



Planetary Health Report Card (Medicine):

University of Manitoba *(Max Rady College of Medicine)*



University of Manitoba | Rady Faculty of Health Sciences

2024-2025 Contributing Team:

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Land Acknowledgment:

The University of Manitoba campuses are located on original lands of Anishinaabeg, Ininiwak, Anisininewuk, Dakota Oyate and Dene, and on the National Homeland of the Red River Métis.

We respect the Treaties that were made on these territories, we acknowledge the harms and mistakes of the past, and we dedicate ourselves to move forward in partnership with Indigenous communities in a spirit of reconciliation and collaboration.

Summary of Findings

Overall Grade	C+
Curriculum	B+
<ul style="list-style-type: none"> The University of Manitoba - Max Rady College of Medicine has a strong curriculum in global health and public health ethics, which focuses on real-world populations and regional health implications. There is a lack of content related to planetary health and sustainability in the curriculum, and the Population Health curriculum is disconnected from the modular courses and the Indigenous Health longitudinal course. Currently the planetary health and sustainability content in the curriculum is isolated to a handful of lectures in the Population Health course and is not well integrated in the overall curriculum. Recommendations: Reviewing the planetary health and sustainability in healthcare content/learning objectives, as well as integrating this material with the rest of the curriculum (ie, rather than stand-alone lectures on planetary health/sustainability, looking at the impact on medical practice would be beneficial). 	
Interdisciplinary Research	C
<ul style="list-style-type: none"> The University of Manitoba has been developing its research aims in sustainability, however there is a lack of planetary health projects, and specific opportunities in health sciences. Recommendations: Having a dedicated website/resource to consolidate all sustainability and planetary health research opportunities - highlighting those related to health science (and Max Rady College of Medicine) - would allow for more participation and development of these areas. 	
Community Outreach and Advocacy	D
<ul style="list-style-type: none"> The University of Manitoba has a strong involvement in community outreach, however lacks patient resources/information regarding climate change effects on health, climate conscious practices, and environmental hazards (ie, lack of health sciences-specific resources). Recommendations: Developing patient resources with the goal of improving community outreach and advocacy at the Max Rady College of Medicine. 	
Support for Student-Led Initiatives	B
<ul style="list-style-type: none"> While there are some support and initiatives, there is no consolidated resource, which makes accessing/finding opportunities related to sustainability/planetary health in healthcare a daunting task. Recommendations: Having a dedicated space for medical students to access resources, would increase knowledge of (and participation in) the available opportunities (ie, information about ongoing projects, research related to sustainability in medicine, and mentors accepting students for work and shadowing opportunities). 	
Campus Sustainability	D+
<ul style="list-style-type: none"> While the University of Manitoba has made strong efforts to incorporate sustainability requirements with regards to supply procurement and compost/recycling programs, there is room for improvement in sustainable infrastructure and transportation. As well, efforts to use and invest in renewable energy sources to power the campus are still in their early stages, mostly restricted to guidelines and roadmaps. Recommendations: Establishing a greater presence for the Office of Sustainability in the Bannatyne campus would allow for better streamlining of sustainability metrics specific to the campus, as well as accelerate current initiatives to improve infrastructure, lab spaces, and transportation options for students. 	

Statement of Purpose

Planetary health is human health.

The Planetary Health Alliance describes planetary health as “a solutions-oriented, transdisciplinary field and social movement focused on analysing and addressing the impacts of human disruptions to Earth’s natural systems on human health and all life on Earth.” This definition is intentionally broad, intended to encompass the multitude of ways that the environment can affect health, including water scarcity, changing food systems, urbanisation, biodiversity shifts, natural disasters, climate change, changing land use and land cover, global pollution, and changing biogeochemical flows. The health of humanity is dependent on our environment, and our environment is changing rapidly and in disastrous ways. Although the World Health Organization has called climate change “the greatest threat to global health in the 21st century,” many medical school’s institutional priorities do not reflect the urgency of this danger to human health.

As future health professionals, we must be prepared to address the impacts of human-caused environmental changes on our patients’ health. This preparation is in the hands of the institutions providing our medical training. It is imperative that we hold our institutions accountable for educating medical students about the health impacts of climate change and other anthropogenic environmental changes, generating research to better understand health impacts and solutions, supporting related student initiatives, embracing sustainable practices as much as possible, and engaging with surrounding communities that are most affected by environmental threats. Because climate change and environmental threats disproportionately affect vulnerable populations (for example, communities of colour, older adults sensitive to health threats, and individuals in low-resource settings), these issues are inherently ones of equity and justice.

