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Patient Rooms: A Changing Scene of Healing

Creating flexibility for future treatments and technology

By Doug Bazuin

Change affects all areas of healthcare organizations and none more so than the patient room. It is there that the issues faced by the major players in healing environments – administrator; caregiver; family member; and, most important, the patient – all come into sharp focus.

Hospitals are already building new or renovating existing facilities so they can accommodate new technologies, patient demands, an aging population and new patterns of care. New facilities can cost \$1.5 million to \$2 million per bed, and renovations can be just as costly. With

this significant investment being made, it is imperative that patient rooms be designed to adapt and enrich the healthcare environment for all who are involved in the continuum of care, from patients to nurses to physicians.

Technology has made its way into the patient rooms. Bedside diagnostic tools are getting more sophisticated. Implementing medical technologies is much more difficult because advancements are so rapid that even a hospital considered state of the art while being built might not be by the time the project is finished. How can hospitals build patient rooms now that will accommodate technological tools and

treatments that don't yet exist? The best answer, says Steven Yundt, planning principal with CO Architects in Los Angeles, may be to “plan in flexibility, so that over time systems and devices can be accommodated in a strategic manner.”

Using Design to Deter Infection

Administrators have the same goal as the other key participants in a hospital setting: returning a patient to good health. A key part of that goal is to avoid a hospital-acquired infection (HAI).

The germs that can cause infections can live on surfaces for months, and they can be

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spread either when the patient touches that surface or when a caregiver touches the surface and then touches the patient. While in theory it might take 30 to 60 minutes to thoroughly clean a patient room, the staff might have only eight minutes to clean it before a new patient arrives. Hospitals are often short on staff in all areas, including housekeeping. One way to compensate for fewer staff is to install furnishings designed for easy cleaning (i.e., surfaces without crevices).

Hand washing is one of the best ways to prevent infections; unfortunately, even healthcare professionals who know the importance of doing it don't always make time for it. One study reports that 60 percent of healthcare workers don't wash their hands properly. Here, too, design matters. Something as simple as sink placement makes a difference. Deep, splash-free sinks should be located near the door of the patient room and at least three feet away from the patient. Infection control can also be improved by separating wet areas from dry surfaces and installing fixtures and furnishings that have "roll-off" edges so water doesn't get trapped.

Protecting Patients and Their Caregivers

Research points to a real link between hospital environments and patient outcomes. A review of the research literature on evidence-based healthcare design (EBD) – simply, "bas-ing decisions about the built environment on credible research to achieve the best possible outcomes," according to the Center for Health Design – was completed in 2004 and again in 2008. The latter review noted that "the body of

evidence has grown rapidly and substantially in recent years. It is now widely recognized that well-designed physical settings play an important role in making hospitals less risky and stressful, promoting more healing for patients and providing better places to work."

In fact, a recent survey conducted by the Center for Health Design studied healthcare architects, designers, consultants and those in related professions. It found that more than 80 percent sometimes or regularly used design research or EBD to make their decisions.

As awareness advances of EBD, more hospitals are using it as they renovate facilities or build new ones. The EBD features most frequently incorporated in patient rooms include single-bed patient rooms; highly visible hand-wash sinks; surfaces and finishes to reduce falls; and rooms with designated zones for patients, families and clinicians.

This design methodology has also been used to enhance the layout of a room to increase the efficiency of nurses who are often considered the face of the hospital. Examples of this include:

- Providing surface space close to the bed for setting down supplies, equipment or charts, keeping these items close at hand
- Placing furniture and equipment so that there is always room to work next to the bed and close to the patient, reducing frustration
- Keeping supplies close at hand and clearly labeled because consistent organization and placement of supplies allow caregivers to reach for and find materials easily

Improving the efficiency of caregivers is good for patients because higher efficiency

leads to better care and lower cost of care. It's good for nurses, who get to spend more time on direct patient care and less time running around. That leads to higher job satisfaction, and nurses who have high rates of job satisfaction are less likely to leave – a huge consideration when the average cost to replace a full-time registered nurse is \$36,567.

While nurses need an environment that increases efficiency and allows delivery of high-quality care, patients are in need of a safe environment in order to heal. There are a number of factors beyond safety and good medical practices that contribute to healing:

- Access to daylight has been found to reduce pain, depression and length of stay as well as improve patient and staff satisfaction.
- Views of nature have been linked to reduced pain, reduced stress and shorter length of stay.
- Decreasing noise levels improves patient sleep and patient satisfaction, and it decreases stress for patient and staff alike.

Family Matters

The role of family members has changed from concerned bystanders to members of the care team. Family members are now expected to be fully involved in the healing process. Families now regularly stay in the patient's room around the clock.

Studies show that family involvement in patient care results in better and faster healing. Family zones in the patient room result in fewer patient falls, reduced patient stress and depression, improved patient privacy and confidentiality, improved communication with patient and family members, improved social support, and increased



patient satisfaction. In newborn intensive-care units that encourage families to be present 24/7 and participate in care and treatment, premature babies experience less stress and better weight gain.

The design of patient rooms is starting to reflect that change of heart. More consideration is being given to the comfort and support of family members. Hospitals are providing not only a comfortable place for one or more family members to sleep but also lockable family storage space, Wi-Fi, and an area conducive to doing paper or computer work.

Doctor's Orders: Thoughtful Design

The confluence of a growing understanding of the hospital environment as a factor in healthcare and a boom in hospital construction projects presents the healthcare industry with a unique opportunity to re-create the hospital to

better meet the needs of patients, families and caregivers. At the same time that they are implementing some of the features suggested by EBD, hospitals must also be able to accommodate changes they can't foresee.

Designs that impede changes can lead to expensive renovation work during the life of a facility; to premature obsolescence of a facility; or, all too often, the development of a caregiving plan that is suboptimal because it is designed around the facility constraints. Moreover, the physical design of facilities could influence staff effectiveness. From the viewpoints of efficiency, staff, well-being and life-cycle cost, it is essential that the built environment be infused with flexibility to different operational models over a facility's lifetime. Even relatively small changes such as in the philosophy of medication distribution can have implications for the patient room.

Thoughtful design of patient rooms can

make a caregiver's job easier and the work environment more appealing. When the design improves efficiency and allows the caregiver more time with the patient, it can make caregiving more rewarding. For family members, design can help encourage participation in recovery, rather than be an obstacle to it. And for facility managers, good design lays the groundwork for accommodating change – whatever that change may be.

There's not much that's for certain in healthcare today, but there is one thing you can count on: The perfect patient room today, if there even is one, will not be the perfect patient room of tomorrow. F&E

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