



Institute of Health Policy, Management & Evaluation  
UNIVERSITY OF TORONTO

## **Health, Health Systems, Climate Change and Environmental Sustainability: Research Interests and Knowledge Needs**

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**Results of a Survey of the Institute of Health Policy, Management and Evaluation (IHPME) Community**

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## Executive Summary

We conducted a survey of the IHPME community in fall 2017 to identify research interests and knowledge needs related to the environment, climate change and sustainability for health and health systems. A total of 205 individuals participated in the survey, including faculty (n=37), students (n=49) and alumni (n=63), representing a wide array of roles across the health sector, including research (n=58), administration or management (n=46), clinical care (n=23) and policy or planning (n=22).

The results indicate that environment and climate change issues are not a current research interest for most members of the IHPME community, though a moderate majority were willing to consider including such issues in future research. While some respondents were convinced of the need to do so, barriers were significant, including lack of knowledge about how such issues are relevant to health or health care and about research priorities or collaboration opportunities, as well as methodological challenges and system constraints, such as limited policy interest. A common theme in open comments was uncertainty about how to take up these issues within existing programs of research.

By contrast, approximately half of respondents indicated that these issues were relevant to their professional activities, and a substantial majority saw a need for more research-based knowledge on these issues, even if only as an ancillary consideration. IHPME was seen to have a role to play in addressing these needs, including by serving as a broker to build links to research and with researchers. In comments, respondents identified the varied ways in which environmental issues were relevant to health care, both for health outcomes and for the organization of health care delivery, and the many ways that IHPME could support internal capacity and advance policy and practice change within health systems and society as a whole.

In sum, members of IHPME's community are more engaged with environment and climate change issues in their professional practices as health system managers, policy makers and clinicians than through the research that they conduct. However, there is a clear belief in the need for more research, and a substantial willingness among researchers to become more engaged. The survey provides baseline data on research interests and knowledge needs and suggests ways in which IHPME can support its community to become more research-active on environment and climate change issues, by fostering awareness, brokering connections, and supporting capacity building both locally and on a larger stage.

## Introduction

The gravity of climate change has called attention to the range of environmental challenges facing the human community and highlighted the potential for alternative futures that are environmentally and socially sustainable. The Institute of Health Policy, Management and Evaluation (IHPME) has a role in addressing these challenges and realizing these opportunities, due to the profound implications of climate change for population health and health systems, and the outsized environmental impact of the health care sector.

Beginning with an initial discussion at an Institute faculty meeting in September 2016, members of the Institute community have worked to identify ways to tangibly address these issues, leading to the creation of a Standing Committee on the Environment, Climate Change and Sustainability and the production of a first [Strategic Plan](#) in July 2017. The plan outlined the Institute's aim to be part of the solution to the challenge of climate change, and to work actively to support environmentally and socially sustainable health systems, the health of populations, and health equity through community-engaged and collaborative efforts in education, research, operational activities and through relevant cross-cutting work.

As part of the Committee's commitment to advance research-based knowledge and impact on the environment, climate change and sustainability in relation to health and health systems, we conducted a survey of the IHPME community in fall 2017. The results provide baseline data on research interests and knowledge needs, which can be used to track interest over time and inform the efforts of the Committee.

## Approach

We designed a brief online questionnaire with four sections. The two primary sections posed questions about:

1. **Research interests** related to climate change and environmental sustainability, for those conducting health and health systems research, and
2. **Knowledge needs** related to climate change and environmental sustainability, for those who mobilize research-based knowledge in practice across the health sector.

In addition, we asked about the respondent's relationship to IHPME, and included a final – optional – section to identify interest in potential IHPME learning opportunities for the community as a whole (e.g., education days, workshops, seminars), educational opportunities for IHPME students, or teaching opportunities for IHPME faculty related to these issues.

Over a two-week period in December 2017, we contacted members of the IHPME community twice by email with an invitation to complete the survey and a link to the online questionnaire, hosted by SurveyMonkey.

## Findings

### Respondents

A total of 205 individuals participated in the survey, though not all respondents answered all questions. While a gratifying total number, we estimate that approximately 4,500 unique individuals were emailed. This suggests a low response rate of about 4.5%.

