



They're calling it **the biggest threat to human health** in this century. It affects everything from the food we eat to the air we breathe, to our access to safe drinking water. **Climate change** is an urgent, global problem **and HEU members** are well-positioned to make a difference.

greening

First. Do no harm. This principle has guided health care for centuries. It's a simple warning that even the best of intentions can have unwanted consequences.

A typical fever thermometer, for example, contains enough mercury to contaminate a lake of about 20 acres. And medical waste incineration is the second largest source of dioxin emissions in Canada. Not only does the health sector produce millions of tons of waste each year, it also uses about twice as much energy as office buildings, making it a substantial contributor of climate-altering greenhouse gas emissions.

Over the past decade, climate change has emerged as a world-wide threat, compounding other concerns about toxins from consumer products, industrial pollutants and other contaminants in our air, water and food supply.

In May, researchers with the University College of London named climate change as the biggest threat to human health in the 21st century.

Our health and the planet's are interdependent

More and more, those who work in the health care system are recognizing that the well-being of humans cannot be separated from the health of the earth. And they're taking action. HEU members, along with many others, are building a green health care movement, one that includes groups like the Canadian Association of Physicians for the Environment (CAPE) and the Canadian Coalition for Green Healthcare.

"We have a duty to look after ourselves and to look after the earth," explains Carolyn Unsworth, co-chair of the union's newly minted Environment Subcommittee. "The sicker the environment, the sicker patients are when we see them."

The Environment Subcommittee was created by the P.E.

It's estimated that Canadian hospitals produce approximately 100 pounds of waste per week per patient.



prior to HEU's 2008 biennial convention, where delegates passed an Environmental Action Plan. That plan calls for negotiating green contract language and developing local workplace environment committees, as well as supporting public water use, green meeting principles, recycling and waste diversion.

HEU members take action

The range of HEU members' roles in health care means the union is uniquely positioned to offer key contributions to green health care initiatives, says Unsworth.

"HEU members have a lot of power. We work in stores, purchasing, patient care, trades and maintenance, kitchens, cleaning and clerical. We need to tap in to this expertise."

There's no better illustration of this first-hand know-how than Bill Vaughn, who was working as a casual in materials management and stores when he initiated Kelowna General Hospital's first recycling program.

He was inspired, he says, by the daily task of removing garbage bags full of items that were not garbage, but recyclable materials such as plastics, cans and bottles. He discovered that these materials not only cost the hospital more in landfill fees, they were also producing unnecessary waste and greenhouse gas emissions when they arrived at the incinerator or garbage dump.

"I could see everything that was in [the bags]," says Vaughn. "And knowing what we were doing, I didn't think it was right. I shook my head every time I was hauling the garbage down."

And Vaughn hauled a lot of garbage. It's estimated that Canadian hospitals produce approximately 100 pounds of

How many earths does it take?

Ecological footprints are a way to measure the amount of the earth's resources needed to sustain humans and their activities.

Ecological footprint studies are based on the understanding that the earth provides services, such as clean air and drinking water, climate stability, and food production.

Everything we do, from the energy and raw materials in building construction to the greenhouse gas emissions produced from driving, are subject to the finite limits of the earth's ability to provide resources and to process waste.

And humans have pushed past these limits.

The ecological footprint of each Canadian is approximately 7.1 hectares. That means if everyone put the same demands on the

earth's capacity as Canadians, we would need four earths to support us. In contrast, the average footprint in Japan is 4.9 hectares and in Sri Lanka it's one hectare.

Today, the United Nations estimates that the global population is using the resources of 1.3 planets. By the mid-2030s, we will be using the equivalent of two earths. And of course, we only have one.

An ecological footprint study of North Vancouver's Lions Gate Hospital – the first of its kind in North America – assessed their footprint as 739 times larger than the hospital's physical area, or 4.9 hectares per inpatient.

The study also found that 1.7 million pairs of gloves were used in the year studied, amounting to 35 tons of waste. Other studies have found that hospitals in Canada use on average six times more electricity than they do in Switzerland.

Can we be healthy on an unhealthy planet?

Hurricanes, heat waves, floods, forest fires, temperature spikes and droughts are all increasing as the earth's climate becomes less stable.

The effects on human health are direct and indirect, and include respiratory problems from increased air pollution, hunger and malnutrition from decreased crop yields, exposure to prolonged disease transmission cycles, and lack of access to safe drinking water.

Vulnerable populations, both in the global south and here in North America, are most at risk. But scientists predict that all of us will be affected as the climate becomes less stable.

According to the World Health Organization, "climate change threatens to slow, halt or reverse the progress that the global public health community is now making..."



What is climate change anyway?

The earth's atmosphere is made up of a combination of gases that let in the sun's rays and hold just enough heat to maintain a temperature that allows life to flourish.

The pollutants from human activity are changing the composition of the atmosphere, which prevents heat from escaping, and warms the earth. This is called the greenhouse gas effect.

