Mapping the Landscape

An Environmental Scan & Gap Analysis of Educational Opportunities in Sustainable Health Care

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Disclaimer

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This project was conducted under the mentorship of the Energy and Environmental Sustainability team. The opinions and recommendations in this report and any errors are those of the author and do not necessarily reflect the views of Fraser Health Authority, Providence Health Care, the Provincial Health Services Authority, Vancouver Coastal Health, the Energy and Environmental Sustainability team, or the University of British Columbia.

Acknowledgements

My Positionality

As a researcher, I understand that it is important to reflect on my identities and experiences to recognize how they have shaped my interest in and interpretation of this work. I acknowledge my privilege as White settler of European descent and an uninvited guest on these lands. I am also a Master of Public Health student at the University of British Columbia (UBC), a Registered Nurse specialized in neonatal intensive care, and the former Teaching Assistant of the course NURS 290: Health Impacts of Climate Change at the UBC School of Nursing. I was drawn to this project because of my own experience as a clinical provider who perceived a need for environmental sustainability in health care at a time when the planetary health movement did not yet have widespread momentum in Canada. I had to search for knowledge and resources on my own, and my search brought me to my graduate education–an opportunity that is not accessible to everyone. As a result of my journey, I'm passionate about making it easier for others to learn about planetary health and sustainable health care. Although the goal of creating a resource database was for it to be widely useful for everyone working in health care, regardless of whether they have a clinical background, my perspective as a point-of-care clinical provider and public health professional guided my environmental scan, development of the resource database, and analysis of interviews. I have been fortunate to have the support and input of my EES team members who are specialized in non-clinical areas in which I do not have expertise.

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Executive Summary

Background

In the aftermath of the COVID-19 public health emergency, and amidst worsening climate change impacts in Canada, it has becoming increasingly clear that both the health-care system and the environment are essential for human health and well-being. However, health care is one of Canada's heaviest polluters, contributing to almost 5% of its national emissions and 200,000 tons of pollution per year.[1] These unintended consequences work against health care's ethic of promoting health and preventing harm, resulting in an annual loss or impairment of 23,000 healthy years of life.[1,2] In response to this, sustainability has been identified as an expansion of health-care's duty of care, and a growing movement has recognized this as an opportunity for the health-care sector to lead sustainable transformation.[3]

Educating health-care staff about their role in sustainability is an important step towards their engagement.[4] While a growing number of health-care organizations are becoming involved in sustainable health-care education and many health organizations in BC are embedding sustainability into their strategic plans,[5,6,7] there is currently no centralized place to view all existing educational resources in sustainable health care, or learn how to become involved. Such a repository could build the capacity of new learners to engage in sustainable projects, and help organizations focus their efforts on developing educational materials that address unmet needs.

Purpose

The purpose of this project was to identify what gaps currently exist in the Canadian landscape of sustainable health-care education and to create a database of educational resources about sustainable health care.

Methods

Experts in the field of sustainable health care in Canada were interviewed about their efforts in developing educational resources and their perspectives on the current educational landscape. An extensive search was conducted to review online and publicly available educational resources about sustainable health care in Canada. Interviews were analyzed according to the following themes: approach to developing educational

resources, audiences, challenges in sustainable health-care education, and current gaps in sustainable health-care education.

Results

Approach to developing educational resources: Needs were identified and resources were developed in collaboration with partners.

Audiences: Intended audiences in sustainable health care are rarely well-defined. There are limited resources directed towards non-physician health professionals, students and trainees, supporting systems, those working outside of the acute care sector, and patients and members of the public.

Challenges in sustainable health care education:
- Educational resources alone are not sufficient for systems transformation, and must be accompanied by cultural and structural changes within health care.
- The field of sustainable health care is rapidly evolving as many new organizations become involved, which can lead to confusion around roles, governance, and scope.
- Scalability is a major challenge, because the highly specialized nature of the health-care system creates many unique contexts, and there is a consistent demand for educational resources to be context-specific.
- The capacity of the health-care system is limited due to its long-term strain and the many competing priorities of health-care staff.