We received responses from across the IHPME community, including faculty (especially status and adjunct faculty, n=26), students (especially Health Services Research students, n=31) and alumni (especially alumni of the Master’s in Health Administration program, n=40). (Table 1)

**Table 1.** Respondents by relationship with IHPME

Faculty	37
Students	49
Alumni	63
Other (postdoctoral fellow, friend of IHPME)	10
<b>Total respondents</b>	<b>146</b>
NB. Does not add to 100% as respondents could identify multiple connections	

Respondents represented a wide array of roles across the health sector, including research (n=58), administration or management (n=46), clinical care (n=23) and policy or planning (n=22). (Table 2)

**Table 2.** Respondents by primary professional role

Clinical Care	23
Research	58
Administration/Management	46
Policy/Planning	22
Sales	0
Lobbying/Advocacy	4
Consulting	12
Other	17
<b>Total respondents</b>	<b>136</b>
NB. Does not add to 100% as respondents could identify multiple connections	

## Section 1: Research Interests

We posed a series of questions about research interests related to climate change and environmental sustainability – for those conducting health and health systems research.

The responses we received suggested that these issues are not a current research interest for most members of the IHPME community, though a moderate majority were willing to consider including such issues in future research. While some respondents were convinced of the need to do so, barriers were significant. These included a lack of knowledge about how such issues are relevant to health or health care and about research priorities or collaboration opportunities, as well as methodological challenges and system constraints, such as limited policy interest. Few survey respondents were critical of pursuing research on these topics and many expressed enthusiasm or potential interest, but a common theme in open comments was *uncertainty* about how to take up these issues within existing programs of research.

### 1.1. Involvement and interest in research on climate change and environmental sustainability

A very small number of IHPME-affiliated researchers currently include issues of climate change and environmental sustainability in their program of research. Only 15% (16/103) of respondents addressed these issues at all. (Table 3)

**Table 3.** Are issues related to climate change and environmental sustainability included in your current program of research?

No	87	(84.5%)
Yes – as central focus	2	(1.9%)
Yes – as important consideration	5	(4.9%)
Yes – as ancillary consideration	9	(8.7%)
<b>Total respondents</b>	<b>103</b>	<b>(100.0%)</b>

However, a much larger number of IHPME-affiliated researchers were interested to include issues of climate change and environmental sustainability in their program of research. Indeed, a small majority (61%, 62/102) of respondents indicated that they were definitely or potentially interested to do so. (Table 4)

**Table 4.** Are you interested in addressing these issues in your research?

No	40	(39.2%)
Yes – potentially	49	(48.0%)
Yes – definitely	13	(12.7%)
<b>Total respondents</b>	<b>102</b>	<b>(100.0%)</b>

## 1.2. Barriers, attitudes and expectations for research on climate change and environmental sustainability

Respondents identified several challenges to researching these issues. Among the challenges identified in the survey, respondents most commonly highlighted issues related to a lack of knowledge, including knowledge about how such issues are relevant to health or health care (n=56), about relevant research priorities (n=52), or about collaboration opportunities (n=47). (Table 5)

**Table 5.** What might make it challenging to address climate change and environmental sustainability issues in your research?

No special challenges	12
Lack of funding	24
Insufficient knowledge of how environmental sustainability and climate change apply to health or health care	56
Unaware of the research priorities in this area	52
Unaware of collaboration opportunities	47
No institutional support	9
Peers would not value this work	8
Other	20 comments
<b>Total respondents</b>	<b>98</b>

NB. Does not add to 100% as respondents could identify multiple challenges

Many respondents offered comments in relation to research interests, both in response to specific questions and to provide general feedback on research-relevant issues. These comments provide additional insight regarding attitudes, expectations and challenges in conducting research of this sort.

Many comments were supportive of pursuing research on these issues, with positive comments from individuals who were already engaged, those who were interested to become engaged, and those who were willing to consider the possibility.

*I have not considered this before but would be very interested in opportunities to include issues of climate change and environmental sustainability in my research.*

*I haven't thought much about this issue yet from my own research perspective. I would be interested in examining impacts of climate changes/environment on mental health and social relations.*

*I see health system sustainability and concerns about environmental impact as connected. Keen to explore them further in research and teaching capacity.*

*Climate change is important, however, equally important in my view is the level and concurrent growth of economic inequality within nations.*

Several comments stressed the importance of the issues, but also identified challenges for research in this area. Among those who were more engaged, the challenges that were identified related to conducting research, such as access to high quality data, as well as the lack of policy interest or institutional capacity to move the research agenda forward.

