BECKER'S
Hospital Review
BUSINESS & LEGAL ISSUES FOR HEALTH SYSTEM LEADERSHIP

8 Trends in Hospital Design and Development

November 12th, 2010

Proficient healthcare design gives hospitals the buildings and framework to help them gain efficiency and avoid risks associated with healthcare reform. **Doug Strout**, healthcare practice leader for **KMD Architects**, explains recent trends in hospital design along with tips for hospitals considering future development.

1. Design-build is a cost-effective, time-saving delivery method. Traditionally, architects and engineers designed and documented instructions for contractors to build, a project delivery system known as design-bid-build. General contractors bid for the work and came in on the project after the design had been established. With the design-build process, however, contractors and architectural/engineering design teams combine forces to collaborate on design and construction. This approach, called a turnkey delivery method, is meant to reduce the time-cost and financial burdens of the project. "This will become more frequent since hospitals are looking for opportunities or delivery methods that allow them to have what they need sooner and with less cost," says Mr. Strout. The Surgery/Emergency Replacement Project at Harbor-UCLA Medical Center in Torrance, Calif., is a current KMD project being designed and constructed via design-build delivery method.

2. EDs will become a top priority for hospitals. Intuition may lead many to believe that if more people are insured through healthcare reform, they won't use emergency departments for primary care, resulting in a lower demand. It's actually the opposite: there will be an increased demand for ED services, impacting all ED departments, according to Mr. Strout. With a physician shortage, fewer patients will be able to get timely appointments. Also, approximately 16 million Americans still won't have insurance and will continue to use EDs as primary care.

A recent poll showed more than two-thirds of ED physicians expect ED visits to increase, says Mr. Strout. This is already happening in Massachusetts, where statewide health insurance reforms recently implemented universal coverage and lowered the number of uninsured to 5.5 percent in 2008. ED visits in Massachusetts increased between 1.5 percent and 2.4 percent annually between 2004 and 2008, according to an American Medical News report. Part of this increase is attributed to the difficulty Massachusetts residents face in accessing primary care physicians, leaving officials comparing the situation to carrying a check that can't be cashed.

In anticipation of the increased demand on emergency services, KMD placed priority on updating the facility master plan for Salinas (Calif.) Valley Memorial Healthcare System, expanding the ED in the earliest phase of construction. Similar approaches were taken with the addition at John Muir Medical Center in Concord, Calif., and El Camino Hospital in Mountain View, Calif.

3. IT is becoming increasingly important, along with a focus on meaningful use. Due to government incentives for a fully meaningful EMR system, hospitals need to integrate IT throughout the entire facility. Beginning in 2015, hospitals that do not demonstrate meaningful use will face penalties through reduced reimbursements. In August, only two percent of hospitals could meet new federal EMR standards. "Those hospitals that don't do this well will either go out of business or be targeted for mergers," says Mr. Strout. It's not a small investment, however, and those hospitals unable to get the money to invest in IT will be at risk. Similar to the prioritization of emergency services at Salinas, KMD assisted the hospital by prioritizing the integration of a major, modernized IT/EMR system upgrade. Preparation for this included coordinating an array of data closets, support spaces and infrastructure for the EMR upgrade that would integrate current and future medical planning of campus and hospital buildings.

4. Operational efficiency may outweigh environmental concerns for a period. While many hospitals may strive to be environmentally conscious and sustainable, they will be challenged to afford it financially unless it directly improves the quality of healthcare delivery. "In their initial response to healthcare reform, many hospitals are focusing inward on operational efficiency to reduce and manage their bottom line," says Mr. Strout. Because of that, many capital projects have been paused and reprioritized for future consideration. "Our hospital clients remain very interested in the future of sustainable design, but are postponing some of those projects to get over a current operating cost hurdle," says Mr. Strout.

