Green Hospital Procurement Policy and Procedure Manual, and Implementation Guide

DRAFT

January 2016

Foreword for Draft Green Hospital Procurement Documents

North American health care is wonderfully competent within the doors of hospitals and clinics, but the time has come to address broader, external impacts of practices. Many organizations are taking an interest in “greening” health care, with procurement featured prominently in their endeavors.

As we seek to improve procurement among health care providers, we invite your comments on this document, as well as adoption of the accompanying forms for suppliers and purchasers. The plan is to formulate environmental considerations and priorities, to be adopted both within and beyond the hospital, by group purchasing organizations (GPOs) or anyone with a purchasing mandate.

In partnership with the Canadian Coalition for Green Health Care (www.greenhealthcare.ca), this draft guide was prepared for the Children’s Hospital of Eastern Ontario (CHEO), with a view that once finalized following feedback, it will be both implemented within the hospital, and importantly provide a template for other healthcare institutions and organizations to implement similar policies and procedures. With multiple large institutions on board, the combined purchasing power and public profile will provide the opportunity and impetus to achieve rapid evolution of practices and products towards more sustainable, less toxic and ultimately healthier choices.

We thank Kent Waddington and Linda Varangu of the Canadian Coalition For Green Health Care for their cooperation and extensive input.

We thank you for your consideration and feedback for this initiative. Please provide comments to Meg Sears PhD megsears@ncf.ca and Matthew Bromwich mbromwich@cheo.on.ca

Table of Contents

CHEO's Policy Context

CHEO recognizes the relationships between the environment, and the health and wellbeing of patients, staff and the broader community, both at the hospital and within the region. Further, we believe we have a responsibility to protect the earth's resources for ourselves today and our children tomorrow. To that end, we must accept environmental and social responsibility for the health care services we deliver, and the positive and negative impacts they have.

As health care consumes a large quantity of resources, health care practitioners seek to reduce consumption of energy (including energy embodied in products over their life cycle, as well as facility management and transportation of staff and patients), and related emissions of greenhouse gases as well as toxicants. At the same time, combined purchasing power and public profile provides the opportunity to achieve rapid evolution of practices and products towards more sustainable, less toxic and ultimately healthier choices, while working to better protect the health of patients, families, staff and visitors.

CHEO has endorsed the "Child Honouring Covenant," that includes the principles of *Safe Environments* and *Sustainability*.[1]

CHEO's Sustainability Committee has the mandate to, "Identify opportunities and develop and implement "sustainability" action plans in the areas of waste management, energy conservation, purchasing and education" (Appendix 1).

The Joint Position Statement toward an Environmentally Responsible Canadian Health Sector (2009) identifies the support for environmental sustainability in health care from 13 of the most prominent medical and health care associations across Canada – including the Canadian Medical and Nurses Associations, the Canadian Healthcare Association and the Canadian College of Health Leaders. This document can be found in Appendix 2.

It follows that at CHEO, consideration is given to potential environmental impacts when purchasing products and services. Preference is given to suppliers who strive to achieve the lowest environmental impacts of their products and services, and we will work with other health care institutions to shift health care to broaden the principle "to do no harm" beyond the patient, to our patients' environment.

Environmentally Preferred Sourcing for Ontario Broader Public Sector Organizations

Ontario broader public sector (BPS) organizations are directed to consider environmentally-responsible and sustainable products and services when making purchasing decisions.[2] The objectives of environmental sourcing are to:

1. Provide an environmental role model for public procurement by making it a priority to use environmentally-responsible products and services, where feasible and cost effective;
2. Support a healthier working environment for employees and for citizens in general through the purchase of environmentally-preferable goods and services;
3. Increase demand for environmentally-responsible products and services, which may ultimately enhance their quality and cost competitiveness; and
4. Increase the conservation of resources through the use of more reusable products, and/or products and services that require less energy and materials to produce or use.

Procurement by public organizations represents a significant opportunity; indeed responsibility, to demonstrate leadership and support for greener business practices. Integrating environmental performance and impact into supply chain decisions is a commitment to improvement of the environment and the quality of life in Canada and beyond.

Green procurement must be viewed in the context of achieving value for money for the total life-cycle costs. It requires the inclusion of environmental impact considerations in the procurement process, including planning, acquisition, use and disposal. Value for money must include the consideration of environmental factors that may be quantified to a greater or lesser extent, when determining the total life-cycle costs and environmental impacts.

Environmentally-Preferable Procurement Policy

CHEO has in place a Green Procurement Policy within Policy No. 173, as follows:

> **Green Procurement:** The purchase of environmentally-preferable goods and services and the integration of environmental performance considerations into the procurement process including planning, acquisition, use and disposal. Environmentally-preferable goods and services are those that have a lesser or reduced impact on the environment over the life-cycle of the good or service, when compared with competing goods or services serving the same purpose. Environmental performance considerations include, among other things: the reduction of greenhouse gas emissions and air contaminants; improved energy and water efficiency; reduced waste and support of reuse and recycling; the use of renewable resources; reduced hazardous waste; and reduced toxic and hazardous substances.

For consideration:

At CHEO, consideration is given to potential environmental impacts when purchasing products and services. Preference is given to suppliers who strive to achieve the lowest broad environmental impacts of their products and services. In recognition that hazards are not always thoroughly understood and delineated, a precautionary approach would be to focus on "minimizing chemicals of concern and potentially hazardous exposures."

Comments:

CHEO's Green Procurement Policy is not always translating into purchases that are truly environmentally-preferable, and potential financial savings are being missed, as in the case of hard cases versus blue wraps for surgical supplies. Commitments in order to implement the Green Procurement Policy more fully could focus on priority areas as identified by the Healthier Hospitals Initiative, such as green cleaning, healthy interiors or reduction of use of plastics associated with phthalates and dioxins, such as polyvinyl chloride (http://healthierhospitals.org/hhi-challenges/safer-chemicals).

CHEO's Green Procurement Policy and associated forms, when finalized, are intended to be a template for CCGHC members to solicit information regarding environmental concerns from suppliers. This serves to: 1) put suppliers on notice, and encourages improved practices and substitution with preferable alternative ingredients/technology; and 2) allows collection of information to scope concerns and identify areas of future green procurement focus.

