

CSHP Sustainability in Pharmacy Recommendations

Background:

Climate Change and Patient Health:

Global environmental change is increasingly recognized as the biggest global and human health threat of the 21st century, projected to result in an additional 250,000 deaths annually between 2030 and 2050^{1,4}. Greenhouse gases that cause global warming and give rise to extreme weather events and air pollution, are also responsible for more than one-quarter of deaths from heart attack, stroke, lung cancer and chronic respiratory disease¹⁰. In Canada, more than 20,000 premature deaths each year are attributable to air pollution.³ Paradoxically, Canadian healthcare activities generated 33 million tonnes of greenhouse gas emissions and over 200,000 tonnes of other pollutant emissions, resulting in 23,000 disability-adjusted life years lost annually⁴.

Globally and in Canada, climate change affects the social and environmental determinants of health – clean air, safe drinking water, sufficient food and secure shelter, ultimately leading to declines in human health, especially across the most vulnerable and deprived in society (children, pregnant people, First Nations, Inuit and Métis Peoples, people with chronic illness, outdoor workers, low income individuals and people with disabilities) further compounding health inequalities^{1,2,8,9}. A National Climate Change and Health Assessment published in 2022 by Health Canada confirmed that climate change is already negatively impacting the health care of Canadians, related to rising temperatures and extreme heat, wildfires and the expansion of zoonotic diseases, such as Lyme Disease⁹. As warming continues, the threats will increase to health; thus, mitigation (efforts to reduce or prevent emission of greenhouse gases¹³) and adaptation (adjusting our decisions, behaviors and activities to account for existing or expected changes¹⁴) strategies need to be incorporated within healthcare.

Pharmacy's Role in Climate Change:

Canada's average temperatures are warming at double the global rate and its greenhouse gas emissions are the 3rd highest per capita in the world^{1,3}. The healthcare sector is one of the major contributors to greenhouse gases, accounting for 4.6% of Canada's total greenhouse gas emissions, which is comparable to the United Kingdom and Australia (3-4% and 7% respectively)⁴. Medicines, medical equipment, and the supply chain are the largest contributors^{1,3,4}.

Although there is no specific data for Canada, aggregate global emissions from the pharmaceutical industry exceed the emissions from the global automotive industry but receive far less attention. Prescription drugs account for approximately 10% of the U.S. health care system's emissions. In the U.K. NHS, medicines and chemicals account for up to a quarter of greenhouse gas emissions. While a substantial portion of pharmaceutical emissions will require actions from regulatory bodies and the pharmaceutical industry for adequate mitigation, a small number of drugs constitute the top contributors to these emissions: anesthetic gases and inhalers make up 5%⁵. Given Canada's aging population continues to rapidly increase, so will demand for health care resources (services, medications, etc)¹¹ in turn creating additional impacts on the environment.

Medications have three major impacts on the environment: 1) the chemical effects of the Active Pharmaceutical Ingredients (APIs) themselves, 2) the large carbon footprint involved in manufacture and

distribution, and 3) pharmaceutical waste. If we consider the life cycle of a medicine, from design and development, marketing authorization to production, post authorization, health technology assessment, prescription and consumption, and finally waste disposal, pharmacy can have an impact at every stage.

Given pharmacists are experts in medicines and their safe and effective use, they have a professional responsibility to ensure more sustainable use of medicines and to decrease the carbon footprint and environmental risk of all pharmaceutical care. Activities such as medicine optimization could save 202 tonnes of greenhouse gas emissions, 0.3 million m³ of fresh water and 24 tonnes of waste per 100,000 population¹².

The role of the pharmacist and the pharmacy team in preventing illness, optimizing medication usage, and reducing pharmaceutical waste already reduces the impact of medicines on the climate, and we have an important role to play as pharmacy professionals.

CSHP's role in Climate Change:

At the most recent United Nations Climate Change Conference (COP26) Canada acknowledged and committed to including health care as part of the decarbonization agenda. Currently, the Federal Government has started a few climate change and health care initiatives including: [Health of Canadians in a Changing Climate](#), [Canada's National Adaptation Strategy](#) and [Mobilizing Public Health Action on Climate Change in Canada](#). National organizations such as [Choosing Wisely](#), the Canadian Association of Pharmacy for the Environment, and [CASCADES](#), as well as various provincial organizations such as [PEACH](#) and [Vancouver Coastal Health](#), [RASDQ](#), and various local health authorities through the [HealthADAPT](#) program are actively involved in initiatives prioritizing environmental sustainability in health care.

