Design and the Bottom Line: Practical Patient-Centered Approaches to the Physical Environment

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Abstract

In the multipriority world of hospital administration, it is a rare and precious occurrence when "the right thing to do" coincides with business opportunity. However, an established and still-growing body of data, both hard and anecdotal, indicates that a patient-centered approach to the planning and design of hospitals, medical clinics, outpatient facilities, retirement villages, and continuing care facilities is the rare case where "too-good-to-be-true" is simply a fact. Industry experts now agree that the physical environment where care is received, in conjunction with other patient-centered care principles, provides enormous opportunity for improving the quality of patients' healthcare experience, and actually accelerates the healing process. It is not simply that patients fare better in an environment that provides for their social, cultural, and intellectual needs—it is that hospitals that create environments conducive to fulfillment of these needs can expect to see significant improvements in patient satisfaction, patient outcomes, and employee engagement. These improvements ultimately save money.

This article examines misconceptions about the long- and short-term costs associated with the evolution of a hospital toward a patient-centered design, as well as the tendency to dismiss changes to the physical care-delivery environment as irrelevant to the organization's bottom line. In fact, more satisfied patients, better outcomes, less costly care, and increased employee dedication can be achieved by incremental changes over time, as an integral part of a hospital's capital improvement, renovation, or expansion budget.

Introduction

In the multipriority world of hospital administration, it is a rare and precious occurrence when "the right thing to do" coincides with business opportunity. However, an established and still-growing body of data, both hard and anecdotal, indicate that a patient-centered approach to the planning and design of hospitals, medical clinics, outpatient facilities, retirement villages, and continuing care facilities is the rare case where "too-good-to-be-true" is simply a fact. The business case for investing in the design of patient-centered care environments comprises four categories:

1. Outcomes that are produced in the hospital: the success rate of individual procedures, including decreased follow-up care and a reduction in the average length of stays. (The latter is a source of substantial savings.)

2. Attracting users: creating an inviting and navigable setting for patients and their families, as well as for staff. This includes varied areas for privacy, interaction, family time, contemplation, and contact with the outdoors.

3. Human resources impact on the bottom line: the number of productive hours per patient day at all staff levels, impact on staff retention, and effect on recruitment.

4. Repeat business: reputation in the community; continued patient and family patronization, especially in choice-driven areas such as obstetrics and pediatrics; and the ability to attract new patients and garner additional donations.

The Healing Value of Design

Angelica Thieriot, founder of Planetree, the nonprofit organization for patient-centered care, provides a compelling firsthand account of an all-too-typical patient experience in a facility where design was a low priority. Hospitalized in the mid-1970s, she was impressed by the technological and clinical prowess of the facility but was also struck by how little it addressed or even acknowledged the harder-to-

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quantify "human" aspects of her stay. Thieriot was placed in a monotonous environment with little privacy and less information provided to her about her condition, which was life-threatening. Glaring fluorescent lighting exacerbated her discomfort. The hospital's policies restricted her family's time at her bedside, and the only homelike splash of color or visual interest was provided by an orchid her mother brought her. She would later say that her experience of her illness was not as bad as her experience of the hospital itself. This impression was reinforced over the next year, when Thieriot's father and brother were both hospitalized, and she had the same frustrating experience from the family perspective. Kept from effectively providing emotional support to her kin during this very stressful time, Thieriot decided that there must be a better way, one that was more respectful of patients' and loved ones' personhood. In 1978 she founded Planetree as a nonprofit organization devoted to "personalizing, humanizing, and demystifying the healthcare experience for patients and their families." To this end, the organization assessed every aspect of a healthcare facility from the perspective of the patient, eventually arriving at its present 10 tenets:

1. We are human beings, caring for other human beings.
2. We are all caregivers.
3. Caregiving is best achieved through kindness and compassion.
4. Safe, accessible, high-quality care is fundamental to patient-centered care.
5. A holistic approach best meets people's physical, intellectual, and spiritual needs.
6. Families, friends, and loved ones are vital to the healing process.
7. Access to understandable health information can empower individuals to participate in their care.
8. The opportunity for individuals to make personal choices related to their care is essential.
9. Physical environments can enhance healing, health, and well-being.
10. Illness can be a transformational experience for patients, families, and caregivers.

It is possible and, in many project instances, desirable to make incremental changes to the physical environs of a hospital. Once leadership has realized the merits of patient-centered care, however, imparting therapeutic or "healing value" goes beyond changing a few paint colors or light bulbs. It requires a thorough understanding of the needs and expectations of patients and staff, the purpose and practices of the healthcare facility, and the psychological and social effects of design and planning. Because cultural identity, type of illness, length of stay, and physical/psychological constraints may vary substantially from one patient to the next, a successful patient-centered design must strive to foster a full spectrum of positive and uplifting psychological responses, including:

- Privacy and undisturbed rest/contemplation.
- An inclusive environment that welcomes families and allows them to be involved in care.
- Mobility and exploration of communal areas.
- Separation between staff and patient areas, allowing staff to "go offstage."
- Ownership/control of immediate surroundings.
- Socialization and interaction with others.
- "Bringing the outside in": integrating patients with nature via views, artwork, landscape, and water features.
- Opportunities for patients to be outdoors when feasible.