Current gaps in sustainable health care education:
- Process-based resources that build the capacity of health-care staff to lead their own sustainability projects
- Resources about how to measure the impact of sustainable health-care projects
- Resources about how to communicate about sustainable health-care and climate change
- Resources that support a holistic, systems-based understanding of health care's dependence on supporting infrastructures, and of climate change as an intersectional issue
- Integration of sustainability within the continuum of required health-care education

Considerations for Future Directions in Sustainable Health Care Education

- Build capacity and connection among health-care staff
- Coordinate regional efforts in sustainable health-care education
- Collaboratively maintain the database of educational resources
- Consider how the education will engage its audience, how it will contribute to change, and how to measure its impact
- Embed sustainability into the everyday competencies of all health-care staff

Key Concepts

Adaptation: adjusting to the impacts of climate change in order to reduce harm or benefit from new opportunities.[8] In the context of health-care systems, this means planning and preparing for expected and unexpected stressors on the health-care system, such as extreme weather, surges in demand due to climate-related health impacts, and climate disasters.[9]

Mitigation: actions that reduce carbon emissions or environmental footprints in order to lessen contributions to climate change[8] or other environmental harms.

Planetary Health: recognizes that our health is connected to, and dependent upon, the health of our planet.[10] It is worth noting that climate change is only one example of planetary health. Other examples include biodiversity loss, pollution, and changes in land use.[10]

Resilience: the ability to cope with, respond to, and recover from climate-related stressors.[8] In relation to the health-care system, this means being able to provide essential health-care services during stressors, such as extreme weather, surges in health-care demand, and climate disasters, as well as having the ability to quickly return to normal functioning afterwards.[9]

Sustainable Health Care: aims to deliver health-care services in a way that protects, restores, or regenerates the health of our planet, and by extension, our health.[11]

1. Background

1.1 Planetary Health, Health Care, and Sustainability

As Canadians, we depend on both our planet and our health-care system for our health. Recent climate events in Canada, including the 2021 Western Heat Dome, which killed over 600 people in BC,[12] and the 2023 wildfire season, which displaced almost 200,000 people,[13] serve as examples of how human health is inseparable from the health of natural systems, a concept known as planetary health.[10] Although health care is intended to safeguard health, Canada's health-care sector accounts for nearly 5% of national emissions and 200,000 tons of pollution per year.[1] The greatest proportion of health-care emissions were found to come from supply chains (62%), including medications and equipment, while building energy accounted for about 10% and water and waste contributed 5%.[14] These impacts create a positive feedback loop in which worsening climate change increases demand for health-care services, and the growing use of health care exacerbates climate change. The pollution and emissions caused by Canada's health-care system were found to result in a yearly loss or impairment of 23,000 healthy years of life.[1] Therefore, a transition to sustainable health care is not only necessary, it aligns with the ethical responsibility and values of the health-care system to benefit patients' health and prevent harm.[2]

The health-care sector is uniquely positioned to drive sustainable change for many reasons. Health-care professionals are among those most trusted by the public,[15] and may have the potential to increase support for climate action by amplifying public awareness of climate change as a health concern.[16] Health-care institutions are deeply significant to local communities because of their long-standing social and economic ties, making them anchor institutions that can support transformational change.[17] The National Health Service (NHS) in England has embraced this opportunity and in 2020, revealed plans to become the first net zero health-care system by 2040.[14,18] In Canada, clinicians, scholars, and health-care staff have been leading sustainable change through grassroots organizing; frontrunners in the movement include the Canadian Association of Physicians for the Environment, Canadian Association of Nurses for the Environment, and Canadian Coalition for Green Health Care, who have been advocating for sustainability for over 20 years.[19,20,21] Creating a Sustainable Health System in a Climate Crisis (CASCADES),[22] a collaborative capacity-building project, was launched in 2021, and has since been at the forefront of research and knowledge translation in sustainable health care. Many health

