The health care industry represents 16 percent of the U.S. gross domestic product, and an estimated 8 percent of U.S. carbon emissions, according to an analysis released in 2009 in the *Journal of the American Medical Association*. With construction activity approaching $16 billion and more than 100 million square feet per year, the healthcare sector is an enormous force for market transformation to sustainable, high performance buildings and operation. Aligning how hospitals build, buy and operate around the principle of “first do no harm” yields environmental, economic and social benefits for health care organizations and the communities they serve. Since 2000, the health care industry’s demand for safer, less-toxic materials has created significant market advancements, including the development of new environmentally friendly products such as phthalate- and PVC-free carpeting, window treatment, guardrails and furnishings.

The Green Guide for Health Care is a catalyst in this important work. Health care facilities around the world are using the Green Guide to design, build, and operate the next generation of high-performance healing environments. The Green Guide’s continuing work reflects the premise that the built environment can shift from being a consumer to being a producer of basic support systems such as energy and water. This enhances their resilience and reduces environmental and health burdens associated with the release of greenhouse gases and other toxic emissions.

As of 2010, more than 200 projects totaling over 40 million square feet have registered with the Green Guide to inform their sustainable design strategies. 2010 marks the launch of the Green Guide Operations Pilot, which will track the performance of more than 100 health care facilities using the Green Guide Operations section. These projects vary in scale, climate zone, program, and approaches to sustainable design and operation. Together, they signal an important shift in the way we imagine health care environments.

There is tremendous enthusiasm in the health care industry for the Green Guide for Health Care. Green Guide website registrants, totaling more than 30,000, span every state in the U.S., every province in Canada, and more than 110 countries.

**ACT TODAY!**
Register your construction project or green operations team and join the Green Guide Forum to track your progress and network with peers in your field who are planning and building healthy hospitals. For more information and to sign up now, go to [www.gghc.org](http://www.gghc.org).

"The Green Guide for Health Care is a superb resource. It helps the leaders and managers of health care institutions ‘walk the talk,’ promoting the health of patients, visitors, employees, community members, and the global community, while operating economically and efficiently. I hope that every medical center, hospital, and clinic in the nation gets a copy of the Green Guide and takes its lessons to heart."  
Howard Frumkin, M.D., Dr.P.H., FACP, FACOEM  
Director, National Center for Environmental Health  
Agency for Toxic Substances and Disease Registry  
U.S. Centers for Disease Control and Prevention

![Above: A patient room in Kaiser Permanente Women’s Medical Center of Roseville, CA uses PVC-free flooring, low VOC paint, and provides access to daylight and views of nature.](image1)  
![Right: Dell Children’s Medical Center of Central Texas in Austin, TX is the first LEED Platinum-certified hospital in the world. It opened in April 2007.](image2)
Creating high performance healing environments

The Green Guide for Health Care (GGHC) is the premier green building guide for the health care industry, and a transformational tool for building hospitals that are healthy for people and the environment. Hospitals in North America and beyond are using the Green Guide to design and build the next generation of high performance healing environments.

The Green Guide is a voluntary, self-certifying system modeled with permission after the U.S. Green Building Council’s LEED® rating system, with 96 design and construction points and 121 operations points. Unique features of the Green Guide:

- tailored to the particular structural and regulatory challenges of health care buildings
- introduces health issues as an explicit component of each credit
- incorporates design elements that enhance patient healing and staff well-being
- emphasizes energy and water efficiency strategies that lessen greenhouse gas emissions and save money

"As the first quantifiable sustainable design tool for hospitals, the Green Guide provides the framework for the health care industry to fulfill its commitment to 'first do no harm.'”

Gail Vittori, Co-Director, Center for Maximum Potential Building Systems; Green Guide Convenor and Co-Coordinator

Best practices in the Green Guide for Health Care include:

- incorporating healing design elements such as daylighting and views of nature
- using innovative technologies to reduce energy and water use
- reducing hazardous chemicals, such as mercury, lead, diison, cadmium, bisphenol-A, phthalates and halogenated flame retardants
- implementing green operations, ranging from local and organic food to environmentally preferable purchasing protocols

WANTED!

Your imagination and experience to help shape the Green Guide for Health Care. Register a project and access the Green Guide Forum to network with peers who are designing, building and operating healthy facilities. Sign up now at www.gghc.org.

3 PRINCIPLES OF HEALTHY BUILDING:

PROTECT

- the immediate health of building occupants
- the health of the surrounding community
- natural resources and the health of the global community

Realize the Power of Imagination

Higher performance healing environments:

BENEFIT THE BOTTOM LINE

- Significant savings over time due to energy, water, and waste efficiencies
- Reduce first costs with smaller building footprints and efficient design
- Increased philanthropic opportunities
- Federal, state, and municipal incentives for green design
- Hospitals are using purchasing power and economies of scale to buy green alternatives at equal or lesser price.

Indirect cost savings: Patients with views of nature went home 1/4 of a day sooner, had a $500 lower cost per case, used fewer heavy medications and exhibited better emotional well-being.

Robin Guenther FAIA, Perkins + Will
Co-Coordinator, Green Guide for Health Care

IMPROVE PATIENT SATISFACTION:

- Reduce stress
- Increase comfort
- Positively influence patient/staff perception and well-being
- Improve performance-related outcomes

PROTECT HEALTH

- Enhance indoor and outdoor air quality
- Reduce exposure to carcinogens, reproductive toxins, allergens, asthma triggers
- Curtail building-related illness
- Reduce chronic diseases

Chronic diseases linked to hazardous chemicals are on the rise – including certain cancers, birth defects, learning disabilities, fertility problems, autism and asthma. Total annual costs of environmentally attributable diseases in American children are estimated at $55 billion.

Lurigio, P. 2002. JHP volume 1:6, number 1

"It’s only fitting that Boston’s healthcare industry should embrace green technology. It’s good for public health. It’s good for the environment. It’s good for your bottom line. And it’s good for the overall economy.”

Boston Mayor Thomas Menino, Boston-area hospitals Brigham and Women’s, Dana Farber Cancer Center, and Boston Hospital have joined the Green Guide.

“Low quality buildings... will attract staff and retain it. They are going to go where the quality is.”

Boston Mayor Thomas Menino

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Center for Health & Healing, Portland, OR (Oregon Health & Science University), Interface Engineering with GBD Architects. Designed to be 61% more energy efficient than Oregon’s Energy Code. First LEED-Platinum Medical Facility in U.S.