With the purpose of increasing planetary health awareness and accountability among health professional schools, we have created a Planetary Health Report Card that students internationally can use to grade and compare their institutions on an annual basis. This student-driven initiative aims to compare health professional schools nationally and internationally on the basis of discrete metrics in five main category areas: 1) planetary health curriculum, 2) interdisciplinary research in health and environment, 3) university support for student planetary health initiatives, and 4) community outreach centred on environmental health impacts 5) medical school campus sustainability.

Definitions & Other Considerations

Definitions:

- **Planetary Health:** is described by the Planetary Health Alliance as “the health of human civilisation and the state of the natural systems on which it depends.” For example, topics such as climate change, declining biodiversity, shortages of arable land and freshwater, and pollution would all fall under the realm of planetary health. Both planetary health and traditional ‘environmental health’ examine the relationship between human health and the external environment, including extreme temperatures, chemicals, vector-borne diseases, etc. Planetary health explicitly concerns itself with the potential health harms associated with human-caused perturbations of natural systems. Therefore, the human health focus of planetary health makes the field well-adapted for the context of medical school education. Throughout this report card, we use the term planetary health to refer to this broad swath of topics, but resources do not need to explicitly include the term “planetary health” to satisfy the metric.
- **Sustainable Healthcare:** As defined by the Academy of Royal Colleges, sustainable healthcare involves ensuring the ability to provide good quality care for future generations by balancing the economic, environmental, and social constraints and demands within health care settings. A sustainable healthcare system maintains population health, reduces disease burden and minimises use of healthcare services.
- **Education for Sustainable Healthcare (ESH):** is defined as the process of equipping current and future health professionals with the knowledge, attitudes, skills and capacity to provide environmentally sustainable services through health professional education, thus working to decrease the enormous environmental impact of the healthcare industry. Planetary Health Education is an integral part of this education rather than an end in itself. This is because knowledge on Planetary Health is required to be able to fully understand the necessity of sustainable healthcare as well as being part of the broader knowledge needed to fully protect and promote health. In summary, ESH is covered by the three Priority Learning Outcomes of the Centre of Sustainable Healthcare below, and Planetary Health Education is embraced in the first learning objective and is a fundamental requirement to achieve learning outcomes 2 and 3:
 1. Describe how the environment and human health interact at different levels.
 2. Demonstrate the knowledge and skills needed to improve the environmental sustainability of health systems.
 3. Discuss how the duty of a doctor to protect and promote health is shaped by the dependence of human health on the local and global environment.
- **Medical School/Department vs. Institution:** When “Medical school” is specified in the report card, this only refers to curriculum and resources offered by the School/department of Medicine and does not include offerings from other parts of the university (e.g. undergraduate departments (USA), other related departments (e.g. Public Health, Population Health departments). In contrast, when “institution” is specified in the report card, we are referring to the university more broadly including all of its campuses. Any resource reasonably accessible by medical students, no matter where in the institution the resource comes from or if it is

specifically targeted for medical students, can meet this metric.

- **Environmental history (Metric #19 in Curriculum Section):** This is a series of questions students are taught to ask during medical encounters that elicits patients' exposures and environmental risk factors. Historically, this has included consideration of exposures like pesticides, asbestos, and lead, though in the modern era shaped by climate change, it can be expanded to include things like wildfire smoke exposure, air pollution and mould after flooding. Key components include place of residence over the lifecourse, occupational history, food and water sources (e.g. meat from industrial feeding operations, regular fishing in contaminated water, access to clean drinking water), and exposure to air pollution. Please be as specific as possible when providing evidence for this metric.
- **Elective:** The word "elective" refers to an optional course or lecture series that a medical student can opt to take part in but is not a requirement in the core curriculum. Generally, these elective courses take place in the preclinical curriculum but vary by school.
- **Core Curriculum:** This refers to taught material that is delivered to the entire cohort of students in one year.
- **Clerkship / Outreach:** This is a term used in the USA to refer to placements that medical students go on e.g. Pediatrics, General medicine, Psychiatry. In the UK these are referred to as rotations, outreach or placements. This is a relatively short (approximately 4-8 weeks) period of study and patient-centred clinical experience that takes place as part of the undergraduate programme.
- **Clinical rotation:** This is a term used to refer to placements that students go on (e.g., ophthalmology, surgery, cardiology).
- **Physiotherapy vs Physical Therapy:** For the purposes of this report card these terms are considered interchangeable. However, physiotherapy will be used primarily.
- **Community organisations:** For most institutions, there are existing groups that are not directly affiliated with the university and exist as a product of what the community the institution exists in cares about or needs. These specific community organisations relevant to this report include those that are focused around some aspect of climate and health preservation. These community organisations can include but are not limited to local mutual aid initiatives, underserved-resource distribution groups, clean-up and nature conservation groups, community gardeners, and other environmental-related organisations. If your institution does not have access to local volunteerships with community groups, please report any community organisations your institution or school has collaborated with.
- **Climate justice:** The idea that certain population groups and geographical locations which are disproportionately more impacted by climate change are already economically and socially disadvantaged. This double vulnerability sits alongside pre-existing social justice concerns and should therefore shift policy and practice to mitigate the inequitable effects of the climate crisis.
- **Extractivism:** The removal of natural resources typically in large quantities. Within anthropology this term is often used in the context of colonialism to refer to