International pharmacy organizations such as the [European Association of Hospital Pharmacists](#), [Royal Pharmaceutical Society \(UK\)](#) and the [International Pharmaceutical Federation](#) are currently engaged in incorporating climate change into their strategic priorities and organization fibers.

As a national organization representing members of the hospital pharmacy team, CSHP is committed to supporting and advocating on behalf of the profession to make pharmacy's voice heard and stimulate action in areas that require multi-agency or systemic change. We will call for the pharmaceutical industry, governments across Canada and other stakeholders to work with us to make the changes that are required to tackle the climate emergency. As health care in Canada is mainly under the Provincial Governments' mandate, engaging CSHP's branches is important so that we can advocate to the provincial Ministries of Health to implement regulatory and policy changes. British Columbia is a leader amongst the provinces in the area of climate change and health care by developing [Environmental Sustainability Policy](#) in 2018, as mandated by their Ministry of Health. Health Quality BC has also embedded environmental sustainability into its [Health Quality Matrix](#). Ontario has also been leading in this area with their [Climate Change and Health Tool Kit](#) developed in 2016. Alberta has developed a plan of action to [Building climate-resilient and sustainable healthcare](#). Quebec has also committed to

incorporating sustainable practices in health care with the creation of sustainable development committees and teams.

In the 2022 CSHP membership survey, 7% of members stated that sustainability in pharmacy was one of the issues that CSHP should address. Though this issue was not one of the top three priorities selected by our membership, there may be a lack of awareness of the urgency and the important role pharmacists can play in addressing climate change in the healthcare sector. In our targeted questions regarding Climate Change and pharmacy, 15% of members considered climate change and sustainability in hospital practice to be a critically urgent issues to address, 30% considered it very important (need to make changes within 1-2 years) and 39% considered it to be important (need to make changes within 3-5 years)⁵.

Based on all of this, at the January 2023 board meeting it was approved that the CSHP Board strike a Sustainability in Pharmacy Task Force, to research, identify and prioritize specific goals and deliverables for CSHP to work on to address the climate change crisis. The following are the recommendations from this task force.

Timeline of Recommendations:

Short-term (6 months – 1 year)

Long-term (> 1 year)

Advocacy and Partnerships

1. Recommendation: advocate to Accreditation Canada for inclusion of environmental sustainability criteria (**long term**)
 - Examples for inclusion- environmental stewardship position recommendations, environmental impact of medications included in formulary considerations, medication waste disposal requirements, extreme weather event disaster planning procedure requirements
2. Recommendation: advocate to federal and provincial government for funding for health authorities to implement sustainable initiatives and positions for pharmacy professionals within public health care settings (**long term**)
 - Human Resource funding for dedicated positions focused on implementing and evaluating climate change adaptation and mitigation initiatives
 - Provincial advocacy can occur in partnership with local branches with support from National
3. Recommendation: Recommend to Choosing Wisely Canada to a) embed sustainability language in existing guidelines and b) create specific environmental sustainability recommendations for health care, particularly in the context of medication management (**short term**)
 - CSHP is already an established stakeholder to provide feedback to Choosing Wisely Canada, and adding “green leaf” recommendations to the existing Choosing Wisely recommendations was discussed at the recent Choosing Wisely AGM
4. Recommendation: advocate to CADTH to include environmental impact of medications in reviews (**long term**)

- CADTH reimbursement reviews cover a wide range of topics including clinical evidence, input from patients and providers, economic analysis, etc.; including a planetary health lens section in their reviews would be an appropriate and high-impact addition
 - International databases (such as this [database out of Sweden](#)) are being developed to make this information more easily accessible
5. Recommendation: advocate to Canadian Council for Accreditation of Pharmacy Programs (CCAPP) to include educational accreditation standards, as well as pharmacy educational institutions and residency programs/CPRB for the incorporation of environmental sustainability principles and climate mitigation and adaptation content into curriculums (short term)
 - The Association of Faculties of Pharmacy of Canada represents the university pharmacy programs; initial engagement has occurred with introduction to Cascades and idea of incorporation of sustainability in existing modules that they have on other topics
 6. Recommendation: advocate to Lexicomp, Micromedex, UpToDate, CPS, and other reference manuals to include sustainable information in medication monographs (long term)
 - Consider partnering with ASHP on this recommendation
 - For example, including a section with the carbon footprint for each medication, or noting if there are other environmental concerns (downstream impacts)
 7. Recommendation: advocate to NAPRA to review and update beyond use dating standards to minimize medication wastage. (long term)