*Insufficient funding and institutional support. Insufficient appreciation of the importance climate change and environmental degradation are playing as global determinants of health.*

*Challenges: getting climate change on the radar of health system decision-makers and policy analysts.*

*As a result of climate change, tick-borne diseases, as well as many other multiple systemic infectious diseases (MSID), are becoming more prevalent in Ontario, impacting how we prevent, diagnose and treat chronic disease in an aging population. Current epidemiological methods, information systems and technologies are woefully inadequate to meet the challenge of developing a new body of knowledge and evidence to support a new logic of new environmental norms, social policy and responsive medicine. In my view, climate change isn't just something that needs to be incorporated into current research and knowledge paradigms but requires a whole new set of institutions to drive this logic forward.*

Among those who were potentially interested to become engaged, it was often unclear how to address such issues given the need to remain focused on their primary research aims.

*Actually, I think it would be very interesting to research climate change and its impact on human health. However, I do not have much experience in this field and I find it difficult to scatter my research interests too broadly.*

*Adding this aspect to my dissertation would make it significantly larger.*

*Insufficient time given competing priorities in my day.*

As well, a common theme was *uncertainty* about how to pursue or develop research in these areas. Indeed, even among those who were clearly sympathetic to the importance of the issues, it was difficult to identify the topical or theoretical connection to their area of research interest.

*It's the probably single biggest challenge facing the planet and its people. It's hard to justify not making it a part of our research. So, I applaud the efforts of the committee. But, it's a big shift and I am not sure how to achieve [it] – in my own research... – or for health care research in general.*

*While I'm interested in the topic of sustainability, I'm not sure how it will fit into my research.*

*I am not sure how I could link [my research] to climate change or environmental sustainability.*

*...at this point I am unsure how climate change directly relates to my research.*

*Challenge relating climate change to my primary [research] focus.*

*I don't appreciate how it can apply directly to my work.*

*In general, not relevant to my areas of interest.*

*Unrelated to my areas of interest and expertise.*

*Does not really fit with my research.*

IHPME was seen to have a role to play in addressing these uncertainties. Respondents suggested that IHPME work to make these issues more visible, to “*discuss examples of health care research that have incorporated climate change issues.*” As well, IHPME could disseminate knowledge about relevant opportunities, such as grants, datasets or (for students) potential supervisors. IHPME could also facilitate connections “*between health care and environmental sustainability researchers*” or “*between environmental researchers and health researchers,*” which might be cross-disciplinary and linked to practice.

Finally, while many respondents saw limited opportunity to take up such issues in their research, or expressed simple disinterest, some skepticism was also expressed. In particular, one respondent articulated concerns about the implications of prioritizing such research for the success of existing health reform efforts.

*It's challenging enough to get people to care about health care transformation from an efficiency standpoint, let alone when you add in social justice considerations, but now environmental ones? We may as well give up any hope of actually effecting any change and just retreat into ivory towers of pure research.*



## Section 2: Knowledge Needs

We posed several questions about knowledge needs related to climate change and environmental sustainability – for those who mobilize research-based knowledge in practice across the health sector.

Responses indicated that these issues are much more evident in practice than through research. Approximately half of the respondents indicated that these issues *were* relevant to their professional role, and a substantial majority saw a need for more research-based knowledge on these issues, even if only as an ancillary consideration. IHPME was seen to have a role to play in addressing these needs, including by serving as a broker of sorts, to build links to research and with researchers. In comments, few respondents were critical of IHPME’s engagement with these questions. Instead, respondents identified the varied ways in which environmental issues were relevant to health care, both for health outcomes and for the organization of health care delivery, and the many ways IHPME could support internal capacity and advance policy and practice change within health systems and society as a whole.

### 2.1. Relevance of climate change and environmental sustainability issues to practice

Approximately half of respondents (n=55) indicated that these issues *were* relevant to their professional role, with a particular emphasis on their relevance to administration or management (n=28), policy and planning (n=20) or clinical care (n=20). (Table 6)

**Table 6:** Are issues related to climate change and environmental sustainability relevant to your current professional role?

No – These issues are not relevant to my current professional role	51
Yes – Clinical Care	20
Yes – Practice Based Education, Supervision, Mentorship, or Training	14
Yes – Administration/Management	28
Yes – Policy, Planning	20
Yes – Sales	1
Yes – Lobbying/Advocacy	6
Yes – Consulting	10
Other	2 comments
<b>Total respondents</b>	<b>106</b>
NB. Does not add to 100% as respondents could identify multiple connections	

As well, a large majority of respondents (86%, 90/104) saw a need for more research-based knowledge related to climate change and environmental sustainability, though for a minority of these it was only as an ancillary consideration. (Table 7)

**Table 7:** In your professional capacity, do you see a need for more research-based knowledge related to climate change and environmental sustainability?