the historic seizing of natural resources, a practice which has developed business models tied to ecological degradation and loss of biodiversity.

- **Global South:** Nations that often have less economic and industrial development and are typically in the southern hemisphere. These nations have been found to be disproportionately impacted by the climate crisis.
- **Low socioeconomic status (SES):** An individual or geographical area that across a variety of socioeconomic factors (e.g., income, education, race/ethnicity) is considered vulnerable. This vulnerability has been correlated to more adverse health outcomes often as a consequence of encountering more barriers in accessing and receiving healthcare.
- **Low and Middle-Income Countries (LMIC):** Countries that have lower degrees of economic affluence.
- **Anthropogenic:** Created through human activity
- **Marginalized communities:** Groups excluded from mainstream economic, educational, social, and/or cultural experiences due to race, gender identity, sexual orientation, age, physical ability, language, and/or immigration status (Sevelius et al., 2020).

Other considerations:

- If there are more than one “tracks” at your institution with two different curricula (for example, Harvard Medical School has a Pathways and HST curriculum track), you can choose to fill out a report card for each track, or fill out just one report card and average the scores received by each track in cases where the scores are different (see the 2021 Harvard or Oxford report cards as examples). Where possible please indicate the proportion of students that are on each track.

Completed in 2022 a [Literature Review by Metric](#) is available for the 2022 medicine report card metrics. We are in the process of updating this review and making it more applicable to all the disciplines. However the review serves as a rough collection of references for further learning and a resource for those advocating for increased planetary health engagement at their institutions.

Planetary Health Curriculum

Section Overview: *This section evaluates the integration of relevant planetary health topics into the medical school curriculum. Today's medical students will be on the frontlines of tackling the health effects of climate and other environmental changes. Therefore, it is critical that medical students are trained to understand the health effects of these changes, as well as planetary health issues and principles more broadly. Topics like the changing geography of vector-borne diseases, the health consequences of air pollution, environmental health inequities, and disaster response principles must be part of every medical school's core curriculum.*

Curriculum: General

1.1. Did your <u>medical school</u> offer elective courses (student selected modules) to engage students in Education for Sustainable Healthcare or Planetary Health in the last year?	
Yes, the medical school has offered more than one elective whose primary focus is ESH/planetary health in the past year. (3 points)	
Yes, the medical school has offered one elective whose primary focus is ESH/planetary health in the past year. (2 points)	
The medical school does not have any electives whose primary focus is ESH/planetary health, but there are one or more electives that include a lecture on planetary health. (1 points)	
No, the medical school has not offered any electives on planetary health or electives that include ESH/planetary health topics in the past year. (0 points)	
Score Assigned:	3
<p><i>Year 1 and 2 electives at Max Rady College of Medicine:</i></p> <p><i>Global Health Concentration Program - elective program, where students meet to discuss various global health and healthcare sustainability issues every month.</i></p> <p><i>Year 3 and 4 electives at Max Rady College of Medicine:</i></p> <p><i>The Public Health & Preventive Medicine Elective at the Manitoba Centre for Health Policy (MCHP) (3-4 weeks) - where sustainability and planetary health topics are highlighted.</i></p> <p><i>Special Topics in Population and Public Health (2+weeks) - where sustainability and planetary health topics are highlighted.</i></p> <p><i>Community Health Science electives: Indigenous Health (Policy, Programs and Planning), Occupational Health Public Health & Preventive Medicine, First Nations and Inuit Health Branch (FNIHB), Public Health & Preventive Medicine – Manitoba Health, Seniors & Active Living (MHSAL), Public Health & Preventive Medicine, Winnipeg Regional Health Authority (WRHA), Public Health & Preventive Medicine, Special Topics in Population and Public Health</i></p> <p>https://umanitoba.ca/medicine/undergraduate-medical-education/electives</p>	

