

Specialized health care facilities are on fast track to innovation

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Across the United States, the physical infrastructure of the health care system is aging. Facilities designed decades ago do not address the challenges of today or the evolving way-of-life. Today, numerous health care facilities are undergoing massive renovations, and new environments are being developed that reflect the growing need for specialized and outpatient treatment centers.

Many illnesses and diseases once thought to be irreversible can now be managed through focused care, not a stay in the hospital. The growing elderly population is placing additional pressures on existing systems. The overall result is the increasing drive to create health care facilities that address new needs -- quickly, with tight budgets and tight deadlines. Health care facilities are on the fast-track in Houston -- and across the nation.

Specialized environments

The very definition of a health care facility is changing. As inpatient care is reduced, there is a corresponding trend toward increased outpatient health care.

An outpatient clinic is less expensive to build and operate than a hospital. A new generation of outpatient treatment centers is becoming increasingly popular as a result. One example is the growing number of dialysis service clinics for those diagnosed with chronic kidney failure.

No longer do patients have to seek dialysis treatments in few-and-far-between locations. Today individuals requiring dialysis services can go to locations around the country for treatment.

Specialized facilities, serving hundreds of thousands of Americans, are part of the increasingly patient-driven health care model. More specialized environments, providing services to a specific segment of the population, are replacing hospitals and addressing long-term care issues.

New and substantially renovated health care facilities face another challenge -- their sheer expense. New build-out for an outpatient or treatment center averages two to three times the cost of a typical corporate office. Complex plumbing requirements, the absolute focus on sterilization and cleanliness, and the necessity of creating an office within the doctor's office for processing the endless insurance and Medicaid paperwork, all add to the expense. Specific fire and other safety codes add to the complexity.

All health care environments, whether a dialysis clinic or an outpatient treatment of another type, need to also be designed for maximum accessibility. The individuals visiting the clinic require facilities that are designed to accommodate all types of physical limitations. In renovations of older facilities, accessibility can add significantly to the cost. In new build-out, the best strategy is to design for universal access.

Design process

Health care design and architecture has evolved quickly to deal with the new demand. Given the complexity of the environments, new processes and design strategies must be employed to achieve tight deadlines, manage expense and create environments that ultimately promote wellness.

- The design team. Securing the complete design team from the onset of the project, leveraging technology for communications and designing space that streamlines operations are all key to developing and establishing successful facilities.

The team is critical to the success of meeting tight deadlines. Lining up qualified contractors at the inception of the project can save weeks. Working with contractors with whom the facility's developers have established relationships can easily cut four to six weeks off the timeline of a project.

If relationships are not established, and it's a strong construction market, developers could find themselves rebidding projects and waiting for available contractors, adding weeks of downtime to a project. Contractors and other construction and engineering professionals, ideally, should be on board from the beginning.

- Scheduling. Once the team is aligned, Day 1 begins with looking at all the critical deadlines and materials. The project should begin with the identification of all long-lead items that require extended time for shipping. Material options may narrow, and expense for expedited deliveries may add up -- but these issues have to be overcome to complete fast-tracked projects on time.
- Communication. Technology has been shifting the way people manage projects across professional disciplines. In health care facility design and architecture, technology has been critical to streamlining the process. Planning, strategy and real-time access combine to enable faster completion of projects.

Once contractors, vendors and other providers of services have been selected, the implementation of a collaborative deliverable timeline is central for communicating progress. In fast-tracked projects, access to a shared intranet enables all team members to update a common grid, allowing project managers to stay up-to-date on all progress or difficulties.

To maintain communications, pre-scheduling weekly conference calls and daily e-mail updates can be helpful. With this formula in place, the design team is able to work remotely and effectively as the project progresses.

Strategic design

Quality and functionality cannot be compromised. However, with thin operating margins, efficiency is a must. Strategic design in line with the process inherent to the facility is critical in numerous respects.

The classic "carousel" design is a space program that positions the business operations in the center of the space. Patient rooms and the waiting area represent the next layer -- specialty and long-term supply rooms represent the third layer. The flow of traffic of the patients and health care providers must be evaluated and controlled in order to avoid unnecessary disruptions.

The framework of the facility, if well programmed, can increase the volume and efficiency when serving patients. However, the need goes beyond patients -- the administrative and business areas of the facility have to be organized for the massive amounts of paperwork and insurance filings required for each patient.

The environment should be programmed with a variety of necessities and functions in mind, including analyzing supply access, considering health care providers' personal spaces and the receptionists' range of sight.

The hospitals and physicians' offices of the past have lost their ability to adequately address the new innovations of the health care field. Health care facilities in the U.S. are breaking ground every day, and their design is often breaking new ground as designers and architects seek to create new solutions for the next generation of specialized care.

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