

Greening Health Care

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In 2001, Lion's Gate Hospital in British Columbia was the first health care institution ever to have its ecological footprint calculated. The study found the total ecological footprint of the hospital to be 2841 hectares, or 4.9 hectares per patient per year, with energy use accounting for 85 percent of this footprint. An ecological footprint represents the "total area of productive land and water required on a continuous basis to produce the resources consumed and to assimilate the wastes produced by a specified population" (William Rees, *What is title of Foot-print book?*, who is Publisher?, 2000). The study of Lion's Gate Hospital's footprint found that the hospital uses a land area about 719 times larger than its actual area of 3.95 hectares, which is staggering in comparison with the footprint calculated for the City of Vancouver, which is about 180 times its actual area.

This study, conducted by Susan Germain and the Canadian Association of Physicians for the Environment, has shown that the practice of medicine can have massive environmental impacts. To St. Mary's General Hospital, in the heart of Kitchener, Ontario, integrating environmental management into the hospital's business plan just made sense. Though almost 85 years old at the turn of the century, St. Mary's felt ripe for a change. As an acute healthcare facility, a large employer and pillar in the community, and with an ethical mandate from its Board of Governors, the hospital has many reasons to be a responsible corporate citizen. And in only five years, St. Mary's has been formally recognized as a pioneer and champion in healthcare for its many noteworthy environmental achievements.

During the 1998-1999 school year, students in the Environmental Studies program at the University of Waterloo completed a number of research projects focusing on St. Mary's. Through this process, the students were able to help the hospital identify a number of its areas of concern and build a

business case for the implementation of an environmental management system (EMS) that would be the building block for environmental improvements. In May of 1999, the hospital hired a new graduate from the Environment and Resource Studies program to start the process of developing and implementing the new EMS plan for the hospital.

The plan was modelled on ISO 14001, which sets guidelines for developing environmental management systems including policies, procedures, goals and objectives, and processes and standards for environmental auditing and life cycle analysis. Since its inception in 2001, the hospital's EMS has been the starting point in helping St. Mary's provide quality patient care while fostering a green and healthy workplace for staff and volunteers. Only the second hospital in North America to have formally registered for ISO 14001 qualification (the first being Cambridge Memorial Hospital in Cambridge, Ontario, in 2000). St. Mary's environmental initiatives include a comprehensive recycling and reuse program that diverts a total of 54 percent of the hospital's waste from landfill. This accounts for 302 tonnes of glass, cans, plastics, cardboard, chemical recycling, food waste, batteries, computer cartridges, computers and electronic components per year. St. Mary's newly constructed areas will consume 26.5 percent less energy, representing an annual cost-savings of \$79,000. Other initiatives include the development of the SMART (St. Mary's Advocates Responsible Transportation) program that focuses on the environmental issues associated with single-car commuting while providing financial incentives to staff that carpool, bike or bus to and from work, and the development of a landscape management plan to eliminate pesticides and herbicides.

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Teaching Green Practices

So how do we educate our colleagues about these ideas and promote them throughout the health care sector? The Canadian Coalition for Green Health Care is composed of 25 major national health care and environmental organizations, and health care facilities and institutions. The mission of the coalition is to minimize the adverse environmental and human health impact of Canada's health care system by encouraging the adoption of resource conservation and pollution prevention principles, and effective environmental management systems – without compromising patient safety and care. Over the past three years, the coalition has partnered with the Ontario Hospital Association to develop an environmental awards program, a “green lane” information service and an educational session at their annual convention. The coalition has also developed a comprehensive guide to green health care; “Doing Less Harm” includes case studies and a fact sheet on building green hospitals.

Doctors and other health professionals overall need more information about environmental issues. Currently only the University of Western Ontario has a program in ecosystem health, but even there practical daily application of healthy environmental practice is not yet a part of the curriculum. A new family medicine teaching centre designed to train the doctors of the future (with links to the University of Waterloo, McMaster University and the University of Western Ontario) is being constructed in Waterloo, Ontario. Other than sensitizing trainees it is hoped that it can help in the education of patients, physicians, colleagues, allied health professionals and the community and ideally truly become a health promoting office.