organizations in BC have also committed to sustainable transformation. In 2021, Vancouver Coastal Health (VCH) appointed Dr. Andrea MacNeill, a surgical oncologist and leading researcher in sustainable health care, to the newly created role of Regional Medical Director of Planetary Health, making VCH the first health authority in Canada to integrate sustainability into its organizational strategy.[5] In 2023, Fraser Health (FH) launched its five year Planetary Health Strategy.[6] In 2024, the Provincial Health Services Authority (PHSA) named planetary health as one of its North Star strategic priorities, and launched its planetary health program. Providence Health Care (PHC) identified sustainability as one of the foundational principles in 2019, and in 2024, is in the process of developing a Planetary Health Strategy.[23]

1.2 The Energy and Environmental Sustainability Team and the Green+Leaders Program

The Energy and Environmental Sustainability team[24] is a regional collaboration housed within Facilities Management and funded by Fraser Health, Vancouver Coastal Health, Providence Health Care, and PHSA. EES's activities drive transformation towards environmentally sustainable, climate-resilient, and low-carbon health systems. These include managing and facilitating the GreenCare network and Green+Leaders community. The GreenCare network connects sustainable initiatives across the BC health-care system, while the Green+Leaders program empowers a community of engaged health-care staff to encourage sustainability across its four partner health-care organizations. New Green+Leaders receive an orientation to connect them with initiatives in their health authorities, other engaged staff members, and resources to support their journey. However, there is currently no centralized place for them to navigate through existing educational resources in sustainable health care. As a result, new Green+Leaders often ask where they can learn more about sustainable health care and kick-start their own sustainability projects. In response to this, part of this project involved creating such a database in order to empower new learners in sustainable health care by giving them greater access to information and building their capacity.

1.3 Purpose

A growing number of health-care staff and organizations are dedicated to engaging in sustainable initiatives, but currently, there is no centralized place for new learners to access resources about how to become involved. This represents an opportunity to

enhance collaboration, innovation, and engagement in sustainable health care. Therefore, the purpose of this project was to identify what gaps exist in the current Canadian landscape of sustainable health-care education, and create a centralized database of educational resources. In order to achieve this, experts working on sustainability initiatives from across health-care organizations were interviewed, and a thorough environmental scan of online resources was conducted.

1.4 Scope

The project was specific to sustainable health-care education in Canada. Experts discussed a wide range of educational opportunities in their interviews, which were considered in the gap analysis. However, for the purposes of the database, educational resources were defined as online, publicly available learning materials. The intended audience for the database was health-care employees in BC, and therefore, site-specific resources from outside of BC, as well as French language resources, were excluded. Formal educational curricula and in-person or synchronous online training courses were excluded from the database because it would not be feasible to maintain up-to-date information about their availability.

The primary research question was about sustainable health care, which mainly falls under mitigation. However, the intended audience for the database (health-care staff), will need to gain an understanding of both adaptation and mitigation in order to support a climate-resilient health-care system. Furthermore, adaptation and mitigation must work in tandem with each other. As a result, experts on both adaptation and mitigation were interviewed. The primary database search focused on mitigation (first eight websites in Table 1), and the search was later extended to include some resources on adaptation.

2. Methods

2.1 Interviews

11 semi-structured interviews were conducted with members of the EES team and the following partner organizations:

- CASCADES
- Canadian Coalition for Green Health Care (CCGHC)
- Health Quality BC (HQBC)
- Health Emergency Management BC

- BC Ministry of Health (BC MoH)

These organizations were selected because they are among the most well-established players in sustainable health care in Canada, and are EES's primary partners. While there are many other Canadian organizations working in sustainable health care, such as specific health authorities and units, interviewing them was beyond the scope of this project due to time constraints. We acknowledge this limitation, especially in relation to the planetary health teams at BC health authorities.