Education

1. Recommendation: include a stewardship or environmental sustainability topic at all conferences (branch and national) (short-term)
 - This recommendation ensures that long after the task force and sustainability initiatives are completed, the topic will continue being discussed
2. Recommendation: create a planetary health education series (long term)
 - To gain interest and potentially generate revenue, consider having some modules free for all members and some fee for access
 - Target different audiences (e.g. pharmacists, technicians, leadership)
 - Ensure contains topics on both mitigation and adaptation
 - Can also bank presentations from conferences where they are embedded through education recommendation 1
 - Multimedia- live presentations/symposium and/or on demand presentations, podcast, include highlighting of print documents such as policies suggested below
 - Suggest partnering with: **ASHP**, CAPhE, CASCADES,

Research and Quality Improvement

1. Recommendation: continue specific award for research conducted in the field of sustainability (short-term)
 - As this has been occurring, want to continue to emphasize its importance
2. Recommendation: CJHP to have a Sustainability Primer series or “Go Green Corner” (or alternative platform/CSHP communication if CJHP not an option) (short-term)
3. Recommendation: facilitate peer-review and mentorship for grant application or research (short-term)

- Partner with CSHP research committee and CAPhE, where this is already in progress
4. Recommendation: include sustainability questions in next Hospital Pharmacy Survey (*short-term*)
 - Questions to include: Are there dedicated resources to support environmental sustainability and climate change initiatives, and if yes what does it look like?
 5. Recommendation: continue to include environmental sustainability questions on the annual membership survey. (*short-term*)

Policy and Procedure Development

1. Recommendation: create and adopt a sustainability declaration/charter, including templates that can be used at a branch and individual member level for goal setting (*short term*)
 - Similar to previous strategic plans from CSHP, suggest giving branches a template to set up their own goals to echo National's priorities
 - Examples of charters to follow: [RPS Declaration of Climate and Ecological Emergency](#), [RPS Climate Change Charter Actions](#)
 - Updates this retired document: [Microsoft Word - S Environmental 2001 RETIRED \(cshp.ca\)](#)
2. Recommendation: Template for disaster planning and supply chain disruptions for hospitals (e.g. checklist) (*long-term*)
 - Collaborate with other organization, such as CASCADES or CAPhE, to facilitate development
3. Recommendation: create guidelines for sustainable conferences (*short-term*)
 - May include limitations on conference giveaways, participants bringing their own containers, offering of virtual to limit transportation
 - Example to follow: [Pharmacy Declares Sustainable Conferencing Checklist](#)
4. Recommendation: create a standing agenda item for board meetings to report on sustainability initiatives (*short-term*)
 - For example, can add to delegate report template to check on branch level activities, as well as a report out from National
5. Recommendation: create a sustainability volunteer position at National and Branch levels (E.g. sustainability coordinator, the "green chair") (*short-term*)

Branding

1. Recommendation: create a unique CSHP sustainability logo and slogan to be used in environmental campaigns (*short-term*)
 - Consider having a national contest to determine to logo and/or slogan, and can kick off the sustainability campaign with this
2. Recommendation: create a specific section of the CSHP website that is dedicated to housing above initiatives and recommendations for membership to access (*short-term*)
 - Specific sections to include: task force updates, link to policies/declarations/charters recommended above, upcoming presentations and previous recorded presentations or module (education), interactive map to share initiatives and prior projects across Canada (members to submit in their work) (research/QI)
 - Organize similar to the pillars from the task force

3. Recommendation: PAM campaign specifically targeted to highlighting sustainability initiatives using new branding (**short-term**)
 - Can include member spotlights like previous years, geared towards environmental initiatives

References:

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