Modern human activity, such as burning fossil fuels, deforestation, and intensive agriculture, has released huge quantities of carbon

how we can
save **lives**
save **money** and
save **the planet**

health care

by Olive Dempsey

**The union's
Environmental Action
Plan calls for
negotiating green
contract language,
developing local
environmental
committees,
supporting public
water use,
and more.**

waste per week per patient. An ecological footprint analysis of Lions Gate Hospital in North Vancouver, the first of its kind in North America, found that more than 1.75 million gloves were thrown out each

year, and an estimated 220 tons of paper was brought in to the facility even though less than half that amount was recycled.

It took a series of back and forth meetings with management, the region's waste reduction office, and the recycling company before Vaughn convinced the Regional District to do a waste audit of the Kelowna hospital. He learned that about 70 per cent of the "garbage" he sent to the dumpsters could have gone to the recycling station instead.

Vaughn used this data to help calculate the cost savings in the proposal for a hospital-wide recycling system that he presented to management. It was not a quick process, but after three persistent years, Vaughn got the program up and running.

"I did it all on my own time," says Vaughn, "because no one else was doing it."

His determination paid off. After two weeks, the hospital's garbage was reduced by 56 per cent and they saved \$25,000 in tipping fees in the first year.

Vaughn is just one example of members from around the province who have taken leadership to integrate environmentally sustainable practices into their work sites, whether they're long-term care facilities or acute care hospitals.

HEU members, in the 1990s, worked with the Labour Environmental Alliance – now called Toxic Free Canada – on a groundbreaking project to address the issue of toxic cleaning chemicals in the workplace.

dioxide and other greenhouse gases in a short period of time. Current levels of methane and carbon dioxide are higher than they have been in nearly half a million years.

The global average temperature has risen by 0.7 degrees Celsius since 1900, and the northern hemisphere is substantially warmer than at any point during the past 1,000 years.

This rise in average temperature does not always mean hotter weather. Instead, it destabilizes the complex balances of the earth's natural systems.

This not only leads to extreme weather and temperature spikes, it's also melting polar ice sheets, driving up sea levels, accelerating species extinction, and threatening food and water supplies around the world.

Snow melt from Himalayan glaciers, for example, provides

water to major rivers in the region. As these glaciers disappear, so does the water supply for millions of people.

Here at home, a recent study predicted that the low-lying city of Richmond could eventually be submerged by rising sea levels. And in California, a major source of vegetables and fruits for B.C., the governor declared a state of emergency earlier this year due to drought conditions.

For these and many other reasons, the UN has stated that, when it comes to climate change, it "couldn't be more urgent ... to act now to safeguard our own survival and that of future generations."

Check out these resources:

Global Footprint Network www.footprintnetwork.org

Health Care Without Harm www.noharm.org/us

Canadian Association of Physicians for the Environment www.cape.ca

Canadian Coalition for Green Health Care
www.greenhealthcare.ca

Sustainable Hospitals
www.sustainablehospitals.org

Health authorities on board

Today, the environment is a consideration in all B.C. health authorities, although the Interior Health Authority (IHA) is recognized as a leader in this area. Vaughn's recycling program was one part of the many changes implemented in recent years.

From phasing out mercury thermometers and toxic cleaning products across the region, to site-specific initiatives, like the use of lake water to cool the building at Kelowna General Hospital (KGH) and the introduction of more energy-efficient boilers and lighting retrofits, the diversity and scope of initiatives reflect the reality that every part of health care delivery has an environmental impact.

This diversity is reinforced in the IHA's newly introduced "Green Teams" which include workers and managers from many occupations and sectors. And it's also this diversity that gives the Green Teams their strength, explains Aman Hundal, IHA's Manager of Environmental Sustainability.

"Everyone wants to better the environment, it doesn't matter if you're a porter, a receptionist or a manager," says Hundal.

"These are the people who walk the hallways... because Green Teams represent different professions and sectors, they're able to look at a problem and fast track it through... and this reduces implementation time."

Melody Bailey, an HEU member and KGH accounts clerk, has been on the IHA-wide Green Team since it started in March. She estimates HEU members make up about half the committee, representing finance, IT, purchasing, and more.

Green solutions save money and jobs

This cross-section of occupations reflects the range of changes – from installing movement-sensitive lights to reducing printing and eliminating bottled water – that have brought sustainability into their health care setting. Bailey has seen real improvements, but says there's still a lot to do.

"I'm very excited," she says. "It's a learning process to look at what we've done and ask where can we take this now?"

As Hundal sees it, this momentum is positive for people and the planet, as well as the health authority and its budget. Decreasing the environmental causes of illness such as cancer, birth defects, respiratory, cardiovascular and gastrointestinal ailments decreases demand on costly health services, he explains.

At the same time, a smaller ecological footprint, means the IHA will purchase fewer carbon offsets and pay less in carbon taxes, as they meet the requirement for public-sector operations to be carbon neutral by 2010. He says it's a win-win situation for everyone, a sentiment that Vaughn echoes in his assessment of the recycling initiative.

"It's a good cause for the environment," says Vaughn, "but let's not forget it helps save money and could help save jobs."



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