Background

Green Procurement

Green Procurement or purchasing is also called “environmentally-preferable purchasing” or “‘environmentally-responsible procurement.” Broadly, it is the sourcing of goods and services that pose the least (or at least ‘less’) potential harm to the environment and public health. Green procurement reduces the consumption of resources and production of waste, minimizes the adverse effects on health, and may decrease costs. It also contributes to sustainability. The diagram below depicts the guiding principles of green procurement.

Incorporating green procurement principles into an existing organization can challenge some long-established thinking and ideas. Thus, cases for green procurement must be clearly effective clinically, and as well as being environmentally and financially sound decisions.

Along with premiums sometimes paid on products with “green” attributes, the costs of establishing a green procurement program include labour and research, including stakeholder engagement (information, training, program initiation and implementation). These costs may seem higher, but there are many ways to reduce them and to illustrate the long-term financial, environmental and health benefits. These include sharing resources among multiple institutions and organizations (e.g. “Canadian Coalition for Green Health Care,” “Healthcare Without Harm,” “Practice Greenhealth”), and by using credible third-party research.

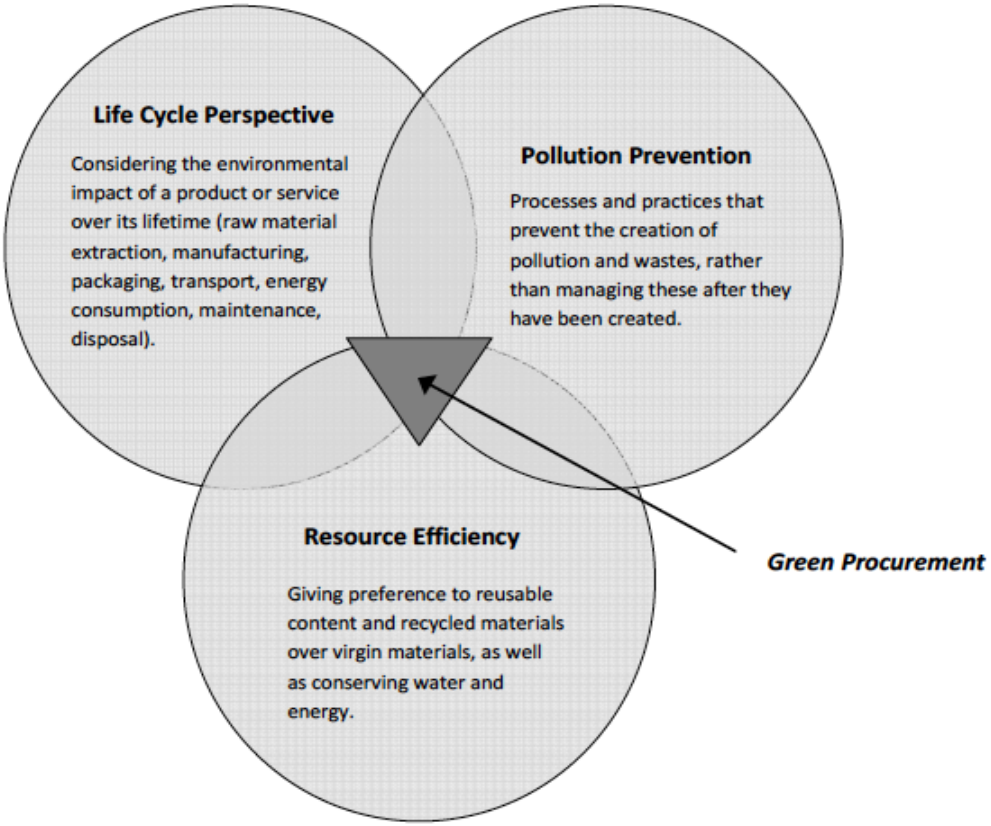


Figure 1: Principles of Green Procurement (Source: Pollution Prevention Regional Information Centre)

Challenges in Implementation

The challenges to green procurement chiefly stem from costs, and change management. Understanding clinical needs, as well as the ability to gather, assess and integrate information from staff, managers, suppliers and third parties, as well as effectively relay considerations to all parties, is essential for optimum outcomes.

Life Cycle Costs

Price is perceived to be the number one barrier to Green Procurement.[3] The notion that "green" products are expensive may be true, when development costs for leading-edge technology are reflected in the price of specialty products. As these costs are spread over more units, the price will fall.

Some "green" products have a higher up front cost, but cost less over their lifetime. For example, a non-toxic alternative to a toxic product may cost less to transport, store, handle, and dispose of. It will require fewer precautions or permits, less staff training, the consequences of an accident could be greatly reduced, and occupational health and safety concerns are obviated. A product with less packaging, and easily recyclable or reusable packaging will have a lower disposal cost.

Life-cycle costing can highlight hidden costs of products and services. In theory, this procurement evaluation technique examines the "cradle to cradle" lifetime costs and impacts of a product, from extraction of raw materials, manufacturing, acquisition, operation, maintenance and reuse/recycling/disposal/resource recovery.

Environmental considerations and potential impacts associated with the life-cycle assessment of goods and services include, among other things: the reduction of greenhouse gas emissions and air contaminants; improved energy- and water- efficiency; reduced waste, and support of reuse and recycling; the use of renewable resources; reduced hazardous waste; and reduced use of toxic and hazardous substances.

Assessment of life-cycle costs commonly requires input from a range of sources including program managers, project authorities, procurement authorities, operational users, environmental and disposal experts, cost accountants and financial management advisors, and standards organizations. Dialogue with the supplier community can also be useful to find out what is available and to inform the market of future requirements.