No	14	(13.5%)
Yes – as an urgent priority	27	(26.0%)
Yes – as an important issue	44	(42.3%)
Yes – as ancillary consideration	19	(18.3%)
<b>Total respondents</b>	<b>104</b>	<b>(100.0%)</b>

## 2.2. Meeting needs for more research-based knowledge

In addition to perceiving a need for more research-based knowledge related to climate change and environmental sustainability, respondents saw a role for IHPME in meeting that need. Key strategies, among those identified, involved building links to research, including through publicizing the work of researchers (n=65), developing a collaborative research network (n=54) or facilitating connections to researchers (n=58). Other key strategies related to education, including through the provision of learning (n=63) or training (n=47) opportunities. (Table 8)

**Table 8:** Are there things IHPME could do to help meet a need for more research-based knowledge related to climate change and environmental sustainability?

No – There is no such need	10
Yes – Conduct a “listening tour” to understand knowledge needs related to these issues	37
Yes – Facilitate connections to researchers with interests in these issues	58
Yes – Publicize research that has been done in these areas	65
Yes – Develop a collaborative research network – to link researchers and practitioners with interests in these issues	54
Yes – Provide learning opportunities (e.g., conferences, workshops)	63
Yes – Provide training opportunities (e.g., educational materials, courses or programs of study)	47
Other	9 comments
<b>Total respondents</b>	<b>107</b>
NB. Does not add to 100% as respondents could identify multiple connections	

A number of individuals offered comments in relation to knowledge needs, both in response to specific questions and to provide general feedback.

One individual was critical of efforts to address this issue, arguing that IHPME should ***“stick to the knitting.”***

***I believe most researchers and laypersons who hold views on the issue do so based on belief / faith rather than knowledge. I think the field is sufficiently crowded and believe IHPME should leave it to others.***

However, most comments were very positive. Indeed, a number reflected on the importance of this issue

***I have just recently learned of this being an issue and priority for health care and its organizations. [...] Thinking now, this should have always been on our radar, as it was always there. I guess it has just now or recently reached public priority.***

***The relevance/importance of this issue is much understated and needs to be brought into the limelight much more.***

***Environmental sustainability is the issue of our time and it requires a complete rethink of our values, economy, residences, work places and travel.***

These and other comments pointed to the diverse ways in which members of IHPME’s community currently engage with issues of climate change and environmental sustainability or see a need for action. These issues were, for example, relevant to respondents in terms health outcomes, including population and public health, ***“as it relates to broader social determinants of health and health policy,”*** as well as clinical care. Though sometimes identified as a ***“very distant relationship,”*** respondents noted that these issues were relevant to clinical practice because ***“pollution affects the health conditions of my patients.”***

In addition to its direct relevance to population health and clinical care, climate change and environmental sustainability issues were seen as relevant to the infrastructure and organization of health care systems. Health care, as respondents pointed out, ***“is not very friendly to the environment (everything is disposable),”*** with ***“toxic materials in IT infrastructure, including computers, smartphones and related equipment.”*** There was a need to, ***“understand the impact and amount of hospital waste that contributes to landfill and what is being done to overcome some of these challenges.”***

Understanding the environmental challenges embedded within health systems also offered opportunities for remediation. In addition to waste reduction, such strategies

included “*energy efficient, low polluting hospital infrastructure,*” with some attention to recent funding announcements to permit hospitals “*to improve their operations [with respect to] climate change and environmental sustainability.*” As well, change strategies included attention to health care purchasing:

*This area of knowledge is important to ethical decision-making with regards to health care purchasing and decision-making alternatives and options to reduce health care’s impact on climate change and to help us educate others.*

In reflecting on how to address these issues and make change, respondents identified ways that IHPME, as an organizational actor, could be part of the solution. Several of these comments spoke to building internal capacity through education, the collation of information and by being clear about what types of research and practice change might be pursued.