2.2 Database Search Strategy

To find and compile educational resources into a database, the websites of main players in the sustainable health-care and planetary health space were reviewed. Details of each website, as well as inclusion and exclusion criteria, are outlined in Table 1.

Table 1. Websites that were reviewed with descriptions, inclusion, and exclusion criteria

Author and Website Name	Description	Included	Excluded
GreenCare	The GreenCare website is run by EES and features annual reports, educational resources, and stories about sustainable initiatives occurring within its four partner health organizations (FH, PHC, PHSA, VCH).	Toolkits, informational web pages, webinars, educational videos, annual reports	Resources that were identified as being outdated or redundant by the EES team.
CASCADES	CASCADES is a collaborative between four research and funding partners and a leading player in sustainable health care in Canada.[22] The CASCADES website contains hundreds of unique implementation resources for various health-care specialties and areas, ranging from their high-level playbooks to very granular and site-specific resources.	Playbooks, toolkits, videos, webinars, QI templates, case studies, and primers	Granular resources, including implementation policies of a specific health-care facility, EMR widgets, email templates, letter templates. Sometimes one topic area had several smaller resources, in which case only the types of

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			resources in the previous column were included
Canadian Coalition for Green Health Care (CCGHC)	CCGHC is a non-profit coalition of health-care professionals and organizations who are working towards a net-zero, climate-resilient, and environmentally sustainable health system.[21] They have a variety of resources, including toolkits and webinars.	Web pages and project websites with information, webinars, toolkits, and guidebooks.	Research reports and resources that were older than 10 years.
Choosing Wisely Canada	Choosing Wisely features recommendations for reducing unnecessary health care, which has been identified as one of the pillars of sustainable health care.[26,26]	Toolkits and web pages with recommendations	All other content
Canadian Association of Nurses for the Environment (CANE)	CANE is a network of nurses working to promote planetary health in Canada.[20] Their website contains information on advocacy campaigns, webinars, and educational resources about environmental health issues.	Climate-related webinars, environmental racism online course, Nursing Toolkit for Planetary Health	Resources about environmental health issues that don't relate directly to climate (e.g. radon, intersectionality), tools for political advocacy (e.g.

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			letters to political representatives)
Canadian Association of Physicians for the Environment (CAPE)	CAPE is a body of physicians working on improving environmental health through research, knowledge mobilization, and political advocacy.[19] They offer a wide array of educational resources about many different environmental health issues, as well as tools for mobilizing political action	Webinars, videos, toolkits, and factsheets about climate change or sustainable health care	Resources about environmental issues that don't relate directly to climate (e.g. toxic substances), scientific journal articles, tools for political advocacy (e.g. letters to political representatives)
Health Quality BC (HQBC)	HQBC provides leadership and supports quality improvement (QI) initiatives within the province of BC, including a low-carbon, high-quality care collaborative.[27]	Resources related to the low-carbon, high-quality care collaborative	All other resources
Nourish	Nourish is a collaborative working to transform Canadian health-care food systems to become more preventive, healthy, and environmentally sustainable.[28]	Infographics, videos, webinars, toolkits	Information about the CoolFood Pledge, which is a paid subscription program

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Government of BC Websites, including **ClimateReady BC** and the **British Columbia Centre for Disease Control**	These websites contain many resources about adapting to climate change and its health impacts within the BC context.	Web pages with information about climate change adaptation, videos, webinars	All other content
National Collaborating Centre for Environmental Health (NCCEH)	The NCCEH produces evidence-based resources about environmental public health issues.[29]	Webinars about climate change adaptation and preparedness	Evidence reviews, evidence briefs and research scans, content not directly related to climate change
Other Websites	Content from other websites was sometimes encountered during the search, either through word of mouth or because they were linked on the sites that were primarily reviewed.	Videos, webinars, toolkits, or other types of resources that either addressed gaps that were identified during the interview process, covered	Resources that did not meet any of the inclusion criteria