While a hospital may be a single building of millions of square feet, a collection of smaller buildings, or a multicampus conglomerate, the selective renewal or replacement of facilities that must occur anyway can be accomplished with a patient-oriented approach without undue cost.

Outcomes, Costs, and Benefits of the Patient-Centered Approach

At many hospitals and clinics, budgeting prioritizes technological improvement. It is not difficult to discern the reason: the purchase of a new device, accompanying software, and staff training is worthwhile on its own merits, but also has the benefit of carrying a finite cost. In contrast, because design and planning is only one part of patient-centered care and cannot succeed without some cultural or organizational change, executives contemplating the next quarter's or year's expenditures may be tempted to ignore the potential savings in favor of business as usual.

The majority of success stories, however, have not involved constructing a whole new hospital or even a whole new ward. Given budgetary constraints and a compelling vision of their future, the facilities highlighted below worked with knowledgeable consultants to make the incremental changes that collectively resulted in exemplary patient-centered care. Technology, equipment, or processes that worked five years ago must be continually assessed as the science of healthcare advances; design and planning must undergo the same evolution and merit the same budgetary allocations. The ongoing journey entails scanning the horizon for the "next right thing" and a commitment to making small improvements when larger ones are not feasible for a particular fiscal period.

A 2007 doctoral dissertation contrasted the results of two orthopedic postsurgical units in two hospitals located within 15 miles of each other in a large urban county, both of which provided elective knee or hip replacement surgery. One was part of Sharp Coronado, a San Diego facility that had implemented patient-centered design and planning principles;

Figure 1: Before: Kaiser Permanente West Los Angeles lobby

Figure 2: After: Simple changes bring positive results to the Kaiser Permanente West Los Angeles lobby

the other had not (although both hospitals were managed by the same not-for-profit system). The study's findings, obtained through examination of benchmark data provided by the facilities and by double-blind survey, indicated the following:

- A lower mean length of stay at the patient-centered care unit for the years 2002–2006.
- Lower costs per case than at the patient-centered care unit for the same period (partially attributed to shorter lengths of stay).
- A significant increase in productive nursing hours per patient per day at the patient-centered care unit, primarily obtained by more effective allocation of higher-cost staff's hours.
- Higher overall patient satisfaction scores in seven of the nine dimensions measured.

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Other studies indicate significant upticks in category 2 of the business case for patient-centered care: attracting and retaining users. A 2002 study contrasting patient satisfaction scores at 12 hospitals one year before implementing a patient-centered approach and two years after yields some striking examples. Griffin Hospital in Derby, Connecticut, saw a 24 percent increase in inpatient volumes after leadership embraced a patient-centered philosophy and implemented specific patient-centered care approaches. This increase correlates neatly with the hospital's steadily improving patient satisfaction scores, which outranked the 2002 state average (14.4 percent) by nearly 10 percent. Similarly, Wisconsin's 13-hospital Aurora Health Care system observed significantly higher scores for both patient outcomes and satisfaction at its pilot patient-centered facilities, leading it to implement them at an additional six of its hospitals.

Also related to both category 2 and category 4 (repeat business) is the fact that for many patients, the decision about which healthcare facility to patronize is determined by expedience, often defined as proximity to the home. People visit hospitals for specific reasons, and a simple test can result in follow-up procedures that make ease of access (even if not to the preferred environment) a selling point. For this reason, many hospitals have felt secure in their consumer base, expecting that locals will patronize and return to their establishment. But given the choice, people will go elsewhere—and will endorse or denounce a healthcare establishment based on their experience in the same way they would a restaurant or a hotel. Patient choice and its impact are clearly illustrated by the repeat business of one group of patients for whom choice is not only possible but actively researched: first-time mothers, who are considering where to give birth. Their positive experience of a hospital for this generally happy visit correlates compellingly with the likelihood that they will use the facility for other services (and not just pediatric or gynecological). It also indicates that they are more likely to recommend that facility to other expectant mothers.

