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Short communication

Reimagining health services and policy research: Embedding environmental sustainability into our research priorities and practice

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ABSTRACT

The health impacts of the climate crisis demand that health systems adapt their practices and mitigate their carbon emissions. Health services and policy research (HSPR) is crucial for the transformation of these systems. We report on an initiative by HSPR trainees from across Canada to ideate on health systems transformation towards environmental sustainability. We outline how environmental sustainability must be embedded into HSPR. We suggest that this process must include a justice-based approach and that HSPR curricula, conduct, and content must consider the health of people and the planet. Furthermore, these endeavours must be supported by funding opportunities and granting organizations. We then offer ways forward for trainees, and those who support them, to ensure environmental sustainability is embedded within HSPR.

Introduction

The many health impacts of the climate crisis demand that health systems worldwide adapt and mitigate given the ethos of healthcare providers to 'do no harm'. Globally, if the healthcare sector were a country, it would be the fifth largest source of emissions [1]. The majority of these emissions come from the healthcare supply chain and the energy used to make, transport, and dispose of items used in healthcare, such as syringes, PPE, and pharmaceuticals. Given the increasing health effects of climate change, climate action in the healthcare sector demands we transform health systems to be more environmentally sustainable, while providing quality care at a reasonable cost. While the United Kingdom has recently pledged net zero healthcare emissions by 2040, other countries have lagged behind in creating strategies for environmentally sustainable healthcare [2]. Health services and policy research (HSPR) can inform the creation, implementation, and evaluation of policies and practices towards a net-zero healthcare system. As a field, HSPR seeks to both understand and improve how we can achieve collective health goals by evaluating implementation and policy processes, as well as health and health policy outcomes. The field tends to be interdisciplinary, supporting a blend of economics, political science, sociology, public health, and epidemiology. Using a variety of research methodologies, these disciplines often work together to better understand our health systems and policies. Health services and policy researchers and trainees are currently embedded in systems that are both vulnerable to, and major contributors towards, the climate crisis. We must be equipped to act, and we propose that action must involve the HSPR community, in particular trainees who will shape systems requiring immediate transformation.

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Collaboration between many stakeholders will be key to health system transformation. Given the most recent manifestation of the climate movement has been largely youth-driven [3,4], student- and trainee-led groups are an important nexus of leadership and action in the healthcare sector. While there are nascent calls for recognition of the climate crisis and our role in mitigation and adaption as an HSPR community, there has been limited interdisciplinary collaboration amongst trainees working towards building environmentally sustainable health systems to date [5].

Other disciplines, notably medicine, have recognized the urgent need to equip trainees with planetary health and environmental sustainability training. For example, the Canadian Federation of Medical Students' Health and Environment Adaptive Response Taskforce (HEART) has developed planetary health competencies for medical students and is making efforts to integrate planetary health into the curricula of all Canadian medical schools [6]. Planetary health is a transdisciplinary field that recognizes the interconnectedness of human health and natural systems and aims to safeguard human health in the Anthropocene [7]. Given the multiple disciplines represented within HSPR, it is no easy task to define a common set of competencies or suggest overarching curricular reform towards planetary health and environmental sustainability. However, in our future roles as HSPR professionals, we will be tasked with protecting and promoting the health of communities and transforming health systems to provide high quality, efficient, and sustainable care. Thus, we believe it is crucial to engage HSPR trainees in charting our own course and ideating on how we can equip ourselves and others to be leaders within health systems on the front lines of the climate crisis.

Here, we outline the importance of trainee engagement in charting a course towards sustainable health systems. We report on one initiative in Canada in which health services and policy researchers and trainees gathered to imagine a future of HSPR that protects both people and the planet.

The HSPR trainee committee on environmental sustainability

Recognizing the critical gap in planetary health and environmental sustainability in our training and collaboration, a group of trainees based at the Institute of Health Policy, Management & Evaluation, University of Toronto created Emerging Leaders for Environmental Sustainability in Healthcare (ELESH) in 2019. ELESH is a trainee-led organization facilitating interdisciplinary learning and action across the many disciplines that comprise the healthcare system to address issues of environmental sustainability.

