

I am a nursing professor teaching at McGill University and Dawson College. I am preparing students for the future in a system that is increasingly affected by shortages of personnel and at the same time increased demands for advanced nursing practice.

I am also a member of the Canadian Nurses Association Environmental Reference Group, the Nurses Working Group of Health Care Without Harm.

I am constantly struck by the enormous divide between the personal environmental consciousness in our own homes and communities, and the evident lack of the same within the hospital system as it now is.

I am happy to see that the provisional expansion of the MGH intends to aim for LEED silver in this new project. This should be the minimum standard for this project because building according to the highest standards of environmental protection is the right thing to do. There is no longer any question of 'business as usual' in designing hospitals or hospital expansion today.

This project of hospital expansion, like the construction of the new 'superhospital' offers a rare opportunity that must be seized upon to set the standard for all new hospital construction in the province. This should include a vision for the future, with the best standards that are possibly available now, allowing for adaptation to new superior technologies that will emerge as the environmental engineering develops.

I see this as an opportunity for making a substantial contribution to the greening of the health care sector, knowing that it is a huge industry, comprising approximately 10% of the Canada's GDP. At the same time, it is a significant contributor to environmental contamination through its air, wastewater, greenhouse gases, toxic chemicals, solid & hazardous waste. We are thus contributing to the burden of disease in our communities through our health care system.

I would urge that the Green Guide for Health Care also be used as a basis for achieving the highest level of environmental responsibility for this project. The GGHC has been specifically designed for the health care sector, including issues that are very different than other sectors, including preoccupations with infection control, specific types of water use, and the fact that hospitals are round the clock institutions. The GGHC is a guide to helping health care institutions become as green as possible. It looks at construction, usage, regulatory challenges, and environmental health, and considers not only the design of buildings but also day to day operations and maintenance.

## **RECOMMENDATIONS**

- This reconstruction should serve as a guide and an inspiration to the future hospital building and reconstruction projects planned for Montreal. It must aim for the highest number of points in all of the LEED criteria (platinum) in order to respect the foundation of all health care 'First Do No Harm'
- Hospitals should be natural leaders in setting the standards for green building design, and being responsible community members. In planning for this project we should be prepared to take risks in demonstrating leadership and vision.

- So far our hospitals in Montreal are lax in attempts to reduce their environmental impact. They show little environmental responsibility at a time when the public is increasingly concerned about environmental pollution and climate change, and that the evidence is building up for links between environmental contamination and human health effects.
- There is very little recycling or re-claiming of materials on existent hospital units. Material that could be easily re-directed to recycling or re-use is most commonly thrown away. Biomedical waste incinerators are Canada's second-largest source of dioxin to the air and also produce substantial amounts of mercury and other heavy major pollutants which directly affect the health of surrounding communities.
- There is little incentive amongst hospital staff currently in our institutions to apply environmentally responsible practices. Disposability rules.
- Numerous studies have been made on the benefits of connecting with nature for patients. Among these are faster recovery times, reduced need for pain relief, reduced anxiety and stress. Evidence-based design brings improved patient outcomes.
- Nurses are the key care-givers within our hospitals, and care for patients 24 hours a day. In a time of nursing shortages, at least one study in the UK has demonstrated that design influences not only workplace performance of nurses, but also their recruitment and retention. Factors such as layout of the units, use of lighting, colour and working space must be considered in this project.
- Nurses are also at high risk from work-place contamination. A 2007 study in the Lancet 2007 showed nurses to be at 2x higher risk than other workers for asthma from workplace exposures, and a survey from the Environmental Working Group, the American Nurses Association and Health Care Without Harm (with University of Maryland School of Nursing) found that nurses are routinely exposed to a variety of potentially toxic agents which can adversely affect not only their own but also their children's health. Use of alternative non-toxic materials in every aspect of hospital design and function will also help to reduce the risks to nurses' health.
- There must also be consideration of space for teaching facilities for student nurses. In most cases these are non-existent in the MUHC. Little consideration is traditionally given to the teaching aspect of the hospital in terms of providing space for student nurses to participate in report or nursing rounds. Lack of space brings a territoriality and conflict which detracts from the harmony of the student nurse experience within the hospital.
- I have seen in the plans the expected increase of traffic, and the plan to facilitate public transport and bicycle use for staff and hospital users. There must also be inclusion of safe bicycle storage areas, and showers and changing facilities for staff as well as incentives for public transport use and car sharing for employees.

- Not only Green roofs, but choice of native species as well as natural plantings and a hospital garden designed to grow herbs for the kitchen, and flowers which could be sold in the hospital to be re-invested in more flowers.
- garden areas around the site using storm water for irrigation and accessible or visible to patients and families.
- Grey water use for toilet flushing or water-less toilets.
- Use of materials and design to reduce ambient noise and encourage quiet and rest for patients and families.
- Non-toxic building materials.
- No materials that contribute to the formation of Persistent Organic Pollutants (POPs).
- Sustainably sourced bio-based or recycled and recyclable material.
- No materials manufactured or that emit highly hazardous chemicals.
- Use of sustainable materials such as the Forest Stewardship Council for wood or fast growing materials like bamboo.
- There should be no second best for this expansion. Short term budget considerations should not take priority over longer term savings in costs to human and environmental health.
- This expansion must respect the Precautionary Principle, and build as a good neighbour to the Mount Royal and surrounding community.

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