



The Greening of Healthcare:

It's Not About the Money

by John Southerst

The headlines amplify the crises in healthcare. Cost and access to services. Shortages of healthcare professionals. Lack of investment causing decline in facilities. Spread of infectious diseases.

These worrisome stories are the same in all the major western countries. Why, then, is anyone even talking about the greening of healthcare? Prevailing wisdom is that green products cost more, so isn't such an expensive idea way down the priority list? Surely, we should spend the money on something that will cure disease, open up more hospital and chronic care beds, or grow the ranks of healthcare professionals.



John Southerst is a Toronto-area writer who believes the everyday stories of business hold a fascinating cultural record. He started his career as a teacher in West Africa and a reporter in India. He now writes for major business publications and acts as a consultant and wordsmith to manufacturing, financial services and high-tech clients. His other passions are his family, his vegetable garden, cooking (eating it) and squash (playing it).

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Before accepting that environmentalism and improved healthcare systems are mutually exclusive, however, let's look at the assumptions. What do we even mean by the greening of healthcare? It's not just separating bottles, tins, plastics and organic waste from a hospital kitchen, although that's a good start.

It's actually about taking a more holistic approach to the creation of healthcare environments and understanding the relationship that exists between human health and positive environmental influences, both inside and outside the building.

So, the question is not whether healthcare systems can afford greening, but rather, how can they afford to ignore it.

Going green

Healthcare administrators throughout North America have turned to internal environmental investments to create healthier healthcare facilities. Some institutions have introduced an organic element to the healing environment, such as the Complex Continuing Care Unit's rooftop terrace garden, opened in September 2003, at Toronto East General Hospital.



Complex Continuing Care Unit's rooftop terrace garden at Toronto East General Hospital.



Within a space 140 feet long, 9 to 23 feet wide, the garden is a sculpture, stimulating all senses.



Underneath the garden's elegant dome, its "eye" open to the sky, people feel nestled and secure.

photos courtesy of Tales of the Earth

It's a refreshing acknowledgement that fresh air and natural surroundings can actually assist mental, spiritual and physical recuperation.

In another case, the Fort St. John Hospital in British Columbia has started composting kitchen waste, using earthworms and heat from the ventilation system. The compost will also be used for a rooftop garden. The city of Prince George, a forestry community that's also in British Columbia, has developed a co-energy plant to heat the local hospital and other public buildings by burning wood waste, while Kelowna General Hospital uses water from a nearby lake in its cooling system.

At Metro Health Village in Wyoming, Mich., Metropolitan Hospital and Aquinas College (Grand Rapids, Mich.) have announced they will jointly operate an energy and education center. The Center for Sustainable Energy and Education (CSEE) will produce electricity for Metropolitan Hospital and serve as a real life learning lab for students in the Sustainable Business Program at Aquinas.

"Our collaboration with Aquinas College at the CSEE will enable Metro to re-evaluate the way it conducts business," said Mike

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Faas, president and CEO of Metropolitan Hospital. “Our business practises will move towards a model of sustainability, which is a process looking to balance fiscal responsibility while maintaining a commitment to the environment. The Center connects to Metro’s core purpose of providing healthcare in several ways. It will allow us to reduce operating costs and therefore contribute to our commitment to the community to reduce the cost of healthcare. It will also make our community a healthier place to live by reducing pollution and the use of limited natural resources.”

These changes represent new ways of thinking about environmentalism and healthcare, looking for savings in the cost of both care and overhead utilities through energy-efficient, waste-reducing measures. Major hospital boards and other institutional administrators, however, must often justify larger projects: energy-efficient new or retrofitted buildings, environmentally responsible purchasing of recycled and recyclable products, and alternative energy sources. Do the arguments in favor support the costs?

A deeper shade of green

While each project undoubtedly must stand on its own cost-

benefit merits, there are some little understood truths about green healthcare facilities.

The first and perhaps most arresting fact is that green buildings do not ultimately cost more.

Yes, green design demands planning and research, placing additional burdens on the co-ordination, education and precision of the design and engineering team. It's not an easy process. But long-term gains often justify initial costs.



Consider a few examples. Renewable energy sources may add to the upfront capital outlay, but will reduce utility costs over the life of the building. Many new building products use sustainable natural materials, agri-byproducts and increased recycled content, at little or no additional cost – it’s simply a matter of seeking them out. Plus, green facilities show lower maintenance costs and greater durability, with a building life beyond the

usual 50-year mark – which also happens to be the term over which healthcare facilities typically last before undergoing major renovation or replacement.