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unique topics that were not found in other resources, centred around sustainable health care, or were process-based)

3. Results

3.1 Landscape of Organizational Partners in Sustainable Health Care

To better understand the roles of different organizations, main areas of focus were grouped and mapped in Figure 1. It's important to note that the figure is intended to provide a broad overview of the landscape, and that placement was based on what was apparent from this review of organizational websites. As a result, it may not fully encompass all of the work being done by the partners that are featured.

Figure 1. Visual map of organizational partners in the current landscape of sustainable health-care education
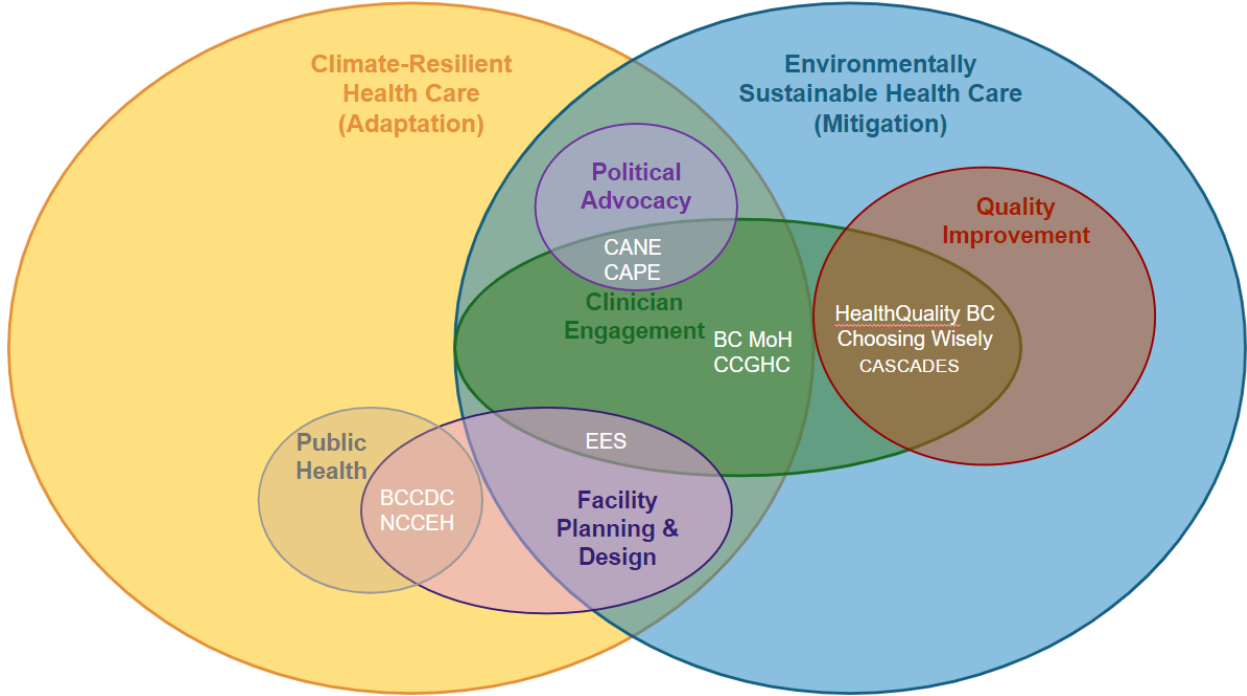
Explanation of Categories

Within the overarching spheres of **adaptation** and **mitigation**, the following categories were identified:

- **Quality Improvement:** organizations in this category have developed resources that aim to improve the quality of health care in a way that is explicitly connected to sustainability

- **Clinician Engagement:** organizations in this category have developed resources and initiatives that seek to involve point-of-care clinical staff in sustainable health care
- **Facility Planning and Design:** these organizations have developed resources that address sustainability, adaptation, or climate-resilience in the built environment, including energy use
- **Political Advocacy:** these organizations are undertaking efforts to influence policy decisions related to environmental health
- **Public Health:** these are public health organizations that create resources for public health practitioners and researchers

3.2 Interview Analysis

Interview responses were grouped and analyzed to understand the following areas: approach to educational resource development, audience, challenges in sustainable health-care education, and current gaps in sustainable health-care education.