Curriculum: Health Effects of Climate Change

1.2. Does your <u>medical school</u> curriculum address the relationship between extreme heat, health risks, and climate change?	
This topic was explored in depth by the core curriculum. (3 points)	
This topic was briefly covered in the core curriculum. (2 points)	
This topic was covered in elective coursework. (1 point)	
This topic was not covered. (0 points)	
Score Assigned:	3
<p><i>Population Health 2 lecture “Climate Change and Human Health” includes the following objectives:</i></p> <ol style="list-style-type: none"> <i>1. Describe the effect of climate change on the health of the population in Canada and globally, including health equity considerations.</i> <i>2. Describe how physicians can address climate issues in small-scale settings (e.g., individual practice activities, in a clinic) and large-scale settings (e.g., organization-wide or nation-wide advocacy).</i> <i>3. Explain the role of a physician in addressing the physical, psychological, and social effects of climate change at both the individual and population levels.</i> <p><i>Specifically, the effects of rising temperatures on health is presented in depth throughout the lecture (as well as attention to specific at risk populations). Global warming, the Paris Agreement, COP28, Manitoba’s Climate and Green Plan, and municipal climate action plans were discussed (as part of the learning objectives).</i></p>	

1.3. Does your <u>medical school</u> curriculum address the impacts of extreme weather events on individual health and/or on healthcare systems?	
This topic was explored in depth by the core curriculum. (3 points)	
This topic was briefly covered in the core curriculum. (2 points)	
This topic was covered in elective coursework. (1 point)	
This topic was not covered. (0 points)	
Score Assigned:	3
<p><i>Population Health year 2 lecture “Climate Change and Human Health” discusses the impacts of extreme cold weather, wildfires, extreme heat, and floods.</i></p> <p><i>Population Health year 2 lecture “Disaster Management” discusses the impacts of floods, earthquakes, and Manitoba specific problems like ice storms or extreme heat.</i></p>	

1.4. Does your medical school curriculum address the impact of climate change on the changing patterns of infectious diseases?

This topic was explored **in depth** by the **core** curriculum. (3 points)

This topic was **briefly** covered in the **core** curriculum. (2 points)

This topic was covered in **elective** coursework. (1 point)

This topic was **not** covered. (0 points)

Score Assigned:

3

Population Health year 2 lecture "Climate Change and Human Health" discusses the changes in habitat range of vectors/animals, increasing risk of vector-borne and zoonotic disease, and the adaptation of disease surveillance systems. Specifically, the increased risk of West Nile Virus, Hantavirus, and Lyme disease are highlighted. Some prevention advice is given to share with patients.

1.5. Does your medical school curriculum address the respiratory health effects of climate change and air pollution?

This topic was explored **in depth** by the **core** curriculum.

This topic was **briefly** covered in the **core** curriculum.

This topic was covered in **elective** coursework.

This topic was **not** covered.

Score Assigned:

3

*Respiratory year 1 lecture "Respiratory Curriculum Module 1" includes 1 slide that addresses the association between climate change and allergens.
Population Health year 2 lecture "Climate Change and Human Health" includes 1 slide about air quality; rise in air pollutants may lead to exacerbation of respiratory conditions (ex. asthma/COPD), cardiovascular diseases, and allergies.
Population Health year 2 lecture "Environmental Health 1" discusses the impacts of air pollutants and air quality on the health of the population.*

1.6. Does your medical school curriculum address the cardiovascular health effects of climate change, including increased heat

This topic was explored **in depth** by the **core** curriculum.

This topic was briefly covered in the core curriculum.	
This topic was covered in elective coursework.	
This topic was not covered.	
Score Assigned:	2
<i>Population Health year 2 lecture "Climate Change and Human Health" includes 1 slide about air quality; rise in air pollutants may lead to exacerbation of respiratory conditions (ex. asthma/COPD), cardiovascular diseases, and allergies. Another slide briefly lists the populations impacted by extreme heat, such as pregnant people and older populations.</i>	

1.7. Does your <u>medical school</u> curriculum address the mental health and neuropsychological effects of environmental degradation and climate change?	
This topic was explored in depth by the core curriculum.	
This topic was briefly covered in the core curriculum.	
This topic was covered in elective coursework.	
This topic was not covered.	
Score Assigned:	3
<i>Population Health year 2 lecture "Climate Change and Human Health" includes the following objective</i> <i>Explain the role of a physician in addressing the physical, psychological, and social effects of climate change at both the individual and population levels.</i> <i>This lecture specifies that climate change affects physical, mental, and emotional health of the population (and healthcare workers). Reduced access to care and support services due to climate change are also addressed.</i>	

1.8. Does your <u>medical school</u> curriculum address the relationships between health, individual patient food and water security, ecosystem health, and climate change?	
This topic was explored in depth by the core curriculum.	
This topic was briefly covered in the core curriculum.	
This topic was covered in elective coursework.	
This topic was not covered.	
Score Assigned:	3

Population Health year 2 lectures “Climate Change and Human Health”, “Disaster Management”, and “Environmental Health 1” address the relationship between health, unique patient food/water security needs, ecosystem health, and climate change. Furthermore, 8 separate classes within a Global Health framework are given in Population Health year 2. These classes address topics (and cover many learning objectives) pertaining to food/water security, immigrant/refugee health, effects of war/conflict/relocation on health, and health ecosystems in other geographic locations.

