

ISSUE FEATURE: INTERIORS

by Linda Gabel, IIDA, AAHID

TRENDS

In Culture and Lifestyle

The Impact on Healthcare Environments

As we move toward the second decade of the 21st century, profound changes in our population, lifestyle and culture will impact the design of healthcare environments overall, especially the interiors.

Our Aging Baby Boomers

According to the Center for Disease Control and the Census Bureau, in 2004 there were 36.3 million Americans that were age 75 or older in the United States. Of this elderly population, 65 percent were classified as non-institutionalized and overweight. It is estimated that by 2020 there will be 40-percent more people age 75 and above than in 1990. With an increase in life expectancy comes an increase in the number of persons suffering from age and lifestyle related diseases and conditions. Chronic and degenerative diseases, such as Alzheimer's, obesity and diabetes, will become more prevalent. And as more people live into their eighties and nineties, social and healthcare service providers will see an increase in volume and cost pressures.

Generational and Cultural Diversity

As life expectancy increases, generations will become increasingly diverse and demand more choices in healthcare providers. Traditionalists, Baby Boomers, Generation X-ers and Millennials have distinct expectations for healthcare services.

Diverse communities maintain cultural and religious differences, and they expect their culture and needs to be accepted and supported. In response, culture-centric consumerism is growing and target markets are emerging that demand responsiveness. The design of healthcare facilities needs to

be flexible to support the diverse needs in the population. Larger, family friendly waiting areas, all-private patient rooms, non-denominational meditation rooms that support a variety of religious ceremonies, and multi-lingual signage and intuitive wayfinding/building design support the trends toward personalized and family-centered care.

Market Drivers Versus Cost

Healthcare systems will continue to be affected by these conflicting pressures.



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Integrated technology in the family activity lounge at Westchester Medical Center, Maria Fareri Children's Hospital. Design Architect: NBBJ.

"Rising costs due to demographic factors, new technologies and increased diversity of public expectations are pulling in one direction," said William Hunter, editor of *International Journal of Integrated Care*. "System reforms, greater efficiencies, reduced reimbursements and increased competition are pulling in another."

Governments and healthcare institutions have to manage these conflicting pressures without losing sight of the importance of health and well-being, and the economic

Learn more: For more information on working with a professional interior designer and access to the latest research in healthcare design, please visit knowledgecenter.iida.org keyword **Healthcare**.

importance of the health systems. Life-cycle costs, material replacement cycles, and flexibility of the design to respond rapidly to changing marketplace needs are continuing to drive long-term choices in the built environment.

Bariatric Needs Versus ADA Guidelines

Currently, 60 percent of the U.S. population is obese or overweight. Obesity rates doubled between 1986 and 2000 from one

A bariatric and family friendly seating arrangement at Bremerton Medical Center, designed by NBBJ.

in 10 adults to one in five. Extreme obesity increased 400 percent from 1983 to 2000 (*Archives of Internal Medicine*, vol. 163, Oct. 13, 2003). With growth projections of this population increasing at an exponential rate, we need to think about design for universal accessibility in health-care facilities and the workplace.

Healthcare providers and designers are discovering that current Americans with Disabilities Act design guidelines for clearances for handicapped and disabled individuals for toilet and shower rooms, doorway clearances, and patient mobility and staff support systems do not support the needs of large persons and the morbidly obese (bariatric). As a design community, we need to establish standards for the ergonomic needs of this population, and the needs of caregivers to safely move and support them. We also need to consider the dignity of the patients and their family members, and the quality of their experience in the healthcare setting.

Generative research and complementary design methodologies increasingly, we are designing for the social, lifestyle and cultural needs of an organization and its target markets, along with improving operational and functional efficiencies. As designers, we now look for the emotional quotient inherent in the desired environment for healing.

This generative research methodology augments Lean and Six Sigma operational efficiency models of analysis, providing the program for the "soft-side" of the patient/family/staff experience. Integrating all three design methodologies will enable the entire project team to improve the built environment by first redesigning the desired user experi-



ences. Currently, The Center for Health Design has 41 active Pebble Projects focused on evidence-based design methodologies to create better buildings for healthcare.