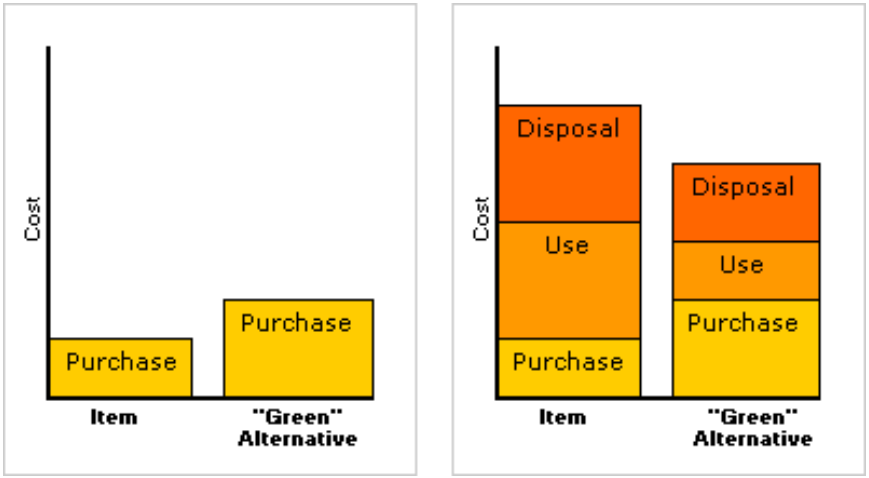


Figure 2: Financial benefits of green procurement resulting from hidden life-cycle costs of conventional items, Source: Healthcare Without Harm

Knowledge and Education

Lack of knowledge may be a barrier to change. Departments and staff not familiar with sustainability concepts are ill-equipped to lead change. Sharing research with all staff across the organization can be the first step to increase awareness. Promoting examples of similar organizations, or actions by departments within the organization, and providing staff with materials and resources are other helpful steps for education leading to changes.

Access and availability

Implementation of a green procurement policy is stymied if alternative options are not available. Local distributors may not stock green products due to lack of sales, or may not have the knowledge and expertise to recommend them to the hospitals. Contracts with vendors and suppliers may force institutions to use particular products. Increasing market demand by strictly following a green procurement policy, and by teaming up with other organizations engaging in joint purchasing, can influence suppliers greatly. Joint training for staff and suppliers can be educational for all involved. Collaboration is the key element in getting all stakeholders to implement green procurement processes.

Change management

Old habits die hard. Buying from trusted vendors, honouring long-standing relationships with suppliers can hinder the process of change. Communication with stakeholders, training, joining with external organization(s) and providing concrete examples and case studies can be strategies to encourage progress. Understanding repercussions for reputations, and for lagging in innovation, can be important in getting stakeholders on board.

Environmentally-Preferable Purchasing

Green Procurement Considerations

Environmentally-preferable purchasing may seem to be an enormous endeavor, but it can be approached in a staged manner, as framed in the challenges from the Healthier Hospitals Initiative (HHI).

"Green" scrutiny can seem intimidating, with complex technical considerations layered upon the primary requirements for clinical efficacy and fiscal prudence. Fortunately, a lot of vetting may be carried out in the process of environmental certification labeling such as ENERGY STAR® (Additional information regarding purchasing energy-efficient products such as office equipment, HVAC, lighting, and other commercial equipment is available at (http://www.nrcan.gc.ca/energy/products/energystar/about/12529 and http://energystar.greenhealthcare.ca). Potential suppliers should provide much of the necessary information. A draft letter to suppliers and an associated environmental merits information form are in Appendices 3 and 4. A supplementary form for hospital staff is provided in Appendix 5.

Procurement of environmentally-responsible products, as well as adoption of pollution prevention "cradle to cradle" criteria when purchasing goods, services and during construction, are examples of initiatives to advance sound environmental management for organizational operations. More specifically, examples of green procurement would include identifying or sourcing:

1. More energy-efficient products and services;
2. Materials and products with higher recycled content, and containing materials harvested through organic agricultural practices;
3. Materials and products associated with lower content and emissions of hazardous materials, greenhouse gases, bio-accumulative pollutants, ozone-depleting substances, volatile organic compounds (VOCs), and particular matter (as defined by this policy);
4. Materials and products with longer lifespans;
5. Materials and products with preferable end-of-life options for reclamation, remanufacturing, and/or disposal;
6. Methods to reduce water consumption, or contamination onsite and offsite (e.g., cleaning products);
7. Suppliers with environmentally-preferable technologies and practices;
8. Environmentally-sustainable or preferable alternatives for commodities; and
9. Opportunities to collaborate with suppliers on green initiatives, such as reducing or changing packaging of goods (e.g. content of instrument packages for the OR), reusing packaging, reducing pollution due to transportation requirements via improved order patterns, or use of hybrid fleets.

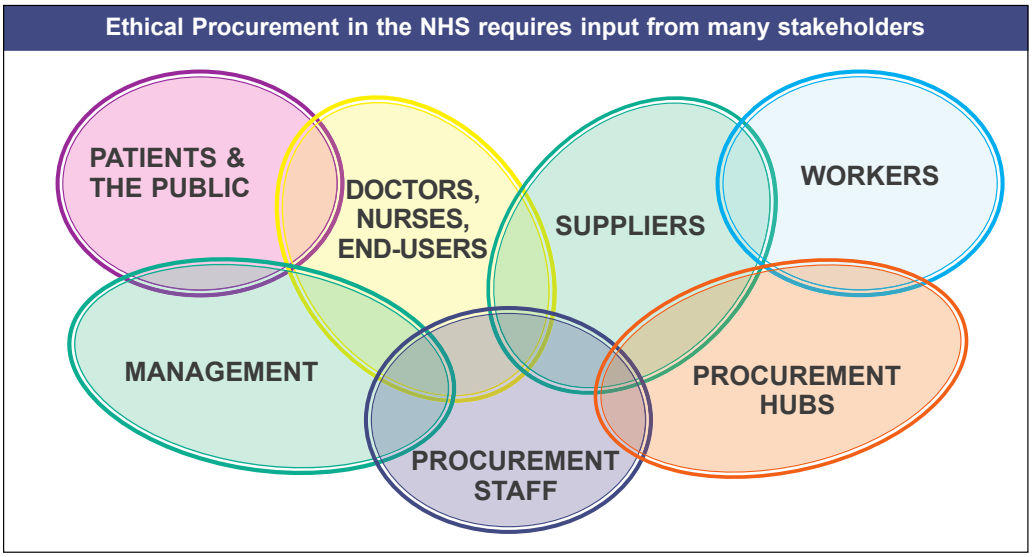
Organizations must be in a position to demonstrate value for money in awarding the contract; i.e., the contract should be awarded to the proponent offering the best combination of costs, quality and performance to meet that requirement over its life-cycle. Awarding of contracts that provide value-for-money requires clear definition of the technical requirements including the environmental outcomes to be achieved; terms and conditions including environmental terms such as use of certified recyclers, mandatory requirements and bid evaluation criteria, as applicable; as well as the contractor selection methodology.