In the summer of 2020, ELESH approached the centre for Sustainable Health Systems (CSHS) and the Canadian Institutes of Health Research - Institute of Health Services and Policy Research (CIHR-IHSPR) to convene a pan-Canadian HSPR trainee committee on environmental sustainability. The proposed aim of the committee was to strengthen the conversation between trainees, funders, and other health system stakeholders on embedding planetary health and environmental sustainability into transformative health system changes necessitated by the pandemic.

The HSPR Trainee Committee on Environmental Sustainability (hereafter 'the Committee') included 14 graduate trainees and professional degree students currently studying HSPR, health geography, health economics, medicine, and public health from five provinces across Canada. The Committee convened weekly in the month of October 2020 to consider and discuss how environmental sustainability factors into three key areas pertaining to HSPR: (1) Curricula, (2) Conduct, and (3) Content – the *3C Approach*. In the final week, the group conducted a synthesis of their discussions in preparation for a Town Hall with CIHR-IHSPR, CSHS, and other HSPR stakeholders. Below, we present a synthesis of our discussions.

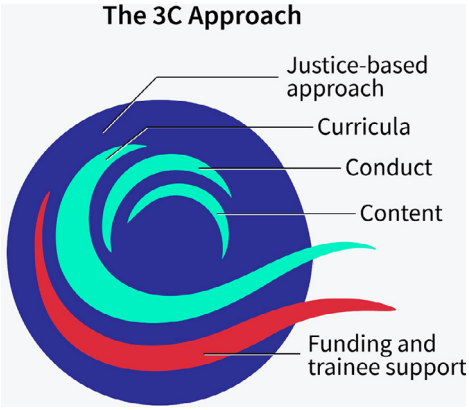

Fig. 1. *3C Approach towards Environmental Sustainability in Health Services and Policy Research*: Framework for embedding environmental sustainability in HSPR training and practice.

Synthesis of committee and town hall findings

Our activities and discussions were guided by the *3Cs*, three key concepts including: Curricula – what we teach and learn, Conduct – how we go about our research or practice, and Content – what we research. Based on these concepts, we synthesized a framework capturing ideas critical to embedding environmental sustainability in HSPR training and practice (Fig. 1). We present our ideas using the *3Cs* from our emergent framework, supported by funding and trainee support, embedded in a justice-based approach.

Grounding our efforts in a justice-based approach

Any path forward in transforming HSPR must be rooted in justice and equity, as social and climate justice are increasingly intertwined. For example, communities who tend to be most impacted by climate change are often communities which are least resourced and experience the most vulnerability. Most importantly though, these communities also tend to be the least responsible for the climate crisis as they consume fewer resources than communities experiencing economic advantages [8]. Thus, pursuing efforts that are grounded in justice and equity will be critical in pursuing health services and policy research that protects all people and the planet. Understanding the social and ecological determinants of health can help trainees participate in critical transformations to support current and future health systems. Furthermore, we must work closely with and learn from Indigenous Peoples in Canada and globally. Though planetary health is a relatively new area of study, Indigenous Peoples have practiced environmental stewardship since time immemorial. Therefore, at the nexus of climate change and health, we find both a responsibility and an opportunity to support Indigenous leaderships and ways of knowing as we move forward. We can do so by continuing to ensure that more Indigenous scholars have culturally safe places to practice their research through active decolonization and by teaching and valuing Indigenous knowledge systems in the same way we do Western hegemony.

Curricula - what we learn

We define curricula as what we learn in our programs, coursework, and competencies in HSPR and associated healthcare programs. Planetary health and environmental sustainability are not consistently taught in HSPR curricula. Indeed, many trainees are not even aware of the connections between planetary health and health systems. HSPR programs can consider a phased approach to curricula reform, involving a core course or other resources co-developed by trainees, that could be embedded across health services curricula. A

"train-the-trainers" approach, whereby trainees are actively engaged in co-creating courses, can help with the uptake, acceptability, and scale of curricula development.