1.9. Does your medical school curriculum address the outsized impact of climate change on marginalised populations such as those with low SES, women, communities of colour, Indigenous communities, children, homeless populations, and older adults?

This topic was explored **in depth** by the **core** curriculum.

This topic was **briefly** covered in the **core** curriculum.

This topic was covered in **elective** coursework.

This topic was **not** covered.

Score Assigned:

3

Population Health year 2 lecture “Climate Change and Human Health” has several slides that address health impacts of climate change including how certain populations are more vulnerable, such as northern and remote communities, marginalized populations (Indigenous peoples, Racialized populations, people with disabilities, low SES populations), and people who are immunocompromised. Furthermore, 8 classes within a Global Health framework are given in Population Health year 2. These classes address topics (and cover many learning objectives) pertaining to the outsized impact of global climate change on marginalized populations, specifically Indigenous/Northern/Remote communities in Manitoba and maternal/child health across the world. The Indigenous Health longitudinal course also strengthens information unique to the care of Indigenous populations in Manitoba.

1.10. Does your medical school curriculum address the unequal regional health impacts of climate change globally?

This topic was explored **in depth** by the **core** curriculum.

This topic was **briefly** covered in the **core** curriculum.

This topic was covered in **elective** coursework.

This topic was **not** covered.

Score Assigned:

3

Population Health year 2 lecture “Climate Change and Human Health” has 1 slide that mentions the unequal impact of climate change on northern and remote communities.

Furthermore, 8 classes within a Global Health framework are given in Population Health year 2. These classes address topics (and cover many learning objectives) pertaining to the outsized impact of global climate change on marginalized populations across the world, and specifically address the impact on Indigenous/Northern/Remote communities in Manitoba. The Indigenous Health longitudinal course (years 1-4), also strengthens information unique to the care of Indigenous populations in Manitoba.

Curriculum: Environmental Health & the Effects of Anthropogenic Toxins on Human Health

1.11. Does your medical school curriculum address the reproductive health effects of industry-related environmental toxins (e.g. air pollution, pesticides)?

This topic was explored **in depth** by the **core** curriculum.

This topic was **briefly** covered in the **core** curriculum.

This topic was covered in **elective** coursework.

This topic was **not** covered.

Score Assigned:

2

Population Health 2 lectures “Environmental Health 1” and “Environmental Health 2” both briefly touch on the topic of air pollution and pesticides, through case-based examples and history taking teaching.

1.12. Does your medical school curriculum address important human-caused environmental threats that are relevant to the university’s surrounding community?

This topic was explored **in depth** by the **core** curriculum.

This topic was **briefly** covered in the **core** curriculum.

This topic was covered in **elective** coursework.

This topic was **not** covered.

Score Assigned:

3

Population Health year 2 lecture “Climate Change and Human Health” presents examples of environmental threats that are relevant to the local community. These include flooding impacts at Health Sciences Centre, extreme cold in Manitoba winters, and extreme heat in Manitoba summers. Population Health year 2 lecture “Disaster Management” includes several brief examples such as the 2009 Manitoba flood, chemical spill, Ebola outbreaks, major winter storms, and wildfire smoke.

1.13. To what extent does your medical school emphasise the importance of Indigenous knowledge and value systems as essential components of planetary health solutions?

This topic was explored **in depth** by the **core** curriculum.

This topic was **briefly** covered in the **core** curriculum.

This topic was covered in **elective** coursework.

This topic was **not** covered.

Score Assigned:

1

The Indigenous Health longitudinal course (years 1-4) strengthens information unique to the care of Indigenous populations in Manitoba (material presented in this course is not testable). There is a lack of integration between the Planetary Health/Sustainability curriculum and the Indigenous Health curriculum.

1.14. Does your medical school curriculum address the outsized impact of anthropogenic environmental toxins on marginalised populations such as those with low SES, women, communities of colour, children, homeless populations, Indigenous populations, and older adults?

This topic was explored **in depth** by the **core** curriculum.

This topic was **briefly** covered in the **core** curriculum.

This topic was covered in **elective** coursework.

This topic was **not** covered.