Human Resource–Related Benefits of Patient-Centered Care

Leaders who are unconverted to patient-centered care may also suspect that increased staffing will be needed to fulfill patient-centered care objectives. In fact, the approach emphasizes maximizing available staff resources and creating efficiencies that require no such increase. One study of four patient-centered hospitals over five years demonstrated that there was no change in RN staffing ratios or HPDs. Moreover, category 3 (the human resources impact on the bottom line) cannot be overlooked in any assessment of the costs and benefits of patient-centered care, although it is often underreported. Darryl McCormick, senior vice president for talent and culture at Connecticut's Griffin Hospital (cited previously for its increase in market share after implementing patient-centered care), guided an organization-side migration to patient-centered care principles in 2004 as part of a response to low patient satisfaction scores in the 1990s. In a significant correlation, in 2003, employee engagement scores at Griffin were in the 33rd percentile. In 2009, after Griffin had made

significant strides in implementing patient-centered care, employee engagement had vaulted to the 96th percentile.

For the ongoing success of any hospital, creating an environment where people want to work is essential. Evidence suggests that a patient-centered approach not only increases productive nursing hours per patient day by more appropriately delegating nonmedical tasks but also provides personal, professional, and cultural support that attracts staff and encourages them to give their all. A patient-centered approach to care shows significant promise in increasing the engagement levels of staff that are moderately committed (approximately 71% of any given organization) although perhaps not the highest performers.

To be clear, there are costs associated with patient-centered care: the initial training of staff and ongoing education are examples. However, these initial costs are dwarfed by the long-term costs of poor Hospital Consumer Assessment of Healthcare Provider and Systems (HCAHPS) scores, increased malpractice costs, HIPAA fines for violations, and turnover rates. The cost of replacing an employee is estimated to be no less than that employee's annual salary, and often up to three times that much. This is due in part to the hard costs of recruitment (advertising, head-hunting, etc.). It is telling that Griffin Hospital, Mid-Columbia Medical Center, and Loma Linda University Medical Center have, or have had, waiting lists for applicants for job openings (an ideal situation for a growing, thriving hospital).

The patient-centered approach considers staff engagement and patient experience to be inherently interrelated, and the impact of the workplace's physical environment is undeniable. In addition, provision of nutritional choices for both patients and staff is key. While hospitals should not consider it an obligation to run a restaurant, neither should they ignore food's complex effects as a comfort-giving and social-interaction medium. From a design and planning perspective, these choices should be supported by ones related to privacy: the decision to eat alone, with other staff, or with patients.

Designing and Planning for Multiple Privacy Levels

The planning and design of interaction points, especially as electronic medical records become the norm, is one example of how patient-centered principles can maximize efficiency. Rather than constructing a new nurse station, rethinking how workflow can be done at the bedside might best benefit an organization. Careful operational analyses can lead to vastly more efficient use of space, reducing the need for renovation or expansion—and perhaps saving millions of dollars. A savvy facility strategic plan will consider human interaction at every major touch-point (nurses' stations, family consultation areas, patient rooms, conference areas) and also the spectrum of privacy versus communality. The best evidence-based healthcare designs provide spaces for patients, staff, and families that range from interactive to private. Examples include:

- A lobby or cafeteria (public)
- A chapel or reference library (semipublic)
- A family lounge (semiprivate)
- A patient room or consultation area (private)

Unlike business transactions, healthcare transactions are inherently personal, and thinking about how privacy is to be respected is among the most fundamental design decisions. When this is done well, the distinct demarcation between the types of spaces is palpable—even just the noise level. (Weakest spaces typically include ER triage, where the need to deliver services quickly is in direct competition with the acquisition of critical data in a nonprivate setting.) From admission through checkout, a patient-centered facility must reduce or eliminate barriers between patients and caregivers. It must allow for compassion and empathy while also providing designated private areas for conversations

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to educate them about their condition and their choices. Perhaps most important, permeability of the caregiving space for family members—historically viewed as operationally inconvenient—has been shown to be beneficial. It often empowers the patient and family to take on some of the basic services that pull nursing staff away from clinical responsibilities.

New Incentives for Patient-Centered Design and Operations

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With the passage of the 2010 federal healthcare reform package and growing consumer awareness about patient choice, many hospitals face an operational shift. The HCAHPS survey (the results of which are available on Web sites such as Hospital Compare) is a valuable tool for patients who want to shop around for their next healthcare experience. Through Quality Check, hospitals that demonstrate superior patient-centered quality, safety, and reporting metrics gain credence with The Joint Commission, whose accreditation is viewed as a condition for Medicaid reimbursement in many states.

At some hospitals, on-demand access to electronic medical records is daunting to physicians or administrators. However, it is a patient right; the contents of these records are not the property of the hospital or the insurance company. A common misrepresentation is that shared medical records violate HIPAA, but while certain procedures (such as the way a release is signed) do need to be carefully enacted, the exchange of medical information between the patient and care providers is valuable—after all, people have subjective insight into their bodies that even the most qualified health professional can only approximate. In any case, with the exponential growth of information available via the Internet (including longstanding access to personal financial records and transactions), it is nearly unthinkable that medical records will not be online within the next 25 years. Those hospitals that establish a culture of transparency now will be ahead of the curve—and poised to benefit from improved HCAHPS scores.