Appendix 4 contains lists of categories of chemicals preferably avoided when purchasing products, according to the levels of concern and the extent to which they are currently commonly excluded. The Healthier Hospitals Initiative (www.healthierhospitals.org) details a staged approach in its challenge to reduce toxic exposures from products used in hospitals.

Initiation of Green Procurement Policy and Procedures

1. **Obtain Support from Management:** Draft a policy statement, create job descriptions, identify cost savings to support funding of green procurement initiatives, and provide education. Creating a strong business case using such measures can garner management and staff support.
2. **Involve Staff:** Creating a green procurement committee can get different teams to work together. A mix of staff will help keep goals reasonable, create ownership and ensure accountability.
3. **Set Goals:** Set up review of current methods and processes and clearly define a future state. Goals should be SMART (specific, measurable, achievable, realistic and time bound). The resulting purchasing policy should have milestones, a timeline and an action plan.
4. **Create Formal Policies and Procedures:** These will guide future purchases across the organization, and facilitate incorporation of "lessons learned" during the process.
5. **Evaluate Feedback:** Create formal procedures to continuously collect feedback. It is important to adjust the action plan according to feedback. A tracking system would determine the progress of the goals.
6. **Communication and Publicity:** Regular internal communication among staff of the progress of the plan, and external communication to suppliers, vendors and partners are also important.
7. **Training, Education and Networking:** Seminars from vendors, top management, external partners and organizations, can help staff to understand projects better. Discovering and sharing information on what similar organizations are doing can generate ideas and gain further support from management and staff.
8. **Pilot Project:** A small, introductory pilot project can show how the green procurement principles can be implemented and subsequently scaled up.

There are many similarities between decision-making for environmentally- and ethically-preferred purchasing. Interested parties are depicted by the Ethical Trading Initiative and the British Medical Association.[4]



Implementing a Green Procurement Program

Healthcare Without Harm describes basic steps in green purchasing as follows:

1. **Establish a Multi-Disciplinary Team**
   Someone with expertise in the environmental hazards in health care, with the ability to work with other teams, understanding their needs, and able to put together and implement a strategy for improvement.

2. **Set Targets**
   When starting out, keep it simple: choose to use more recycled paper, for example, and aim to reduce packaging waste by 20% over two years. Don't forget that you can look at the entire supply chain, from manufacture through to disposal, as well as primary features such as energy consumption.

3. **Integrate Green Criteria into the Purchasing Process**
   Refer to ÖkoKauf (EcoBuy) (pdf), a guide to implementing green criteria throughout the purchasing process. The EU handbook Buying Green (pdf) is also full of detailed information.

4. **Define the Contract Subject Matter**
   The buyer is theoretically free to set whatever criteria they want for the product they wish to purchase. Overly strict criteria may lead to costly delays, highlighting the importance of market research regarding the availability and success of other hospitals with products meeting your requirements.

5. **Translate Subject-Matter into Measurable Specifications**
   Specifications have to be clear, transparent criteria which provide a measuring-stick against which tenders can be evaluated. Translate the contract subject matter into measurable specifications. Clarity is key: it prevents time being wasted with unsuitable offers, and eliminates the possibility of accusations of improperly favouring one supplier over another.

6. **Use Standard Labels and Criteria**
   

   …
   Eco-labels indicate that products meet a set of ready-made environmental standards. This saves effort evaluating the product and developing independent criteria. Although eco-labels themselves cannot be specified during the public tender process, it is possible to demand that a product meet the standard which the label sets.

7. **Choose the Right Supplier**
   You are entitled to exclude companies which have broken environmental regulations and legislation. You can also state that suppliers have to demonstrate a certain degree of technical competence in environmental management.

8. **Award the Contract**
   Most contracts are awarded primarily on a cost basis. However, life-cycle costing can reveal budget savings even for initially more expensive items.

9. **Visibly Celebrate Success**
   Celebrating achievement of environmental goals can create a lot of energy for raising standards and generate pride in your institution among staff and the public.

To further understand the transformation to Green Purchasing, activities to support green procurement to meet a particular need may be incorporated during each stage of the procurement process, for example as follows:

Procurement Step	**Traditional Focus Areas**	**Green Focus Areas**
Step 1 *Assess Need and Opportunity*	Spend analysis focuses primarily on materials and logistics costs	Assess nature of "need" and whether it is indeed necessary (e.g. examination table paper, no longer used at CHEO). Spend analysis encompasses alternative means to meet the need. Direct and indirect environmental costs (e.g., energy consumption, disposal, packaging waste, water)
Step 2 *Assess Supply Chain*	Specification focused, map current process and identify process opportunities	Specification review and design considers industry's environmentally sound products and services
Step 3 *Assess Supply Market*	Identify potential sources of supply and perform supplier assessments/comparisons	Supply base includes suppliers who specialize in more efficient and sustainable products (e.g., possible commodity substitutions and new manufacturing processes)
Step 4 *Develop Sourcing Strategy*	Confirm scope, determine desired outcomes and brainstorm process enhancement	Sustainability considerations and criteria are specified in the RFP document (e.g., energy, disposal, water usage costs may be solicited from suppliers for analysis)
Step 5 *Implement Strategy*	Develop/implement supplier solicitation strategy, conduct supplier negotiation and award contract	Bid analysis quantifies cost/benefits of sustainability attributes (e.g., energy consumption, carbon footprint, product lifespan, waste, etc.)
Step 6 *Institutionalize Strategy*	Transition to new process, develop supplier relationships, implement operation changes and monitor/report performance	Sustainability measures closely tracked and audited

Afterword: Examples for Improving Sustainability

Healthcare Without Harm (http://www.noharm.org/us_canada/issues/toxins/) identifies that toxins with an especially heavy impact in the health care sector may be found in:

- Cleaners and disinfectants
- Dioxin-containing byproducts
- Electronic equipment
- Flame retardants
- Fragrance chemicals
- Mercury-containing medical devices and wastes
- Pesticides
- Phthalates and DEHP
- PVC

Plastics and electronics provide a couple of examples of the broad considerations leading to improved decision-making.