*Provide education on how to link climate change research to traditional research topics.*

*As trainees, we need to develop our skill sets in incorporating diverse literatures outside of our primary area of study; in this way we will be better prepared to contribute to scholarship examining the intersection of health and of climate change and environmental sustainability.*

*A centralized library, or mechanism, to access updated standards of care, best practices and new innovations would be very helpful.*

*Really think as an institution what we mean by this, maybe you could provide a few examples so that people could understand what this means to health care research as I don't appreciate an obvious connection to all areas*

In addition to working inward to support the IHPME community, several respondents identified opportunities for IHPME to work outward, to help influence policy and practice. Specifically, IHPME could, “*foster policy discussions,*” “*collaborate with other institutions exploring these issues,*” or “*put pressure on U of T and the Ontario/Canadian government to take real action against climate change.*”

### **Section 3: IHPME Educational Activities**

In a final section, which we identified as optional, we asked three additional questions about interest in the kinds of activities that IHPME might pursue to support the community in engaging environmental and climate change issues. These questions related to learning opportunities for the community as a whole (e.g., seminars,

workshops), educational opportunities for IHPME students and teaching opportunities for IHPME faculty. Many respondents provided answers to these questions.

### 3.1. Learning opportunities

A majority (68%, 90/132) of respondents were interested or very interested in IHPME learning opportunities (e.g., education days, workshops, seminars) on issues of climate change and environmental sustainability. (Table 9)

**Table 9.** If you take advantage of IHPME learning opportunities (seminars, workshops, events), how interested are you in learning opportunities on issues of climate change and environmental sustainability?

I do not attend IHPME seminars, workshops and events	9	(6.8%)
Not at all interested	7	(5.3%)
Not very interested	26	(19.7%)
Interested	68	(51.5%)
Very interested	22	(16.7%)
<b>Total respondents</b>	<b>132</b>	<b>(100.0%)</b>

### 3.2. Educational opportunities

A majority (71%, 34/48) of students were interested or very interested in IHPME educational opportunities on issues of climate change and environmental sustainability. (Table 10)

**Table 10.** How interested are you in educational opportunities on issues of climate change and environmental sustainability? (data for IHPME students only)

Not at all interested	2	(4.2%)
Not very interested	14	(29.2%)
Interested	22	(45.8%)
Very interested	12	(25.0%)
<b>Total respondents</b>	<b>48</b>	<b>(100.0%)</b>

### 3.3. Teaching opportunities

A majority (69%, 20/29) of IHPME teachers were interested or very interested in incorporating issues of climate change and environmental sustainability into their teaching. (Table 11)

**Table 11.** If you teach at IHPME, how interested are you in incorporating issues on climate change and environmental sustainability into your teaching (data for IHPME teachers only)?

Not at all interested	1	(3.4%)
Not very interested	8	(27.6%)
Interested	14	(48.3%)
Very interested	6	(20.7%)
<b>Total respondents</b>	<b>29</b>	<b>(100.0%)</b>

### 3.4. Learning, educational and teaching opportunities – comments

A number of respondents offered reflections on learning, training and teaching opportunities. Comments pointed to the potential value of incorporating environment and climate change issues into required courses, and convening – or collaborating with local, national or international organizations to convene – workshops or related events, including through online platforms to permit broad-based participation. Some respondents offered suggestions for specific topics, such as environmental epidemiology or HTA for health and the environment, though others cautioned that there were already many related events across campus, and a need to “*see the changes happening within the department first.*”

### Discussion and Next Steps

This survey represents an initial effort to understand research interests and knowledge needs related to climate change and environmental sustainability within the IHPME community – a community with a focused interest in health, health care and health systems. Though a small proportion of IHPME’s sizeable community, a large number of people took the time to express their views and were broadly supportive of research attention to these issues.

The results suggest that members of IHPME’s community are much more engaged with environment and climate change issues in their professional practices as health system managers, policy makers and clinicians than through the research that they conduct. That said, there is a clear belief in the need for more research-based knowledge, and a substantial willingness among researchers to become more engaged.

As well as enthusiasm, the survey identified considerable uncertainty about how to address these issues through research, as well as some concern about IHPME’s capacity to take on this issue, and the implications of doing so for other health system priorities.

Doing more of this research will not be easy, but respondents saw a role for IHPME in advancing the research agenda. Respondents identified barriers that are both practical and systemic, including knowledge deficits about research priorities and opportunities, and structural challenges in terms of policy interest and capacity for change. Yet IHPME could do more, by fostering awareness, brokering connections, and supporting capacity building both locally and on a larger stage.

**Next steps** for the Committee on the Environment, Climate Change and Sustainability in light of these results, are to consider how to:

- Raise awareness of the ways in which climate change and environmental sustainability affect health and health care,
- Raise awareness of research needs and research opportunities in this area,
- Broker connections between researchers (including students), and between researchers and knowledge users,
- Support capacity for the development and mobilization of research,
- Support dialogue and deliberation about the implications of climate change and the environment for health, health care and health systems among researchers, health system managers, policy makers, clinicians and the wider community.