An example of this is the Welcome Center planned for Salinas. Currently on hold, it remains a scheduled phase of their long term master plan and is anticipated to achieve LEED Platinum status, according to Mr. Strout. Its various sustainable design features will include natural ventilation, a green garden roof, water reclamation and demand reduction, renewable energy, wind turbines and solar thermal arrays.

5. Hospitals will increasingly rely on solid, flexible master planning, responsive to future technological, political and economic changes. Master plans are ongoing designs that make a hospital's strategic plan a physical reality and should not need much, if any, revision. Hospitals need flexible master plans that can adapt to changes, maintain vision and continue to move forward since this is the only way a hospital can be efficient in design and development. If something changes, whether politically, technologically, economically or demographically, a solid master plan will not be derailed. Mr. Strout points to KMD's Brigham and Women's long

term master plan as a success story. “It was developed over 20 years ago, and it’s still holding true. That’s what I call a really good, flexible master plan. Alternatively, if it’s prepared too rigidly, within a short time period, it becomes irrelevant, finds its way to a shelf to gather dust and costs the hospital commission for a new master plan,” he says. KMD’s scenario planning approach to facility master planning is designed to respond to alternative futures and allows a hospital to be nimble through the years in the future development and evolution of their campus. This was the case with Brigham and Women’s.

Master plans are the most cost effective tools for hospital development. If it is poorly designed, it can end up costing hospitals significant money. For example, Mr. Strout says a poor master plan may box in an ED, leaving it little opportunity to grow. “A good master plan allows for future horizontal and vertical expansion opportunities for particular hospital departments that will likely require future growth, such as radiology, surgery or emergency services,” says Mr. Strout. If this occurs, a hospital may have to spend money on redesign or possibly move to another facility, spending much more than if the master plan had left room for department growth.

6. Government officials may become increasingly involved in development. Massachusetts has become somewhat of a crystal ball for the nation when it comes to healthcare reform since it boosted health insurance coverage years ago. Many of the changes in Massachusetts hint at trends that may be sweeping across the country as reform programs take effect. In June, Massachusetts’ government officials decided to review expansion applications and certificates of need more stringently to curb healthcare costs. “I do believe certain actions from states like Massachusetts may prove to be an indicator of how the rest of the country is going to be affected,” says Mr. Strout. If government officials became more involved in Massachusetts, it could be an indicator of a forthcoming trend nationwide.

7. Projects funded by philanthropy are sounder, but still facing challenges. Many hospital foundations running campaigns have a few deep pocket resources from which to anchor a charity based project, but also depend heavily on the average donor. “Those are the projects greatly impacted by the recession,” says Mr. Strout. “I do know philanthropy has been affected. When hospitals manage a $2 million campaign, for example, they’re finding they might rely on more than half of that money from big donors, but the average donor is impacted greatly by the recession and may not have the resources to contribute as they may have before.”

Specific hospital programs, such as cancer, pediatric care or women’s health, still garner the steadiest philanthropic support. KMD is involved in a number or projects that are mostly paid through philanthropic services, such as the Center for Cancer and Blood Disorders at the Children’s Medical Center in Dallas, a pediatric cancer department primarily funded through a philanthropic source.

8. Small project building booms may occur. Hospitals will need to survive on less income after the reform, and one way this will be evident is through more small-scale development projects. “Hospitals are going to step back and only minimally invest, so we may see the big trend of smaller projects as an outcome,” says Mr. Strout. When healthcare reform was first being introduced, many short-term projects came to a screeching halt as hospitals began to reconsider their necessary components. “What we’re seeing in the industry, is when construction halted and hospital organizations wanted to ‘see what happens’ with healthcare reform, many hired strategic consultants to guide their future business plans. The natural outcome was to revisit their short-term and long-term master plans,” says Mr. Strout. Projects may not necessarily be small, but may combine various service lines and decant outpatient services previously located on campus. For instance, KMD recently designed UCSF’s new Osher Center Medical Office Building. It’s an outpatient facility that also houses a number of medical offices, including the Osher Center for Integrative Medicine. The building is set to open in Nov. 2010.

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