The VA Example

In recent years, the Department of Veterans Affairs (VA), the largest healthcare system in the United States, has begun a top-down implementation of patient-centered care to better serve veterans and their families. This change will likely eventually affect many of

Figure 3: Loma Linda Rehabilitation Center

the 153 VA hospitals, 773 outpatient centers, and 260 vet centers. VA patients now span several generations and both genders. Many are elderly or have mobility issues. As a subset of all patients, veterans represent a unique case study. Facilities must accommodate not only the physical, cultural, and social needs of the patient but also those of the family member/members who may accompany him/her to the facility or support-givers during medical tests and procedures.

In addition to the more general design principles of color, noninstitutional lighting, and privacy-conducive acoustics that apply to patient-centered care, VA facilities share the need for an expression of culture and place that will resonate with patients' experience as veterans. This consideration should be integrated into the design standards and reflected throughout the facility. For example, waiting and consultation rooms must accommodate the vet's family and consist of groupings of furniture conducive to conversation (rather than rows of seats), and exam rooms must be appropriately sized. Family-oriented single-occupancy rooms and family restrooms are often a requisite. In certain areas, such as those specializing in PTSD, special emphasis may be placed on noise reduction.

Catching the Wave: Patient-Centered Design as the Future of Healthcare

Like many aspects of patient-centered care, design of the physical and built environment plays an integral role in achieving financial and marketing advantages for a hospital. While thorough review of new technologies, medications, and procedures is indispensable in determining how and when they should be implemented, evidence-based design aspects are often given short shrift. This is often due to apprehension that large capital expenditures on a new ward or a new building are necessary in order to realize the benefits of patient-centered design and planning. These fears can be alleviated once healthcare leadership understands one of the most elemental virtues of patient-centered design and planning: it is a gradual, if pervasive process that considers the hospital's overall priorities and evolution. Most facilities simply do not have the wherewithal to build new rather than to repurpose. This does not mean that they cannot make appropriate strategic-plan budget allocations that will enable important incremental changes.

At its most basic, a design approach that facilitates patient-centered care is about instituting physical surroundings that enable a culture of kindness, empathy, and human

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Figure 4: Catching the Wave: Patient-Centered Design as the Future of Healthcare

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Figure 5: Before: Renown Regional Medical Center, postpartum wing

Figure 6: After: Renown Regional Medical Center, postpartum wing

interaction. However, there is no one-size-fits-all approach. Every hospital must determine what it is trying to accomplish, and then assess how those goals can be optimally realized within the realities of budget and existing facilities. Many low- or no-cost opportunities exist in artwork, improved views to the outdoors, soothing colors, plants, rearrangement of furnishings, music, staff training, and improved access for family members. In determining priorities, administrators should consider the healing environment for patients and the working environment for staff.

When a hospital is considering implementing a patient-centered approach, obtaining feedback from patients, families, staff, and the wider community is essential. Surveys or focus groups (often best conducted by a qualified outside agency) can provide a valuable foundation for all changes that are to be considered by the hospital over time. For example, patient satisfaction surveys consistently reveal that access to family and friends, access to information, and personalized care are three important ways to improve the experience of a facility. Proper design, even if it is incremental, can facilitate all three, although operational changes contribute at least equally.

Hospital decision-makers should assess the value of patient-centered design in light of the fact that upgrades, expansions, renovations, and new construction are all necessary components of "staying open." If a new technology or methodology necessitates any of the above, why not do it in a patient-centered way? Small steps toward the larger desired effect can go a long way on their own. The success of facilities that have implemented patient-centered principles, often in the face of challenging fiscal circumstances, is telling when viewed alongside the trends of healthcare reform and growing involvement of patients in their own care. Costs associated with changes to processes and to the physical environment are balanced by improved HCAHPS scores, decreased malpractice costs and HIPAA fines, increased retention of valuable staff, and increased staff discretionary effort. Moreover, once the commitment is made, change can be as sweeping or as incremental as is feasible. Some hospitals tackle the transformation in a concentrated way; some do it over years to defray costs. Some communicate their accomplishment loudly and repeatedly; some prefer more modest communications (especially if—as with the VA—there is concern over the perception of how taxpayer money is being used). However, there can be a plan for every budget that will empower patients and family members as part of the healing process, enrich the surrounding community, and save money in the long term.

Perhaps at some point in the future, Angela Thierot's vision of healthcare will simply be the way things are done. In the meantime, administrators unconvinced that the "right thing to do" happens to make excellent business sense might benefit from a visit to a hospital that has made patient-centered principles the core of its strategy—even if that hospital is a competitor. These visitors will likely not see brand new facilities or smell cookies baking, but they will sense a subtle difference: the continuum of patient-centered care factors, including effective design and planning, have made things better for patients, family, and staff.

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