



# SEE THE DIFFERENCE. BE THE DIFFERENCE.

As an Affiliate+ member, you'll be better equipped to make a positive difference through healthcare design, plus you'll be supporting The Center for Health Design in its vital and life-changing work.

See how evidence-based design makes a positive, measurable difference in the safety, health and satisfaction of patients, their families and their caregivers . . . . . Page 2



See how the support of organizations like yours has enabled the center to fulfill its mission of improving health outcomes through design research, education and advocacy . . . . . Page 4





University Medical Center of  
Princeton at Plainsboro

Providing access to nature in healthcare settings has been proven to increase patient, family, and staff satisfaction, reduce stress and anxiety, reduce pain and pain medication use, and shorten patient's length of stay.

## SEE THE DIFFERENCE

Evidence-based design makes a positive, measurable difference in the safety, health and satisfaction of patients, their families and their caregivers

Throughout our 25+ year history, we've helped lead the evidence-based design movement in healthcare by initiating, directing and supporting research that documents and measures the impact that design of the physical environment has on a wide range of healthcare outcomes.

Thanks to the collaborative efforts of The Center, healthcare providers, product manufacturers, educational institutions, the architecture and design community, professional associations and others, healthcare decision makers are increasingly aware of the benefits of incorporating evidence-based design elements into facility design.

The result? As healthcare organizations embark on construction projects they can choose design elements that are proven to positively impact the safety, health and satisfaction of patients, their families and their caregivers. For example:

- Research clearly indicates that single-bed rooms, compared with shared rooms, may expedite patient recovery. The benefits of single-bed rooms have been demonstrated at many healthcare organizations including those participating in The Center's Pebble Project research initiative. For example, Bronson Methodist Hospital in Kalamazoo, MI reduced infection rates by 45% when it switched from semi-private to all single rooms.
- Providing access to nature in healthcare settings has been shown to increase patient, family, and staff satisfaction, reduce stress and anxiety, reduce pain and pain medication use, and shorten patients' length of stay.
- Exposure to daylight helps reduce depression among patients with seasonal affective disorders and bipolar depressions, decrease length of stay in hospitals, improve sleep and circadian rhythm, lessen agitation among dementia patients, ease pain, and improve adjustment to night-shift work among staff.



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The number of staff injuries related to patient handling reduced significantly, from 10 in the two years preceding ceiling lift installation to two in the three years after the installation.

- High efficiency particulate air (HEPA) filters are very effective (99.97%) in removing airborne pathogens as small as 0.3 micrometer in diameter and have been found to significantly reduce pathogen concentration.
- Sound-absorbing ceiling tiles are effective in improving healthcare acoustics by reducing noise reflection and reverberation.
- Ceiling-mounted or mobile lifts are designed to assist patient lifting, moving, and handling. Pebble Partner PeaceHealth, in Eugene, OR, installed ceiling lifts in most patient rooms in their intensive care unit and neurology unit and found that the number of staff injuries related to patient handling reduced significantly, from 10 in the two years preceding ceiling lift installation to two in the three years after the installation. The annual cost of patient handling injuries in these units was reduced by 83% after the lifts were installed.
- Providing spaces and amenities for families in the patient care spaces may support families' presence and involvement in patient care.

*From: Joseph, A., Quan, X., and Keller, A. "Top 10 Evidence-Based Design Features That Improve Healthcare Outcomes."*



## SEE THE DIFFERENCE

The support of organizations like yours has enabled the center to fulfill its mission of improving health outcomes through design research, education and advocacy

With the support of healthcare providers, the architecture and design community, product manufacturers, educational institutions, professional associations and others, The Center for Health Design has been able to both lead and serve the healthcare design industry, creating and producing:

- Educational programs and events
- Research, resources and tools
- Journals, publications and books
- Standards, certifications and recognition
- Industry leadership and innovation

Highlighted accomplishments of The Center's 25+ year history include:

### 1988

- First Symposium on Health Care Interior Design held.