Polystyrene (including Styrofoam™) and vinyl (polyvinyl chloride or PVC) are two materials that are toxic to manufacture, are difficult or impossible to recycle, do not biodegrade, and result in toxic combustion products when incinerated. PVC also contains large quantities of additives that erode or leach out of products, including phthalates (plasticizers that disrupt endocrine function) and stabilizers including toxic elements such as cadmium or lead. An initial step could be to target reduction and substitution for these two materials, particularly for single-use items. PVC-free bags and infusion sets have been available for many years, and a panel struck by Health Canada recommended that they be used at least for infants to avoid DEHP (diethylhexylphthalate) exposure. Oncology patients who receive large intravenous fluid volumes may also be at risk, and may be particularly susceptible to the toxicities of endocrine disruptors. A more ambitious, broader approach would be to examine plastics and synthetic materials on the basis of the large review by Lithner et al., in combination with assessment of exposure potential.[5]

E-waste is escalating rapidly in this electronic age. Electronics contain many toxic substances including metals and plastics. Recycling and reclamation of valuable materials from batteries and electronic equipment has infamously polluted entire third world villages. Transition-to-new-life / recycling is particularly important for electronics.

Finally, we can take inspiration from the United Kingdom. In the interconnectedness of ethical and environmental considerations, much good may ensue. Product quality and off-site impacts affect workers producing them, as well as using the products used in healthcare. In addition to occupational exposures to chemicals that cause cancer, mutations, birth defects and numerous other toxic effects, surgical tools and uniforms are examples that may be produced by child workers, and under poor working conditions. The British Medical Association's Medical Fair & Ethical Trade Group won the British Medical Journal's Corporate and Social Responsibility Award in 2009. The MFETG also calls for an end to child labour, and for workers' health, safety and rights.[4]

References

1. Centre for Child Honouring. Child Honouring Covenant and Principles [Internet]. [cited 2013 May 15]. Available from: http://www.childhonouring.org/covenantprinciples.html

2. Supply Chain Management, Ontario Shared Services, Ministry of Government Services. Broader Public Sector Procurement Directive [Internet]. [cited 2013 May 15]. Available from: http://www.doingbusiness.mgs.gov.on.ca/mbs/psb/psb.nsf/EN/bps-procurementdirective

3. admin. Toxics Reduction Strategy for Health Care | Canadian Coalition for Green Health Care [Internet]. [cited 2016 Jan 20]. Available from: http://greenhealthcare.ca/toxics-reduction-strategy-for-health-care/

4. Ethical Trading Initiative, and the British Medical Association. Ethical procurement for health: new guidelines [Internet]. 2011 [cited 2013 May 16]. Available from: http://www.ethicaltrade.org/ethical-procurement-for-health

5. Lithner D, Larsson Å, Dave G. Environmental and health hazard ranking and assessment of plastic polymers based on chemical composition. Sci Total Environ. 2011 Aug 15;409(18):3309–24.

Resources

Some organizations working for healthier health care include:

Canadian Coalition for Green Health Care	www.greenhealthcare.ca
Green Guide for Health Care	www.gghc.org
Healthcare Without Harm	www.noharm.org
Ontario Health Promoting Hospitals and Health Service Networks	ontariohph.com
Ontario Hospital Association, Green Health Care	http://www.oha.com/CurrentIssues/keyinitiatives/Green%20Healthcare/Pages/GreenHospitalChampionFund.aspx
Practice Green Health	www.practicegreenhealth.org
Sustainable Development Unit, National Health System, UK	www.sdu.nhs.uk
Sustainable Hospitals	www.sustainablehospitals.org

Canadian Hospitals that have committed to the Healthier Hospitals initiative (www.healthierhospitals.org) include:

The Ottawa Hospital Civic Campus
The Ottawa Hospital Riverside Campus
The Ottawa Hospital General Campus
University Health Network
Vancouver Costal Health - Vancouver General Hospital
Vancouver Coastal Health - UBC Hospital
Vancouver Coastal Health - Richmond Hospital
Vancouver Coastal Health - Lions Gate Hospital
Vancouver Coastal Health - St Mary's Hospital
Vancouver Coastal Health - Powell River Hospital / Evergreen
Royal University Hospital
Vancouver Coastal Health - Squamish Hospital / Hilltop House
Saskatoon City Hospital
Vancouver Coastal Health - Whistler Health Care Centre
St. Paul's Hospital
Vancouver Coastal Health - GF Strong
Fraser Health - Surrey Memorial Hospital
Fraser Health - Royal Columbian Hospital
Fraser Health - Burnaby Hospital
Fraser Health - Peace Arch Hospital
Fraser Health - Langley Memorial Hospital
Fraser Health - Chilliwack General Hospital (including CHC)
Fraser Health - Eagle Ridge Hospital
Fraser Health - Ridge Meadows Hospital
Fraser Health - Delta Hospital
Fraser Health - Mission Memorial Hospital
Fraser Health - Fraser Canyon Hospital
Provincial Health Services Authority - Children's and Women's Hospital
Provincial Health Services Authority - Vancouver Cancer Centre

Provincial Health Services Authority -
Sunnyhill Health Care Centre
Providence Health Care - St. Paul's Hospital
Providence Health Care - Mount Saint
Joseph Hospital

Appendix 1. CHEO Sustainability Committee Terms of Reference

Overview

CHEO recognizes the relationship between the environment, and the health and well-being of patients, staff and the broader community, both at the hospital and within the region we serve. Further, we believe we have a responsibility to protect the earth's resources for ourselves today and our children tomorrow. To that end, we must accept environmental and social responsibility for the health care services we deliver, and the positive and negative impacts they have.

The development of a sustainable health care system is a priority that can no longer be ignored. The sacrifice of the global resources of tomorrow to meet the needs of today is a shortsighted plan that can only end poorly. However, it is the hope of this committee that through education, research and the application of common sense principles we can promote healthy living, treat disease effectively and manage our precious resources sensibly. Success will depend on immediate evaluation of our current practices, recognition of our failings and the rigorous undertaking of corrective action.