Integration of Communications

Communication technology will continue to impact healthcare dramatically in terms of how staff members communicate, how patients and families communicate with those at home, and the expectations of the patient experience. Instead of adding computers after the fact, smart cards, dash boards and interactive touch screens continue to be designed as an integrated part of "smart hospitals" to create an intuitive way to navigate and communicate in the complex healthcare system. Concierge stations in key public spaces provide the face-to-face interac-

tion and support for multi-lingual and generational needs. Wireless Internet in family lounges, resource centers and patient rooms are now available for continuity of work and home needs during a patient's stay.

Bioterrorism and Protection

All building owners and employers have an inherent civil responsibility to protect their workplace and workers from harm. Healthcare work environments are different in that they are taking care of persons already at risk, and they are also seen as places of refuge during a catastrophic event. Detailed research is being done on the risk analysis for hospitals, focusing on regions (rural or urban) and the possible crises that could greatly impact them. Healthcare facilities must quickly convert spaces and provide for quarantined and decontamination

**Patient/family-centered patient room design for healing at Christ Hospital.
Designed by NBBJ.**

environments. This pushes designers and hospital facility managers to create flexibility in the design of emergency departments, inpatient units, HVAC controls and clinical support systems.

Sustainability

The updated Green Guide for Health Care provides designers with a strong roadmap for sustainability initiatives. Initiatives such as Health Care Without Harm and Hospitals for a Healthy Environment provide guidance for materials selections and include protocols for “green” infection control and disinfection methods. In the near future, LEED for Healthcare will be launched, providing a clear roadmap for implementation and building certification levels in the acute care arena.

Building Information Modeling

Increasingly, architects, engineers, interior designers, building owners and construction managers are working together using building information modeling (BIM)—an integrated approach to designing a building, with the building system trades involved early on, using a 3D imaging platform and design/build collaboration to reduce error and waste in the design and construction process. BIM covers geometry, spatial relationships, geographic information, quantities and properties of building components (for example manufacturers’ details). BIM can be used to demonstrate the entire building lifecycle including the processes of construction and facility operation. Quantities and shared properties of materials can easily be extracted. Scopes of work can be isolated and defined. Systems, assemblies, and sequences are able to be shown in a relative scale with the entire facility or group of facilities. The interoperability require-



ments of construction documents include the drawings, procurement details, environmental conditions, submittal processes and other specifications for building quality.

The American Institute of Architects has further defined BIM as “a model-based technology linked with a database of project information,” and this reflects the general reliance on database technology as the foundation. In the future, structured text documents such as specifications may be able to be searched and linked to regional, national and international standards.

Certified Healthcare Interior Designers

It’s undeniable that the healthcare environment presents highly specialized design challenges. Experienced, innovative and forward-thinking designers are gearing up to meet and exceed these demands. To help clients identify these qualified healthcare interior designers, IIDA has continued to develop a strong Healthcare Forum that provides student and professional interior designers with the information and educational resource links to assist them in developing and maintaining the highest quality of skills to practice healthcare design. A Healthcare Task Force composed of 12 diverse design experts in the fields of acute

care, assisted living, facilities management and ambulatory care was started in 2006 to provide interior designers with insight and leadership.

The American Academy of Healthcare Interior Designers (AAHID) was established in 2005 to be recognized by the healthcare industry as the certification board of choice in assessing and qualifying the knowledge, skills and abilities of healthcare interior designers. Currently, more than 61 board certified healthcare interior design certificants are now distinguished and qualified by education, examination and work experience to practice healthcare interior design.

These cultural trends and benchmarks have implications for all healthcare professionals and interior designers can be a great resource to forward-looking healthcare facilities in navigating the implications of our evolving communities. ■

Linda Gabel, IIDA, AAHID, is a senior associate at NBBJ. Gabel, who has more than 23 years of experience, with the last 18 dedicated to healthcare design, collaborates with the entire design team to create interior environments that enhance the healing process and reduce stress for patients, their families, and caregivers. As the 2005-2007 IIDA Healthcare Forum advisor and a founding member of AAHID, Gabel provides leadership in the design of healthcare environments on an international level.

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