Score Assigned:

1

This topic was not specified in the core curriculum, however can be read about about in elective course materials (Population Health years 1 and 2).

Curriculum: Sustainability

1.15. Does your medical school curriculum address the environmental and health co-benefits of a plant-based diet?

This topic was explored **in depth** by the **core** curriculum.

This topic was **briefly** covered in the **core** curriculum.

This topic was covered in **elective** coursework.

This topic was **not** covered.

Score Assigned:	3
<p><i>Gastrointestinal Health and Nutrition year 1 lecture “Special Diets and Dietary Patterns” briefly discusses health benefits of a plant based diet.</i></p> <p><i>Endocrine and Metabolism year 2 lecture “Nutrition in Diabetes” has 1 slide that mentions a vegetarian diet as beneficial to health.</i></p> <p><i>Population Health year 2 lecture “Climate Change and Human Health” includes information on sustainable procurement policies and plant-based diets as a targeted option to reduce GHG emission/carbon footprint.</i></p>	

1.16. Does your <u>medical school</u> curriculum address the carbon footprint of healthcare systems?	
This topic was explored in depth by the core curriculum.	
This topic was briefly covered in the core curriculum.	
This topic was covered in elective coursework.	
This topic was not covered.	
Score Assigned:	3
<p><i>Population Health year 2 lecture “Climate Change and Human Health” addresses the burden of healthcare’s GHG emission and carbon footprint, as well as targeted programs to help reduce emissions in many sectors. Specific example on MDI’s (inhalers) large carbon footprint (aim to switch to non-MDI inhalers and reduce over prescription of inhalers).</i></p>	

1.17. Does your <u>medical school</u> curriculum cover these components of sustainable clinical practice in the <u>core</u> curriculum? (points for each)	Score
The health and environmental co-benefits of avoiding over-medicalisation, over-investigation and/or over-treatment (2 points)	1
The environmental impact of pharmaceuticals and over-prescribing as a cause of climate health harm. Alternatively teaching on deprescribing where possible and its environmental and health co-benefits would fulfil this metric. (2 points) .	2
The health and environmental co-benefits of non-pharmaceutical management of conditions where appropriate such as exercise or yoga classes for type 2 diabetes; social group activities such as gardening for mental health conditions; active transport such as bicycle schemes. This is commonly known as social prescribing in the UK. (1 point)	1
Environmental impact of surgical healthcare on planetary health and the climate crisis, and how can it be mitigated. (1 point)	0
The impact of anaesthetic gases on the healthcare carbon footprint and ways to reduce anaesthesia’s environmental impacts, such as total intravenous anaesthesia or choosing	1

less environmentally harmful anaesthetic gas options with reduced greenhouse gas emissions. (1 point)	
The impact of inhalers on the healthcare carbon footprint and the environmental benefit of dry powdered inhalers over metered dose inhalers. (1 point)	1
Waste production within healthcare clinics and strategies for reducing waste in clinical activities (e.g. single use items in the inpatient or outpatient setting) (1 point)	1
<ol style="list-style-type: none"> 1. Population Health year 2 lecture “Climate Change and Human Health” addresses the environmental impacts of over treating asthma with MDIs. No mention of health impacts. 2. Population Health year 2 lecture “Climate Change and Human Health” addresses the environmental impacts of over prescribing and improper use of MDIs. Discusses the importance of proper MDI use and when an inhaler is not needed. 3. Population Health year 2 lecture “Climate Change and Human Health” includes examples of climate solutions that also benefit health such as active transportation (increased physical activity, decreased air pollution) and parks/green spaces (increased physical activity, decreased air pollution, increased social cohesion) 4. Not addressed in detail. 5. Population Health year 2 lecture “Climate Change and Human Health” includes 1 slide that mentions anaesthetic gases as a source of GHG. 6. Population Health year 2 lecture “Climate Change and Human Health” includes 1 slide on the impact of MDIs on GHG. Respiratory 1 lecture “Respiratory Curriculum Module 1” includes 1 slide on MDIs. 7. Population Health year 2 lecture “Climate Change and Human Health” includes 1 slide that discusses waste management and strategies to reduce this. 	

