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Strategic design process results in improved patient outcomes

Recent studies reveal an important truth that will shape the future of health care projects: A sound design and construction strategy for hospital programs not only improves time to market while reducing costs, it also improves patient outcomes.

With a focus on quality care ranking at the top of health care initiatives, the value of this finding is both timely and meaningful to health care providers, patients and strategists alike — and for very different reasons.

Rewinding slightly, a series of studies was assembled by the Center for Healthcare Design, a nonprofit research and advocacy organization, and sponsored by The Robert Wood Johnson Foundation, the nation's largest philanthropy devoted exclusively to health and health care.

In the most extensive review ever done of the evidence-based approach to hospital design, more than 400 research sites examined the link between hospital design and patient outcomes. What they found was that health care environments have substantial effects on patient health and safety, care efficiency, staff effectiveness and morale.

Small changes resulting from sound pre-construction strategies during the design phase have major impacts, according to the studies. For example, acoustical panels utilized to decrease noise levels resulted in a 30 percent reduction in medical errors. Patient falls declined by 75 percent when nursing stations were positioned effectively. Smart lighting design significantly decreased patient and family anxiety, depression and anger. Private rooms and sink locations affected hospital-acquired infection rates. And the list goes on.

OPPORTUNITY FOR EXCELLENCE

The study comes at a time when the design and construction of new hospital facil-



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ities is at an all-time high, giving hospitals more opportunities than at any point in history to improve patient outcomes through more insightful, strategic design. But customer-centric environments designed to improve patient outcomes also come with a price tag, and hospitals are faced with a big-ticket expenses.

So what is a hospital to do? Sticking to the status quo is one option sure to end negatively in a marketplace where multiple health care providers are pursuing the same patients. Conversely, developing distinguishable, best-in-class facilities to deliver patient-centric care is not only admirable, it's a competitive necessity. Hospitals must be built better, cheaper and smarter while reducing hospital costs and providing an exponential return on investment.

That's a tall order to fill, but it is possible. And it's being done in Houston.

DESIGNING EFFICIENCIES

According to the Lean Construction Institute, a typical design and construction project is 20 percent to 30 percent inefficient. Why so much waste? The answers vary, although they consistently point back to poor planning and a lack of attention to the little things that add up to big expenditures.

The process for managing design and construction projects must eliminate the traditional fragmented design and construct. A new delivery approach centered on early strategic planning is the solution. Instead of designs driving the budget, the budget should drive the design. It also must embrace the procurement of key components of capital development — design, procurement, construction, commissioning and operations of new and expanding health care facilities.

In Houston, Memorial Hermann Healthcare System utilized a comprehensive design and construction strategy for its \$35 million, 93,000-square-foot Memorial Hermann Memorial City Heart & Vascular Institute, the nation's first fully digital "community-centered" catheterization facility and the only neuro-ICU facility outside the

Texas Medical Center.

The project was originally scheduled to take 24 months to complete.

The company's strategy reduced the overall time to market by 25 percent, whittled the budget by 20 percent and allowed for enhanced finishes and patient services. The Institute, which opened in fall 2005, offers its patients access to settings equipped with the latest tools and technologies, including advance imaging modalities on patient floors, while improving on the level of finishes and services.

The planning process began with facilitating a partnering approach which allowed not only the project team but the actual users of the facility to make decisions, not only on operational issues but also allowed them to make design decisions which ultimately impacted patient care and resulted in improved patient outcomes.

CHRISTUS Health is another innovator to utilize proven, proactive design and construction strategies to keep its projects on track, on budget and on schedule. CHRISTUS may also soon break ground on a fully digital, state-of-the-art acute care facility in the master-planned community of Sienna Plantation in Fort Bend County.

A comprehensive design and construction strategy is being used to drive the planning process on that project as well. CHRISTUS Health will also soon complete a \$49 million renovation and expansion of CHRISTUS St. Catherine Hospital, which was planned and executed from a comprehensive design and construction strategy process.

As health care institutions blaze new trails in Houston's patient-centric health care delivery, everyone is watching closely as the benefits of a strategic design and construction process unfold through innovation, time to market improvements, tighter controls and welcome cost reductions.

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