Building a Green Team

Many opportunities exist for health professionals to green their offices. In Montreal, in May 2003, employees at the Centre de Santé et Services Sociaux Côte-des-Neiges banded together to create a green team of 20 (out of 450 employees). These volunteers began with lunch-time education sessions about environmental issues and promoting environmental solutions. The team later succeeded in motivating the administration to adopt a progressive environmental policy including instituting ISO 14001 policies and obtained the support of other institutions such as Récy-Québec (the government waste management promoter).

So far the group has reduced consumption by placing recycling bins beside each desk and minimizing garbage bins. Toxic products are continuously phased out and replaced with biodegradable hypoallergenic agents when possible. Mercury use in items such as thermometers has been almost eliminated (except for electrical/temperature controls/appliances). Energy efficient products are increasingly preferred by the purchasing department and an energy audit is planned for 2005.

The group also considers social and political issues. A local soup kitchen has become the official caterer for many meetings and organic fair-trade coffee is served exclusively onsite.

The administration now encourages healthy activities that also reduce pollution, such as biking and walking to work. The green team supports local businesses that strive to make similar reforms and it continues to educate administration and employees on the 3Rs.

Resources

The Canadian Coalition for Green Health Care is a group of non-profit health and environmental organizations and health care facilities whose current initiatives include the development of environmental management systems at six health care facilities, elimination of mercury thermometers and the promotion of a green hospital checklist: www.greenhealthcare.ca

Health Care Without Harm in an international coalition of hospitals, health care systems and other organizations dedicated to making health care ecologically sustainable and harmless to public health and the environment: www.noharm.org

The Canadian Association of Physicians for the Environment is an advocacy group that works to educate hospitals, health care professionals and Ministries of Health about the possibilities of caring for health without harming the public or the environment: www.cape.ca/greening.html

Learn more about Susan Germain's study of the ecological footprint of Lions Gate Hospital in Vancouver, BC at www.c2p2online.com/documents/Lionsgate.pdf

Read more about environmental management at St. Mary's General Hospital in Kitchener, Ontario: www.smgh.ca/~Environmental/environmental.asp

The Boulder Community Foothills Hospital was the first US medical facility to receive LEED certification for its attention to air quality and resource and energy efficiency: www.bch.org/aboutbch/foothillshospital.cfm/Environmental%20Impact

Planetree is a non-profit membership organization working with hospitals and health centres toward a holistic, patient-centred model of health care: www.planetree.org

Learn more about the importance of green health care, and discover practical ways to reduce the impact of health care activities on the environment by visiting the Canadian Centre for Pollution Prevention's website at www.c2p2online.com/healthcare

Sustainable Hospitals provides a database of environmentally friendly products for hospitals: www.sustainablehospitals.org/cgi-bin/DB_Index.cgi

To learn about the ISO 14000 series of international standards on environmental management, visit www.iso14000-iso14001-environmental-management.com

The Canada Green Building Council, a coalition of representatives from different segments of the design and building industry, aims to accelerate the design and construction of green buildings across Canada. Learn more about their organization and about the Leadership in Energy and Environmental Design (LEED) program at www.cagbc.org

The International Initiative for a Sustainable Built Environment is a forum for information on advancing the energy and environmental performance of buildings: www.greenbuilding.ca

The Environmental Choice Program is a listing of environmentally responsible products and services: www.environmentalchoice.com

Find out about an engineering consulting firm recognized for its sustainable designs, evaluations of environmentally appropriate technologies, building inspections and energy audits at www.enermodal.com

To learn about current environmental issues related to agriculture, corporate accountability, public lands, transportation and toxins, visit the Environmental Working Group's website (which also features archived reports dating back to 1995): www.ewg.org/pub/home/reports/greening/greenexec.html