Curriculum: Clinical Applications

1.18. In training for patient encounters, does your <u>medical school's</u> curriculum introduce strategies to have conversations with patients about the health effects of climate change?	
Yes, there are strategies introduced for having conversations with patients about climate change in the core curriculum. (2 points)	
Yes, there are strategies introduced for having conversations with patients about climate change in elective coursework. (1 points)	
No, there are not strategies introduced for having conversations with patients about climate change. (0 points)	
Score Assigned:	2
<p>Population Health year 2 lecture “Climate Change and Human Health” concludes with several slides on how to address climate change impacts at the patient level. Strategies include educating patients about the actions they can take to reduce their climate-related health risks, encouraging behavioural changes that are healthy for them, their families and the planet, and the health co-benefits of active transportation and a healthy plant-based diet.</p> <p>Population Health year 2 lecture “Environmental Health 2” also addresses this in a history taking lesson that provides strategies and obstacles that are relevant to climate change discussions.</p>	

1.19. In training for patient encounters, does your medical school's curriculum introduce strategies for taking an environmental history or exposure history?

Yes, the **core** curriculum includes strategies for taking an environmental history. (2 points)

Only **elective** coursework includes strategies for taking an environmental history. (1 point)

No, the curriculum does **not** include strategies for taking an environmental history. (0 points)

Score Assigned:

2

Clinical Skills years 1 and 2 course teaches students to take a full history, including environmental and occupational exposures (relating to travel, work, hobbies, and home environment). Population Health year 2 lecture "Environmental Health 2" includes detailed instructions on how to illicit a thorough environmental and exposure history.

Curriculum: Administrative Support for Planetary Health

1.20. Is your medical school currently in the process of implementing or improving Education for Sustainable Healthcare (ESH)/planetary health education?

Yes, the medical school is currently in the process of making **major** improvements to ESH/planetary health education. (4 points)

Yes, the medical school is currently in the process of making **minor** improvements to ESH/planetary health education. (2 points)

No, there are **no** improvements to planetary health education in progress. (0 points)

Score Assigned:

2

The Max Rady College of Medicine is a signatory on the AFMC Declaration on Planetary Health. As part of this declaration, signatories have pledged to "Immediately work to align our healthcare schools with the Planetary Health Education Framework, providing common foundational principles, competencies, and language to prepare future healthcare professionals to both mitigate further environmental degradation and to lead and contribute to adaptation and resilience strategies" and to "Provide healthcare professionals and learners with value- and evidence-based training to reduce overdiagnosis and unnecessary investigations and treatment, to both improve the quality of care and reduce unnecessary healthcare-related environmental impacts, including greenhouse gas emissions" among other actions. However, no communications regarding curriculum improvement or planetary health content have been made.

Student groups are working to improve Sustainable Healthcare/Planetary Health in the curriculum, and some small changes have been made by administration (adding some slides or lecture/course objectives). Most changes are student-led/advocated.

1.21. How well are the aforementioned planetary health/Education for Sustainable Healthcare topics integrated longitudinally into the <u>core</u> curriculum?	
Planetary health/ESH topics are well integrated into the core medical school curriculum. (6 points)	
Some planetary health/ESH topics are appropriately integrated into the core medical student curriculum. (4 points)	
Planetary health/ESH is not integrated and is primarily addressed in (a) standalone lecture(s) . (2 points)	
There is minimal/no education for sustainable healthcare. (0 points)	
Score Assigned:	2
<i>Planetary health is almost solely taught in the Population Health year 2 lectures "Climate Change and Human Health", "Environmental Health 1 and 2", and Global Health (8 lectures). Some modular courses such as Respiratory may include 1 slide on the topic, but it is not addressed in detail anywhere other than the Population Health year 2 course.</i>	

1.22. Does your <u>medical school</u> employ a member of faculty to specifically oversee and take responsibility for the incorporation of planetary health and sustainable healthcare as a theme throughout the course?	
Yes, the medical school has a specific faculty/staff member responsible for overseeing curricular integration of planetary health and sustainable healthcare. (1 point)	
No, the medical school does not have a specific faculty/staff member responsible for overseeing curricular integration of planetary health and sustainable healthcare. (0 points)	
Score Assigned:	0
<i>No, there is no member of the faculty in this role.</i>	

Section Total (57 out of 72)	79%
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Interdisciplinary Research

Section Overview: *This section evaluates the quality and quantity of interdisciplinary planetary health research at the broader institution. Interactions between health and the environment are complex and multifactorial. While climate change has been extensively studied from an environmental science perspective, planetary health is an emerging field. As leading health institutions with talented researchers and research resources, institutions should fund research studying the health effects of climate change and anthropogenic environmental toxins. This obligation is particularly strong because the public and policymakers are more attentive to climate change when its implications for human health are emphasised.*

2.1. Are there researchers engaged in planetary health research and healthcare sustainability research at your institution?