The CHEO Green Health Care Committee will undertake to audit and improve the sustainability of the services provided at CHEO. Further, it will function to coordinate, nurture and facilitate green initiatives at each departmental level. The committee will work closely with the existing administration to meet, exceed and develop new guidelines for healthcare in a sustainable future.

Mandate:
Identify opportunities and develop and implement "sustainability" action plans in the areas of waste management, energy conservation, purchasing and education.

Waste Stream Management

- Review, prioritize and implement recommendations of the annual waste audit results with the objective of reducing the amount of solid waste going to landfill.
- Identify opportunities to *reduce* consumption as a first goal, *re-use* products that cannot be eliminated, *recycle* waste that cannot be reused. To only use landfill where reduction, reuse, remanufacturing or recycling is not an option.
- Evaluate water and gas waste streams.

Energy Conservation

- Review, prioritize and implement recommendations of the energy audit report with the objective of optimizing the use of energy and reducing the hospital's emission footprint over time.
- Identify local opportunities to reduce energy consumption, or redirect to environmentally cleaner energy sources.

Construction, Purchasing and Product Consumption

- Ensure development of a purchasing program that promotes the use of environmentally sustainable products, exclude products with potential health risks and considers the complete product life cycle of any purchases. Sustainable products are those that:
    - can be recycled, reused or remanufactured
    - are less energy/resource intensive during manufacture, use or disposal
    - are minimally toxic during manufacture, use or disposal (ex: PVC, DEHP)
    - minimize any negative social impact by considering the circumstances of production as part of the product evaluation (Ex: Fair Trade purchases)

Communications, Training, Research and Education

- Develop a communication, training, research & education plan to:
    - Raise awareness and promote involvement in CHEO green initiatives
    - Promote research in the environmental determinants of health
    - Encourage sustainable consumption and waste practices among staff including transportation and food
    - Develop sustainability indicators for ongoing monitoring and improvements

Responsibilities

- Ensure that all action plans maintain compliance with infection prevention and control practices.
- Ensure that all action plans maintain compliance with health and workplace safety practices.
- Ensure that all action plans maintain compliance with all applicable municipal, provincial and federal regulations.
- Ensure energy conservation plans meet or exceed energy efficiency deliverables imposed by external agencies.

Advisory Committee Membership:

The Task Force will be co-chaired by a physician and a senior hospital administrator. The membership of the Advisory Committee will not exceed 12 and consist of the following individuals:

Regular Members

Director, Environmental Services
Director, Facilities Management
Director, Materiel Management,
Director, Public Relations
Manager, Infection Prevention and Control
Physician Co-Chair

Resource members as required

Pharmacy Services
Surgery
Emergency Services
Anesthesia
Inpatient Services
Environmental Health Research

Accountability:

The Advisory Committee will report to the Executive Team through the Senior VP, Corporate Services & CFO.

Meetings:

The Advisory Committee will meet for a minimum of 8 meetings/year or at the call of the Chair.

Minutes:

Minutes will be distributed to the Senior VP, Corporate Services & CFO

Approved by the CHEO Sustainability Committee, October 2011

Appendix 2. Joint Position Statement Toward an Environmentally Responsible Canadian Health sector

JOINT POSITION STATEMENT

Toward an Environmentally Responsible Canadian Health Sector

Context

Health, health care and the environment are linked inextricably. Environmental contaminants have been associated with compromised health status, including cancer, birth defects, respiratory and cardiovascular illness, gastrointestinal ailments and death — and an increased demand for a range of health care services.

The health sector is a significant part of Canada's economy, contributing approximately 10% of gross domestic product (GDP). Thus, the sector uses considerable energy; consumes large quantities of plastics, paper and other resources; and produces significant solid, liquid and gaseous waste. With the improvement of health care technologies and a growing awareness of environmentally responsible practices, there is an increased opportunity for reducing the health sector's environmental footprint. Although there are important health, financial and ethical reasons for adopting such practices in the health sector, a number of challenges exist, including financial, technical and administrative.

Vision

We envision the health sector as a leader in integrating environmentally responsible practices into the delivery of health care. We also see it as an advocate in sharing information on best practices and encouraging Canadians and Canadian organizations to limit their environmental footprint. In a green health sector, minimizing negative impact on the environment would be a priority for all organizations and individuals in their day-to-day practices and at all levels of decision-making.

A Collaborative Approach

Achieving our vision requires a collaborative approach to delivering environmentally responsible health care. For example:[1]

- Greener health infrastructure:
    - Support investment in renewing physical plant infrastructure that allows for the retrofit of facilities that function more efficiently; use cleaner technologies; and meet new environmental standards for energy efficiency, water management and waste management.

[1] Canadian Nurses Association/Canadian Medical Association. *Joint position statement: environmentally responsible activity in the health-care sector.* Ottawa. 2009.

- Best practices:
    - Educate staff and the public on the link between health and the environment and on the health impact of environmental degradation, and help in the development, dissemination and implementation of knowledge and best practices.
    - Support and encourage research on health and the environment, and on environmentally responsible practices in a variety of health care settings.
    - Implement energy-conserving techniques and products.
    - Request rationalized packaging and other environmentally responsible actions from vendors of health care products.
    - Promote safer substitutes to reduce exposure to toxic substances.
    - Reduce waste by reusing and recycling when possible.
    - Practise safe disposal practices for biomedical and infectious waste; outdated medications; and polyvinyl plastics, mercury and other toxic substances.
    - Establish green teams to support the practice of ecologic stewardship.

We recognize that our efforts to achieve a greener health sector must fit into broader societal and global actions to improve the environment. The health sector plays a role in supporting the efforts of all Canadians to find environmentally responsible ways to perform their daily activities by contributing to the management of global environmental issues, such as greenhouse gas emissions and toxic waste disposal.

Calls to Action

We call on *governments and policy-makers* at all levels to understand and address links between health and the environment and to incorporate these links into policy decisions through legislative and budgetary actions.

We call on all *health care organizations* to pledge to minimize the negative impact of their activity on the environment and to seek solutions to existing barriers.