3.2a Approach to Educational Resource Development in Sustainable Health Care

When asked about their approach to developing educational resources in sustainable health care, interviewees indicated that needs are identified during their work with partners (for example, through their engagement with communities or point-of-care staff) and then development occurs through collaboration with individuals who work in the affected area. In many instances, resource development centred around scaling existing initiatives into new settings. For example, HQBC's low-carbon, high-quality care collaborative has two streams, one for sustainable inhalers and one for perioperative care, which are initiatives that have been mobilized at the national level by CASCADES.

CASCADES is a very prominent driver of new sustainable health-care initiatives in Canada. CASCADES itself is not an organization, but a project that was initiated by four founding partners (the Collaborative Centre for Climate, Health and Sustainable Care at the University of Toronto; the Healthy Populations Institute at Dalhousie University; the Planetary Health Lab at the University of British Columbia; and the Canadian Coalition for Green Health Care) and funded by Environment and Climate Change Canada.[22] Each year, they call for proposals from health-care teams looking to develop sustainable innovations. Successful proposals lead to national collaborations centred around creating a playbook of implementation resources for the proposed topic. Playbook development occurs

through continued engagement and relationship building with people who work in the identified area. As a result, several sustainable health-care innovations in Canada begin as collaborations with CASCADES and are later disseminated and scaled more widely.

3.2b Audience

Intended Audiences for Educational Opportunities in Sustainable Health Care

Intended audiences are usually not well-defined. The most common audience described by participants was "health-care workers", referring to anyone working in the health-care system who might be associated with the identified area of change. One limitation of this broad approach is that the health-care system is highly specialized, and people working in specific areas may not feel that the information applies to them. Some participants recognized the importance of tailoring messages to specific audiences, but expressed uncertainty around which audiences to target and when, as well as how to group different audiences.

EES has a unique audience because in addition to engaging health-care staff through the GreenCare Network and Green+Leaders program, they create resources for people who work in facilities management and operations (FMO), including capital projects, planners and designers, engineers, environmental services staff, and waste management.

Gaps in Intended Audiences

Health-care professions:

Participants noted that physicians are well-established leaders in sustainable health care, and therefore have more resources directed towards them. They identified a need for resources that either address other health professions and clinical specialties, or resources that are recognized as being applicable to a diverse range of professions and clinical specialties. One limitation of targeting specific professions and clinical specialties is that such resources require the input of people who are very familiar with the everyday realities of that particular area, which can be difficult to find and scale on the level that is needed.

Students and trainees:

Participants identified a need for resources that are targeted towards health-care students and trainees, as well as for onboarding health-care staff. Many expressed a need to include a mandatory sustainability component in the orientation materials for all new health-care staff.

Supporting systems:

Most educational resources are aimed towards clinical practice. Participants identified a need for resources that address those who work in supporting systems and can enable change. These included procurement, supply chains, quality improvement, infection prevention and control (IPAC), food services, and health-care leaders and executives.

Community and public health:

Participants noted that mitigation efforts are especially focused towards the acute care sector, which sometimes overlooks non-acute health-care systems, including community and public health. These systems play an important role in upstream prevention, and can therefore support sustainable health care.

Patients and members of the public:

Patients and members of the public were not an intended audience of any of the organizational partners interviewed, but were identified as being impacted by, and having the potential to support, changes in sustainable health care. Some suggestions for addressing this gap were to have broader media campaigns or toolkits for health professionals on how to communicate with the public about sustainable health care and planetary health.