Given the longer building life, there is greater opportunity to reap long-term rewards of conservation and higher air quality – not just utility savings, but also productivity and labor retention. Studies have demonstrated, in fact, that initial design and construction represents only 2% of a building’s life-cycle cost. Employee labor accounts for 92% of those costs. Improving productivity by just 1% – through better employee health, lower absenteeism and fewer disability or even personal injury claims – can easily justify minor additional upfront costs.

Improved care should also come into the air-quality equation, as many patients experience weakened immune systems and heightened respiratory vulnerability to chemicals such as disinfectants common to the healthcare environment, as well as sensitivity to allergens such as those in latex gloves.

Facilities in many industries (and residential projects, too) have sought the “green” economies of

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environmentally responsible construction. When organizations take a holistic approach to it – one that takes in all the facets of site selection, water-use reduction, renewable energy sources, emission reduction, control of indoor pollutants, ventilation and materials recycling – the U.S. Green Building Council's Leadership in Energy and Environmental Design (LEED) certification system not only offers the framework to accomplish it but also a public confirmation of having met high independent standards.

LEED works something like ISO certification for industrial practises. Registrants institute measures in different categories and obtain basic, silver, gold or platinum status based on points awarded. As of October 2004, 1,600 projects had registered and awaited consideration, and 130 buildings had obtained it.

Healthcare facilities are now among them. The 60-bed Boulder Community Foothills Hospital in Boulder, Colo., became the first U.S. hospital to achieve LEED certification when it opened in September 2003. Highlights of the 200,000 sq.-ft. project include 75% recycled local materials and a building management system that optimizes energy use. Hospital

administrators believe the facility will be one of the most sustainable medical facilities in the country, benefiting patients, staff and the community at large.

In Canada, the British Columbia Interior Health Authority (IHA) now has a policy that all new facilities will be LEED-certified to at least bronze level. The tendering process for a new mental health center is targeting gold certification.

“Going green” with new facilities or renovation adds about 3% to capital costs, according to Chris Mazurkewich, chief operating officer for the IHA, in an article in *Healthcare Quarterly* published in April 2004. He says the investment pays for itself in operating savings over a few years.



Responsible purchasing

Environmentally responsible purchasing programs can also make a contribution to cost savings

and productivity improvement.

Studies show that 80% of health-care facility waste arises from the disposal of purchased products, and a 200-bed hospital typically generates about 445 tons of waste a day.

A purchasing program that favors products and services that reduce the impact on the environment can make a corresponding impact on the cost of waste management and utility consumption.

For example, a facility may require that products approved for purchasing may need to meet low-emission standards for volatile organic compounds (VOCs). Or certain products may need to meet requirements of an environmental monitoring agency. Although standards vary, products with government and monitoring agency certification logos reduce environmental impact. Products with the international Energy Star logo, for instance, consume roughly 10% to 15% less energy than others. In each purchasing category, facility administrators may choose to set requirements for recycling, pollution-prevention, codes of practice or control of toxic substances.

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Steelcase Inc. has established itself as a workplace systems and furniture supplier that meets stringent environmentally responsible purchasing policies. Steelcase was among the first two companies to pioneer testing for VOC emissions with Air Quality Inc., the originator of the GREENGUARD indoor air-quality certification program for low-VOC products. This year, 15 Steelcase wood product lines, 12 seating lines and three systems products were awarded GREENGUARD certification, assuring buyers that these Steelcase products have minimal impact on workplace air quality.

As Steelcase works toward certification of other systems and casegoods furniture, it is also setting high standards for its own facilities. The Steelcase Wood Plant in Caledonia, Mich., for example, is the first manufacturing facility in the world to obtain LEED certification. Among other features, a waste-heat recovery system, low-VOC water-based paint and a monitoring system that sounds an alarm if temperature, humidity or air quality moves out of acceptable ranges earned the plant silver LEED status. A water-recovery system and water-wise landscaping will also conserve about 715,000 gallons of water a year.

A healthy way to look at it

The goals of environmental buildings and interiors and the goals of the healthcare system are remarkably aligned: maintaining the health of inhabitants and the community at large as the supreme mission, with long-term cost control, minimal risk exposure, attractive work environments and minimizing economic waste as important touchstones along the way.

Inside and outside, buying supplies or planning an entirely new facility, the case for the greening of healthcare grips both the ideals and the hard realities of administration. It's about physical and economic health. It makes sense.



If you'd like to learn more about how you can help make a difference to the environment, Steelcase is offering a CEU accredited course entitled "Designing through Sustainability through Life Cycle Thinking".

Contact your Steelcase Workplace Consultant for more information on where and when this course is available.