We call on *individuals* working in the health sector to both model and advocate for environmentally responsible approaches to delivering health care without compromising patient safety and care.

Association of Canadian Academic Healthcare Organizations

Canadian Association of Physicians for the Environment

Canadian Coalition for Green Health Care

Canadian College of Health Service Executives

Canadian Dental Association

Canadian Healthcare Association

Canadian Healthcare Engineering Society

Canadian Medical Association

Canadian Nurses Association

Canadian Pharmacists Association

Canadian Public Health Association

David Suzuki Foundation

National Specialty Society for Community Medicine

Developed by a working group of the above organizations

September 2009

Appendix 3. Draft letter to suppliers

To
Xyz corp

Date:

Re.: Green Procurement Policy

Dear Sir or Madam:

The Children's Hospital of Eastern Ontario (CHEO) is committed to providing quality care while minimizing the environmental impact of operations, and we are seeking your commitment to work with us in achieving our goal. On [date], CHEO approved our sustainable procurement policy (attachment/appendix).

At CHEO, we are aiming to reduce our environmental impacts and avoid, minimize, or at least mitigate health and environmental risks associated with products and services. We are therefore looking to build a relationship based upon mutual understanding of the financial, environmental and social benefits of sound purchasing practices. We will consider environmental impacts and sustainability when selecting products, in order to minimize impacts of health care, to promote environmentally responsible manufacturing and distribution, and to provide leadership in environmental sustainability for the health of our children, and our greater community.

Attached to this letter is a set of items that we ask you please to address regarding your enterprise, and for each product offered for sale. We are open to discussing your questions, concerns and ideas on engaging in more sustainable operations. We would also welcome a brief summary of your organization's actions towards sustainable practices and products, and/or how your product under consideration for this RFP can benefit our sustainability improvement initiatives.

As we provide health care, we understand the direct links between health care, the environment and human health, and as we "green" our operations, we look forward to working with vendors and organizations that share these values. If you want to learn more about committing to sustainable health care, please visit the Canadian Coalition for Green Healthcare (CCGHC) website at www.greenhealthcare.ca.

With thanks and best regards,

Appendix 4. Environmentally Sustainable Purchasing Information Form for Suppliers – information requirements (ultimately to be put in a database-linked fillable form)

[Company, Contact, and detailed product Information (e.g. model, size, SKU, etc.), pricing]
GENERAL COMPANY-WIDE QUERIES
Please describe your organization's policies and practices with respect to: • Environmental sustainability; • Labour practices; and • Fair trade practices.
Does your company, and its subsidiaries, have ISO 14001 certification (http://www.iso.org/iso/home/standards/management-standards/iso14000.htm)? □ No □ Yes If not, have you applied for certification? □ No □ Yes
Describe your company's climate action plan, including any greenhouse gas reduction target and achievements.
Describe use of renewable energy sources in your facilities.
Describe your company's initiatives to use least-toxic feedstocks, components and processes, and substitution / elimination initiatives to achieve this end.
Describe your company's reuse, recycling and end-of-lifecycle take-back programs.
Does your company have an established environmentally preferable purchasing and supply chain program? Please describe.
Please specify if your company manufactures to meet any third party environmental certifications (e.g. Greenseal, EcoLogo, Forest Stewardship Council, EPEAT, EPA DfE, Energy Star, etc. – see www.ecolabelindex.com/ecolabels).
Please detail Environmental stewardship practices, including: • Environmental, sustainability and/or corporate social responsibility policies and reports □ No □ Yes (attach, or provide links) • Membership in the Canadian Coalition for Green Health Care (www.greenhealthcare.ca) □ No □ Yes Any other environmental initiatives
PRODUCT SPECIFIC QUERIES
Is this product the most efficient and sustainable means to achieve the desired end, or could you recommend different strategies or products?
Energy and water requirements of products and services, including ENERGY STAR ratings (http://www.nrcan.gc.ca/energy/products/energystar/about/12529) if available.
Is your product reusable? □ No □ Yes What is the projected product life, or the recommended number of times for reuse?
What is the recycled content of the product? Is your product recyclable? □ No □ Yes If so, please describe what portion of it is recycled and what is the recycled material used for?
To assist us in evaluating the disposal cost of your product (or components), please confirm the weight of the product when it is no longer useful and whether this product (or components) is ultimately recyclable, or to be disposed of as general waste, or as biomedical waste.
Please detail how this product is packaged: The type and weight of packaging, what materials are used in the packaging (paper, metal, glass, type of plastic: [Rigid #1 (polyethylene terephthalate [PETE]), #2 (high-density polyethylene [HDPE]), #4 (low density polyethylene [LDPE]), #5 (polypropylene [PP]), clear #6 (polystyrene [PS]) plastics) and #7 (other). Efforts your company has taken to minimize the packaging of this product and to improve the recyclability of the packaging (e.g. substitution of wood pulp-based forms for Styrofoam, or single-material polyethylene for mixed-material unrecyclable vinyl plus paper packages). Do you have a packaging take-back program? □ No □ Yes Is packaging recyclable? □ No □ Yes – How? What is the recycled content of the packaging?
Have you determined the carbon footprint associated with the manufacture and delivery of this product? □ No □ Yes

If Yes, please provide details.

If electronic, can this product be plugged in, or does it require batteries?
Are batteries rechargeable, and if so what is the projected lifespan?
Describe how to recycle the electronics and batteries in an environmentally responsible, ethical manner in Canada; we do not believe waste (particularly e-waste or radioactive waste) should be shipped abroad.