3.2c Challenges in Sustainable Health-Care Education

Resources don't stand alone

There is an awareness that educational resources alone are not sufficient to create and sustain change. Many participants identified a need for a culture and paradigm shift within the health sector. One suggestion was to engage more deeply with intended audiences in order to understand what will be relevant to them. Alongside the creation of resources, participants noted a need to ensure that resources are relevant to their intended audiences and considerate of the amount of available time their audiences have. Another suggestion was to build connections between health-care staff who are striving towards sustainability, such as through mentorship programs. Lastly, it was mentioned that educational resources should be accompanied by a theory about how the education will be beneficial, but these theories are usually not clearly defined.

Rapidly changing context

Participants noted that one of the challenges of working in the sustainable health-care space is that it is evolving so rapidly. This makes it challenging to keep information and

resources up to date, and can also lead to confusion around governance and scope. One example of this is the confusion in terminology that has arisen as a result of the rapid emergence of the field. The terms "sustainability in health care" and "planetary health" are often used interchangeably to refer to climate change mitigation in health care, and one participant referred to planetary health as a new "buzzword". However, "planetary health" is a broad term which encompasses the interdependence of human health and the health of the natural environment.[10] Confusion in terminology has the potential to lead to a lack of role clarity among people working in sustainable health care, especially because climate change is only one aspect of planetary health, and climate change mitigation is only one area of sustainability. Furthermore, many health organizations in BC have developed their own planetary health teams within the last two years. While this reflects the growing momentum of the movement, it leads to concerns about using limited resources to unintentionally duplicate work.

Scalability

A common theme across interviews was that participants identified gaps in areas of sustainable health care where resources already exist, but the existing resources are not tailored to their particular context. For example, one participant indicated a need for resources about sustainable perioperative care that are specialty-specific, despite the fact that CASCADES has extensive resources about sustainable perioperative care. This may reflect the highly specialized nature of the health-care system, in which every facility and clinical department has its own unique set of policies and practices. It also poses a significant challenge to scalability, because creating context-specific resources requires the input of people who are deeply embedded within that context. One way to overcome this challenge may be to examine how to help health-care staff recognize the ways in which existing sustainable initiatives can be adapted and scaled to their context.

Limited capacity of the health-care system

A final challenge that participants identified was that the health-care system has a limited capacity and has been facing significant strain for years, especially since the COVID-19 pandemic. Both health-care leaders and point-of-care clinical staff have many competing priorities and may not have the capacity to take on sustainability initiatives. One proposed solution for this challenge was to ensure that health-care staff can have protected and paid time to engage in sustainable projects.

3.2d Current Gaps in Sustainable Health-Care Education

Capacity building resources

Many participants identified a need for process-based resources that build the capacity of health-care staff to lead their own sustainability projects. This included resources that support participants in assessing and understanding the impact of their sustainability project ideas, navigating their own institutional pathways, understanding and engaging transdisciplinary partners, and steps they can follow to implement sustainable changes.

Measurement

Many participants noted that their point-of-care partners had expressed a desire to understand the environmental impact of different health-care practices, and identified LCAs, emission inventories, and climate-resilience indicators as areas requiring further research. At the same time, participants recognized that it may not be necessary for all health-care staff to understand the nuance and specificity of LCAs as opposed to having a general awareness about which practices are more sustainable than others. It was noted that LCAs are difficult to generalize because energy infrastructure, waste management, and supply chain logistics are different depending on geographic location. Identifying less technical ways that health-care staff can measure the impact of their sustainable projects could help fill this gap.

Communication

Participants identified a need for resources about how to communicate about sustainable health care, including how to balance the need for urgency with hope and optimism, as well as how to communicate in a way that generates buy-in from colleagues and organizations.

