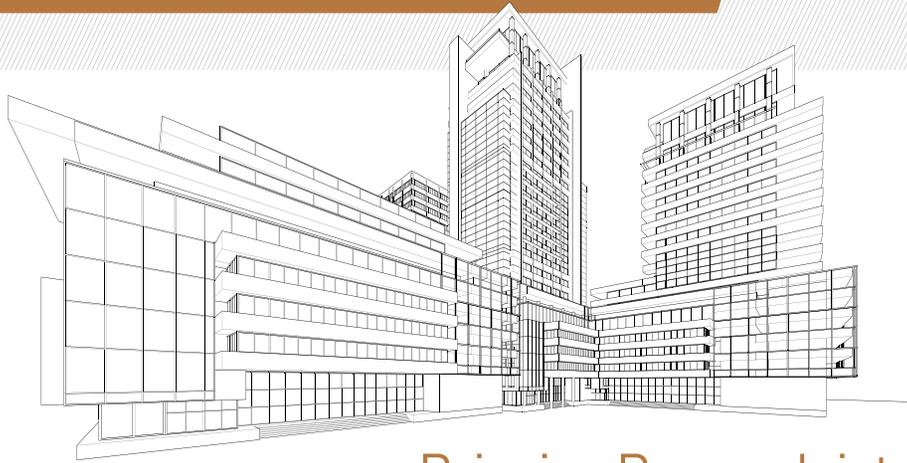


# THE WEIGHT OF EVIDENCE:



## Bringing Research into Hospital Design

BY HANNAH STUART

PATIENTS AND HEALTHCARE FACILITIES REAP BENEFITS FROM EVIDENCE-BASED BUILDING DESIGN, EXPERTS SAY.

**WHEN HOSPITALS AND** health systems construct new facilities or renovate existing spaces, they are turning increasingly to design techniques that incorporate research on enhancing care. The resulting improvements are invaluable, particularly as healthcare quality is measured to a greater degree by outcomes and the patient experience.

Architecture firm EwingCole and Clemson University recently won prestigious design awards. Below, they discuss their data-driven approaches to advancing care.

### PATIENT-CENTRIC DETAIL IN AN AMBULATORY SURGERY CENTER

EwingCole won a Best of Competition Healthcare Interior Design award from the International Interior Design Association (IIDA) for work on the Brandywine Valley Specialty Care and Ambulatory Surgery Center in Glen Mills, Pennsylvania. The center, part of the Children's Hospital of Philadelphia, was created to enhance suburban access to the hospital's pediatric care.

The project was "sensitive to the patient's path of movement throughout the space and how the design provided sequential movement and experiences along the way," says Tiana Lemons, IIDA, EDAC, NCIDQ, Healthcare Studio Leader at Orcutt | Winslow, an architecture, planning and interior design firm, who was one of the judges for the award. "This space is a progressive center for the care of children that enriches the family experience, increases workflow efficiency and promotes healing."

EwingCole focused on improving the areas in which patients wait. From bright and cheerful color accents to design that considers pediatric patients of all age groups to the extensive use of natural light, the building exudes warmth and comfort.

"There's a good statistic that says most of the people who express dissatisfaction with their patient experience already come to the doctor or the caretaker unhappy," says Saul Jabbawy, Director of Design and Principal at EwingCole. "So where does that happen? That happens somewhere between

arrival, parking or not being able to find a place to park, greeting, and waiting, particularly at a larger healthcare institution."

EwingCole felt that by making those early impressions more agreeable, the design would give physicians and other providers a better chance to foster a positive patient experience.

"We went to great effort to create a landscape around the building, and most of the waiting areas, including the rehab gym, are overlooking those landscaped gardens," Jabbawy says. "We have this whole area of landscape between the road and the building which begins to make it a lot more domestic and a lot friendlier to the visitor."

Safety was another focus. Exam rooms in the ambulatory center are standardized to minimize error, and separation of patient and provider traffic addresses infection control concerns. Circulation in general, of both patients and staff, is simple and clear, and should the building grow in the future, the design supports expansion of both waiting and treatment areas.

"In a competitive market, people's experience becomes really important," Jabbawy says. "It's the interface between the architectural spaces and framework and the people who are serving the patient ... That sort of interface between the caregivers or the touch points where a patient meets staff and the sort of architectural environment are the two things that can provide for the needs of the patient and define the experience."

### A HUMAN-CENTERED OPERATING ROOM

Clemson University's Realizing Improved Patient Care Through Human-Centered Design in the Operating Room (RIPCHD.OR) recently won The Center for Health Design's Gold Level Evidence-Based Design Touchstone Award in the conceptual category. RIPCHD.OR exemplified what The Center for Health Design describes as three key components of the evidence-based design process: collaboration, evaluation and sharing.

The Clemson project is unique, says Donna Deckard, BSN, MPA, EDAC, Director of Strategic Projects at The Center for Health Design.

"Clemson University received a four-year grant from the Agency for Healthcare Research and Quality to support the development of a learning lab," Deckard notes. "Their goal was to create, as they said, 'an optimal, ergonomically sound operating room that results in improved patient and staff safety.'"

Clemson's work began in September 2015. The team's goals were to reduce infections, improve visibility in the OR pipelines and prevent falls, and the design strategy was to reach those goals using evidence-based guidelines.

"We came up with initial ideas, and then we built a cardboard mock-up of the operating room," says Anjali Joseph, PhD, EDAC, Spartanburg Regional Healthcare System Endowed Chair in Architecture + Health Design, Director of the Center for Health Facilities Design and Testing, and Associate Professor of Architecture and Public Health Sciences at Clemson. "[We] had the clinicians come in, and they tested it by moving things around and simulating the process. They would bring a patient in and transfer them. We wanted to see how much space there was. Was there any likelihood of any disruptions or [anyone] bumping into one another?"

A high-fidelity, physical mock-up of the OR was unveiled in Charleston, South Carolina, on Jan. 25, 2018. The focus for the remainder of 2018, Joseph says, is evaluating how the mock-up functions in simulations of both typical and extreme situations. The final design will be implemented at the Medical University of South Carolina's future Ambulatory Surgery Center.

Some methods used in Clemson's OR design are already being put into practice in the construction of a new pediatric center in North Charleston, giving weight to the years of research and work by Joseph and the team at Clemson. ■

“The evidence-based design process [is] not just about using research to inform design. It's also encouraging people to evaluate results and add to the body of knowledge in the industry.”

— DONNA DECKARD, BSN, MPA, EDAC, DIRECTOR OF STRATEGIC PROJECTS AT THE CENTER FOR HEALTH DESIGN