Does your product contain any of the following substances with potential health effects:

General Guidelines

Does the product list any toxic ingredients in its Material Safety Data Sheet (MSDS)? □ No □ Yes, list
Does it contain City of Toronto "subject pollutants"? □ No □ Yes, list
Does it contain Ontario Regulation 347 listed substances? □ No □ Yes, list
Does it contain items on the Clean Production Action and Healthy Building Network Red List? □ No □ Yes, list
Does it contain CEPA listed toxic substances? □ No □ Yes, list
Does it contain chemicals of concern as a result of being persistent, bioaccumulative, endocrine disrupting, carcinogenic, mutagenic, neurotoxic, or a reproductive toxicant? □ No □ Yes, list

Specific Contents

□ *Does it contain latex?* □ No □ Yes
□ *Does it contain dioxin-related substances such as Polyvinyl Chloride (PVC) and styrene polymers*
□ *Does it contain diethyl Hexyl Phthalate (DEHP) or other phthalate plasticizers*
□ *Does it contain polybrominated flame retardants such as polybrominated diphenyl ethers (PBDE)?*
□ *Does it contain polyfluorinated anti-wrinkle, anti-stick or anti-stain chemicals?*
□ *Does it contain perchloroethylene (PERC)?*
□ *Does it contain mercury?*
□ *Does it contain lead?*
□ *Does it contain cadmium?*
□ *Does it contain hexavalent chromium?*
□ *Does it contain volatile organic compounds (VOCs; e.g. formaldehyde) or semi-volatile organic compounds?*
□ *Does it contain triclosan or triclocarban?*
□ *Does it contain unnecessary, potentially harmful ingredients such as fragrances or colours?*

Does your product contain any other hazardous compounds? □ No □ Yes
If Yes, identify them.

Please provide the Material Safety Data Sheet (MSDS), and all information under Workplace Hazardous Materials Information System (WHMIS) Regulation.

Describe any other environmentally responsible features of this product.

Please add any additional comments regarding your organization's environmental profile and the "earth-friendly" characteristics of your product(s) or service(s).

Resources
Toronto Environmental Reporting and Disclosure Bylaw
[http://www.toronto.ca/legdocs/municode/1184_423.pdf] lists 25 priority substances. Their health effects are summarized here:
http://www1.toronto.ca/wps/portal/contentonly?vgnextoid=77385ce6dfb31410VgnVCM10000071d60f89RCRD&vgnextchannel=6660ebfc2bb31410VgnVCM10000071d60f89RCRD

Appendix 5. Environmentally Sustainable Purchasing Information Form for Hospital Staff

The health services sector in Canada represents twelve percent of GDP. It therefore represents a tremendous opportunity to drive the development and availability of safer, smarter products. However, some products marketed to the health sector generate unnecessary waste, contain hazardous materials, or use excessive energy.

This guide has been developed to assist you in assessing your buying decisions, aiming to improve the environmental consequences of patient care and hospital operation.

Questions to ask yourself, in addition to assessing information required from suppliers:

Need to Buy	□ Is there a need for this item/product, or could the purpose be achieved some other way?
Reuse/Recycle/ Disposal	□ Is the item/product reusable or single use only? □ Can the item be upgraded or reprocessed to increase its life? □ Can the Item be recycled? □ Is it easy to recycle? □ Can it be recycled locally (at the hospital)? □ Can the Item be re-sold or re-allocated? □ Will the disposal of this item pose any environmental concerns?
Packaging	□ Has packaging been minimized on the product? □ Is the packaging reusable? □ Will the supplier take back the packaging? □ Is the packaging recyclable? □ Is it easy to recycle? □ Can it be recycled locally (at the hospital)?
Hazardous Substances **Substitutes**	□ Does the product list any toxic ingredients in its Material Safety Data Sheet (MSDS)? (list) □ Does it contain mercury? □ Yes □ No □ Does it contain latex? □ Yes □ No □ Does it contain cadmium? □ Yes □ No □ Does it contain lead? □ Yes □ No □ Does it contain hexavalent chromium? □ Yes □ No □ *Does the product list any toxic ingredients in MSDS?* □ *Does it contain City of Toronto "subject pollutants"?* □ *Does it contain Ontario Regulation 347 listed substances?* □ *Clean Production Action and Healthy Building Network Red List* □ *Does it contain CEPA listed toxic substances?* □ Is there a non-hazardous or less-hazardous substitute for this product? (For example, from the USEFA DfE website www.epa.gov/dfe)
	□ Does the product have any third-party environmental certification? □ Environmental Choice/Green Seal/ENERGY STAR? or other *(see page 2 for more details)* _____ □ Is the product energy efficient? Has it received an ENERGY STAR Qualified label? □ Yes □ No
Supplier Information	□ Does the supplier/manufacturer act in an environmentally responsible way? □ Do they have a publicly-listed environmental policy? □ Do they produce an annual environmental report? □ Are they ISO 14001 certified? □ Is the product made in Canada? □ Do they support the Safer Chemicals Policy, available at http://greenhealthcare.ca/safer-chemical-policies ? □ Are they a member of the Canadian Coalition for Green Healthcare?

Labels

Many products have labels that claim that they are “green” or eco-friendly, but not all labels are the same. The chart below provides some examples of logos and claims.

	ECOLOGO/ ENVIRONMENTAL CHOICE Provides independent verification of product claims.		**COMPOSTABLE** Certified to biodegrade at the same rate as food scraps, but doesn’t mean it can be put in your backyard composter.
	GREAN SEAL Provides independent verification of product claims.		**BIODEGRADABLE** A vague claim unless backed by third-party certification. This seal means 70 per cent of a product will biodegrade within 28 days.
	ENERGY STAR Tells you an appliance uses 10 to 50 per cent less energy and water than standard models.		**CRUELTY FREE** There are many similar “leaping bunnies”, but this is one of the few true third party certifications. Look for the two stars.
	FOREST STEWARDSHIP COUNCIL WOOD/PAPER Information on sustainable practices used to harvest trees for wood and paper.		**FAIR TRADE CERTIFIED** Workers are paid a fair wage, with some proceeds being used to fund health care and education.
	CANADA ORGANIC Products must be 95% organic to receive this label.		**NATURAL** A non-regulated label/term that should be read with caution.
	USDA ORGANIC Products must be 95% organic to receive this label.		**NON-TOXIC** A non-regulated label/term that should be read with caution.
	GREENGUARD Certifies that products are free of strong smelling “VOCs”, but are not necessarily “green”.		**US- EPA** EPA's Design for the Environment program helps consumers identify cleaning and other products that perform well, are cost-effective, and are safer for the environment
	epeat EPEAT® is a comprehensive environmental rating that helps identify greener computers and other electronic equipment.		

Resources:

See a label that’s not in the table? Visit the Ecolabel Index’s extensive list of labels at www.ecolabelindex.com/ecolabels/, for more information on labels and what they mean.