Holistic, systems-based understanding

Participants highlighted the need for health-care staff to have an integrated, holistic, and systems-based understanding of sustainability. Climate-resilient health-care systems require recognition of the health sector's dependence on supporting systems, including transportation, energy, and supply chains, and the reality that disruptions to any of these systems would impact health-care delivery. Furthermore, an equitable transition to sustainable health care will require health-care staff to acknowledge climate change as a broader social issue that intersects with other determinants of health, including colonialism, environmental racism, and socioeconomic disparity.

Integration of sustainability within the requirements of health-care education

Participants observed a lack of understanding among health-care staff about how to collaborate with sustainability teams, as well as low awareness among health-care staff that sustainability is part of their job. As a result, many identified a need to include sustainability content in mandatory orientation and continuing competence for all health-care staff.

4. Considerations for Future Directions in Sustainable Health-care Education

Build capacity and connection among health-care staff

One way to overcome scalability challenges is to support bottom-up projects that are led by health-care staff. The Green+Leaders program has over 400 active volunteers who are leading, innovating, and advocating for sustainable health care,[30] and in a recent survey, a third of respondents expressed interest in leading sustainable projects at work.[31] This reflects tremendous opportunity, passion, and drive within BC's health-care workforce. Creating a user-friendly, online community of practice where engaged health-care staff can share resources and connect with each other could support the development of localized sustainability networks within health authorities and facilities across BC. Such networks could empower staff to self-organize. Another way to build the capacity of health-care staff is to create resources that support them in identifying sustainable health-care principles that can be scaled into their area of work.

Coordinate regional efforts in sustainable health-care education

Planetary health and sustainable health care are rapidly evolving. Within the last three years, all four of EES's partner health organizations (FH, PHC, PHSA and VCH) have created roles and strategic priorities dedicated to planetary health.[5,6,7] A coordinated approach to sustainable health-care education across organizational partners can promote collaboration and knowledge-sharing, reduce uncertainty around governance and scope, and minimize duplication of work. The community of practice described above could serve as a platform for regional planetary health leads to communicate with each other, share their work, and connect with staff within their health authorities.

Collaboratively maintain the educational resources database

The database of educational resources creates an opportunity to build connection and regional coordination by serving as a centralized repository for knowledge and resources. To improve useability, it could be adapted into a web format similar to the mock-up example in Appendix 1. Different resources could be filtered or searchable by audiences and topics. Given how quickly new information and resources in planetary health are emerging, involving organizations in reviewing the resources of theirs that are included, submitting new resources they have developed, and sharing the upcoming resources they are working on would maximize the long-term sustainability and use of the database.

Consider how the education will engage its intended audience, how it will contribute to change, and how to measure its impact

Sustainable health-care education should consider key principles of knowledge translation, which include considering what the desired change is, who the intended audience is, how the education will engage its audience, and how to measure the impact of the education.[32] In the current landscape of sustainable health-care education, specific audiences are usually not defined. However, education may not resonate when audiences are too broadly defined, especially in health care, where many professionals are highly specialized. Having a general audience may also limit engagement with them, making it difficult to understand what educational formats or resources would be most helpful. Additionally, not all educational resources are currently being evaluated. Supporting resource development with a theory of change that clearly identifies the specific intended audience, how the resource will engage with its audience, how it will facilitate their implementation of the change, and how to evaluate the desired change can lead to more successful outcomes.

Embed sustainability into the everyday competencies of all health-care staff

Structural shifts are needed to support sustainable health-care education and facilitate systems transformation. Many health organizations, including FH, PHC, PHSA, and VCH have taken important initial steps towards this by identifying planetary health as one of their strategic priorities. [5,6,7] To further advance this, institutions could recognize sustainability as a required competency for all health-care staff, embed it into the continuum of health-care education, and include it in all health-care job descriptions.

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Appendix 1. Mock-up of educational resources database in user-friendly web format