Conduct - How we do our research

We define conduct as how we do our research or our data collection methods, the theoretical lenses we apply, the frameworks we use, and the ways we translate knowledge. A planetary health and environmental sustainability lens must be adopted and prioritized from study protocol to the dissemination of findings and throughout the research process. Furthermore, transdisciplinary and intersectional approaches should be used in the conduct of HSPR. In order to support this process, a "Green Research Scorecard" could be implemented, much like the "Green Healthcare Scorecard" produced by the Canadian Coalition for Green Health Care [9]. The "Green Healthcare Scorecard" is a reporting tool for hospitals which supports them to track and summarize their environmental performance relative to other hospitals [9]. A similar tool could therefore be implemented at either the individual researcher or institutional research level during study conduct. Finally, it would be of great value to develop an environmental sustainability framework for those conducting HSPR, much like the knowledge translation approach required by CIHR [10].

Content - What we research

We define content as what we research or the research questions we ask and the research topics we pursue. Trainees identified notable areas of research worth pursuing including minimizing surgical and food waste through effective policy and more sustainable systems, supporting the development of healthcare as anchor institutions to promote community well-being, and incorporating sustainability as a key comparator in economic evaluations. We acknowledge that not every researcher will or should pivot to exclusively study the impacts of climate change and ecological degradation on human health and health systems. However, there are many aspects of research already being conducted that have environmental implications that deserve further exploration. Virtual care, for example, has environmental impacts that could be explored but are not often prioritized in research questions or study designs.

Funding and trainee supports

What research is prioritized and how it is completed is strongly influenced by funding bodies. Funding bodies have a unique opportunity to catalyze change across the research ecosystem, setting research agendas and priorities that encourage the development of sustainable health systems. Just as granting bodies in Canada and elsewhere expect research protocols to consider a Sex and Gender Based Analysis (SGBA) and knowledge translation, the Committee identified that the environmental impacts of HSPR should similarly be a required consideration. Furthermore, as HSPR only accounts for approximately 8–10% of CIHR's total funding portfolio [11], the application of this lens could extend beyond HSPR to the wider body of health research at CIHR [12]. HSPR could be used as a starting point to extend an environmental sustainability lens across CIHR's full portfolio of research. We encourage trainees and others in HSPR to consider how similar progressive efforts may apply to their regional or national funding bodies.

Ways forward

Our collaborative efforts to embed an environmentally sustainable approach in the ways we conduct research, in what research we conduct, and through what we teach and learn, are the beginning of a long overdue movement within HSPR. As trainees, we hold not only our institutions and funders, but also ourselves, accountable for the necessary transformations to our programs and practices. As members of the Committee and HSPR trainees, we make five commitments towards the pursuit of embedding environmental sustainability within our work:

1. Advocate for planetary health and environmental sustainability in our content, conduct, and curricula.
2. Ensure a **justice-based approach and support for Indigenous leadership** is central to our efforts.
3. Continue **capacity building** among ourselves, other trainees, and the HSPR community.
4. Seek **transdisciplinary collaboration** in our efforts and actions, including with disciplines beyond HSPR such as engineering, environmental sciences, urban planning and design, amongst others.
5. **Engage with and develop** our frameworks, indicators, and community towards environmental sustainability.

These commitments are underpinned by outreach and knowledge translation. Our committee has used social media, campus news, commentaries, and presentations to convey our efforts to a wider audience [13–15].

Conclusions

Without committing to these actions, the mandate of healthcare to "do no harm" cannot be fully actualized. Given that HSPR is a diverse field, there is no single prescription for successful collaboration and fostering advocacy towards environmentally sustainable health systems. However, our framework and experience may offer ideas and serve as a call to action for environmental sustainability to be a priority within the field while encouraging similar efforts amongst other trainees and the broader HSPR community. We recognize that HSPR must address many intersecting challenges within health systems that demand action and resources, not least of which has been the impact of COVID-19. Yet despite scarce resources and plentiful challenges, HSPR must also reckon with the accelerating impact of the climate crisis on health and health systems. To do so, emerging leaders must be equipped with awareness and skills. These must enable us to drive change within organizations towards 'low carbon, high quality' care, to shape policies that consider the ecological determinants of health, and to lead a broader movement towards policies and practices that promote environmental sustainability. However, current HSPR curricula often has little space or time for additional competencies. We therefore must actively work to find synergies in existing curricula and embrace co-design efforts that challenge us to meet the demands of the climate crisis. Together, we can begin to chart a course that not only imagines but pursues a future of HSPR that protects both people and the planet.

Declaration of Competing Interests

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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