### 1989

- Healthcare Environment Awards competition launched.
- Journal of Health Care Interior Design, Volume I published.

### 1990

- Nightingale Product Design competition launched.
- ICU Room Demonstration Project developed.

### 1991

- Executive Forum, "Using Design to Enhance Productivity & Therapeutic Outcomes within the Healthcare Environment," held.
- AIDS Respite Care Demonstration Project developed.

**1992**

- Executive Forum, “Project Design Strategies: Using Philanthropy to Generate Capital When There Isn’t Any,” held.
- Æsclepius newsletter launched.
- Meditation Room Demonstration Project at USCSD Medical Center developed.

**1993**

- Research Council formed.
- “Design Evaluation of Six Primary Care Facilities for the Purpose of Informing Future Design Decisions” published.

**1994**

- Environmental Quality Work Group formed.
- “A Guide to Conducting Healthcare Facility Visits” published.

**1995**

- “Gardens in Healthcare Facilities: Uses, Therapeutic Benefits, and Design Recommendations” published.

**1996**

- “Progress Report: An Investigation to Determine Whether the Environment Affects Patients’ Medical Outcomes” published.
- Center receives “Design for Humanity Award” from the American Society of Interior Designers.

**1997**

- Shoebox Adventure Project held.

**1998**

- “Status Report: An Investigation to Determine Whether the Environment Affects Patients’ Medical Outcomes” published.
- “Working Paper: Consumer Perceptions of the Healthcare Environment – An Investigation to Determine What Matters” published.
- Video, “Enhancing the Quality of Healthcare Delivery with the Built Environment: Through the Patients’ Eyes – Acute Care” released.



### 1999

- The Center's recommendations incorporated into the "Management of the Environment of Care" chapter in JCAHO's 1999 Comprehensive Accreditation Manual for Hospitals.
- "Healthcare Design Action Kit" released by The Picker Institute.

### 2000

- Pebble Project launched.

### 2001

- "Competing by Design" executive programs launched with Turner Construction Company.
- HealthCare DESIGN published by Medquest Communications in association with The Center for Health Design.

### 2003

- HEALTHCARE DESIGN conference launched with Medquest Communications.
- "IMPACT of the Built Environment on Outcomes, Satisfaction, & the Bottom Line" mini-conference launched with the Institute for Healthcare Improvement.
- Robert Wood Johnson Foundation (RWJF) funds research project to update summary of evidence-based design research studies.

### 2004

- "Business Case for Better Buildings" executive programs sponsored by Turner Healthcare.
- RWJF funds "Designing the 21st Century Hospital" meeting and media briefing.
- "Role of Physical Environment in the Hospital of the 21st Century" research report by Roger Ulrich and Craig Zimring (funded by RWJF) released.
- Affiliate membership program launched.
- "Business Case for Better Buildings" lead article published in Frontiers of Health Services Management.

### 2005

- American College of Healthcare Executives (ACHE) presents two audio/web conferences featuring The Center's work.



- “Environment of Care” recommendations prepared by the Environmental Standards Council are accepted by the review committee for the 2006 Guidelines for Design and Construction of Healthcare Facilities, published by the American Institute of Architects and the Facility Guidelines Institute.
- RWJF funds development of Evidence-Based Design Assessment and Certification (EDAC) program and Community Conference on green design for hospitals.
- RWJF funds development of six white papers on environmental responsibility.

## 2006

- Improving Healthcare with Better Building Design is published by Health Administration Press.
- Updated AIA Guidelines for Design and Construction of Healthcare Facilities published, calling for single-bed patient rooms. “Environment of Care” recommendations included.
- RWJF funds development of issue papers, Design Guidebook, and Healthcare Design Web.
- Six white papers on environmental responsibility are written and published in conjunction with Health Care without Harm.
- The Coalition for Health Environments Research (CHER) becomes part of The Center.

## 2007

- First Environments for Aging Conference held.
- The Center, along with Health Care without Harm and Hospitals for a Healthy Environment, becomes a partner in the Global Health & Safety Initiative founded by Kaiser Permanente.
- *Health Environments Research & Design (HERD) Journal* launched with Vendome.

## 2008

- *A Visual Reference to Evidence-Based Design* book by Jain Malkin published.
- Evidence-for Innovation, Transforming Children’s Health through the Physical Environment book is produced in association with the National Association of Children’s Hospitals and Related Industries.
- EDAC Study Guide One, An Introduction to Evidence-Based Design, published.
- The Research Coalition’s book project, A Practitioner’s Guide to Evidence-Based Design is published.



## 2009

- EDAC Study Guide Two, Building the Evidence Base and Study Guide Three, Integrating Evidence-Based Design published; EDAC exam launches.
- Community Clinic website launched with the California Health Care Foundation.

## 2010

- Research report, “Critical Issues in Healthcare Environments,” published.
- Built Environment Network (BEN) launched.
- Research report, “Validating Acoustic Guidelines for Healthcare Facilities,” published.

## 2011

- “Promising Practices for Facility design in Community Clinics” seminar hosted by The Center with support from the California HealthCare Foundation.
- “Evidence-Based Design Glossary” published.
- Patient safety risk assessment tool developed with the Agency for Healthcare Research and Quality for the 2014 Guidelines for Design and Construction of Health Care Facilities.
- “Designing for Patient Safety” seminar hosted by The Center in partnership with the Facility Guidelines Institute, Agency for Healthcare Research and Quality, and Virtua Vorhees.
- More than 1,000 individuals are EDAC certified by year-end.

## 2012

- Community Health Center Design Seminars launched throughout the country sponsored by The Kresge Foundation.
- “Hour with an ICON” Master Webinar Series launched.
- Knowledge Repository launched with over 2,600 references and 100 summaries that provide article analysis.
- “Achieving EBD Goals through Flooring Selection & Design” published with support from Tandus Flooring.

## 2013

- Launched EBD Journal Club.
- New Report Published – “Design Research and Behavioral Health Facilities”.

## 2014

- Held the AHRQ Patient Safety Seminar.
- The Center Wins 2014 EDRA Award.



## 2015

- Launched a set of interactive patient room diagrams that provide access to the healthcare design evidence base in an accessible and actionable format (funded by Donghia Foundation).
- With funding support from AHRQ, launched the Safety Risk Assessment to help design teams proactively identify and mitigate conditions that impact patient and worker safety.
- Launched a redesigned website with over 250 design tools, case studies, design strategies, issue briefs and more. Funded in part by The Kresge Foundation.
- Launched new membership opportunity, Affiliate+, providing high-value, leading-edge facility design research, strategies and tools addressing today's most pressing healthcare design challenges.

## 2016

- Launched "Research in a Snap", a listing every two months of the most recent papers and citations found in the Knowledge Repository.
- Launched the fourth room, the primary care exam room, within the Interactive Design Diagrams Tool.
- Launched five new topic toolboxes: Technology, Perception of Cleanliness, Patient-Centered Medical Home, Population Health, and Impact of Aging.

## 2017

- Launched the online version of the Safety Risk Assessment Toolkit targeting six areas of safety: infections, falls, medication errors, security, injuries of behavioral health, and patient handling.
- Added Healthcare at Home to the Interactive Design Diagrams Tool.
- Launched the Evidence-Based Design Touchstone Awards, recognizing the use of an evidence-based design process in the pursuit of increasing value, improving outcomes, and engaging stakeholders.

## 2018

- Launched Safety and Behavioral Health Webinar days, and free webinar weeks for Affiliate members.
- The Center's President and CEO, Debra Levin, named Honorary Fellow by the American Society of Interior Designers (ASID).
- Launched the Behavioral and Mental Health Toolbox.



- Added three Healthcare at Home diagrams to our Interactive Design Diagrams tool.
- Kicked off The Center's 25-year anniversary celebration at Healthcare Design Expo & Conference 2018.
- Launched Design Can, The Center's first fundraising campaign.