Yes, there are faculty members at the **institution** who have a **primary** research focus in planetary health **or** sustainable healthcare/vetcare. (3 points)

Yes, there are individual faculty members at the **institution** who are conducting research **related** to planetary health or healthcare sustainability, OR are part of a national/international sustainability working group, but it is not their primary research focus. (2 points)

There are sustainability researchers at the **institution**, but not specifically associated with healthcare/vetcare. (1 point)

No, there are **no** planetary health and/or sustainability researchers at the **institution** at this time. (0 points)

Score Assigned:

2

Based on information gathered through The Sustainability Tracking, Assessment and Rating System (STARS) website, the University of Manitoba had a number of individual faculty members performing research on sustainability and environmental health in 2020-2021. A few of the research topics with a specific health focus are outlined below:

- College of Medicine (Pediatrics and Child Health): How do early-life environmental exposures and health influence school readiness? A sub-study of the Canadian Healthy Infant Longitudinal Development (CHILD) Study.
- College of Medicine (Internal Medicine): The urban exposome and Inflammatory Bowel Disease: Determining environmental factors that increase the risk of IBD and the cost of care.
- College of Medicine (Community Health Science): Landscaping of HIV prevention product delivery ecosystems
- College of Medicine (Community Health Science): Population and global health

Examples of more broad research topics are outlined below:

- Faculty of Environment, Earth and Resources (Natural Resources Institute): Northern sustainability teaching lodges in remote First Nation Communities
- Faculty of Environment, Earth and Resources (Natural Resources Institute): Scaling climate change adaptation knowledge technologies for empowering women and for enhancing social equity and disaster resilience in Bangladesh

Included is the link to the entire research spreadsheet:

<https://reports.aashe.org/institutions/university-of-manitoba-mb/report/2022-08-05/AC/research/AC-9/>

2.2. Is there a dedicated department or institute for interdisciplinary planetary health research at your institution?

There is **at least one** dedicated department or institute for interdisciplinary planetary health research. (3 points)

There is **not currently** a department or institute for interdisciplinary planetary health research, but there are **plans** to open one in the next 3 years. (2 points)

There is an **Occupational and Environmental Health department**, but no interdisciplinary department or institute for planetary health research. (1 points)

There is **no** dedicated department or institute. (0 points)

Score Assigned:

1

There is an Office of Sustainability for the entire University of Manitoba. Multiple departments within the school perform research but there are no specific interdisciplinary departments with a specific focus on planetary health. The websites for related departments at the University of Manitoba are as follows:

- Institute for Global Public Health (<https://umanitoba.ca/institute-for-global-public-health/>)
- Manitoba Centre for Health Policy (<https://umanitoba.ca/manitoba-centre-for-health-policy/>)
- Ongomiizwin - Indigenous Institute of Health and Healing (<https://umanitoba.ca/ongomiizwin/>)
- Office of Sustainability (<https://umanitoba.ca/sustainability/education-and-research#education>)

The University of Manitoba was also named as the United Nations Academic Impact Hub for Sustainable Development Goal 6 for its ongoing research into developments in clean water and sanitation. A Working Group made up of researchers from a variety of fields are participating in the advancement of SDG 6. The website for the University's work on the United Nations Sustainable Development Goal 6 can be found here:

<https://umanitoba.ca/research/united-nations-sustainable-development-goal-6>

2.3. Is there a process by which communities disproportionately impacted by climate change and environmental injustice give input or make decisions about the research agenda at your institution?

Yes, there is a process in which community members impacted by climate and environmental injustice have **decision-making power** in the climate + environmental research agenda. (3 points)

Yes, there is a process in which community members impacted by climate and environmental injustice advise the climate + environmental research agenda. (2 points)	
No, but there are current efforts to establish a process for community members to advise or make decisions on the research agenda. (1 points)	
There is no process, and no efforts to create such a process. (0 points)	
Score Assigned:	2
<p><i>The University of Manitoba United Nations Sustainable Development Goal 6 Working Group works on interdisciplinary research to help build sustainable water systems in communities in Manitoba. This includes research with Indigenous communities which considers their needs and encourages active participation from these communities in the research agenda</i> https://umanitoba.ca/research/united-nations-sustainable-development-goal-6 <i>The University of Manitoba is also a part of the Mino Bimaadiziwin Partnership, an institute which works on housing and land planning projects to help Indigenous communities secure a clean water supply</i> https://ecohealthcircle.com/about/ <i>Wa Ni Ska Tan Alliance, a community-academic research partnership is based out of the Environmental Conservation Lab in the Clayton H. Riddell Faculty of Environment, Earth, and Resources and the University of Manitoba and consists of a partnership between researchers, academics, and communities impacted by hydropower projects in Manitoba. The goal of the projects is evaluating the impact of these projects on neighbouring communities and creating an environment where social and environmental change can occur</i> https://hydroimpacted.ca/about-us/</p>	

2.4. Does your <u>institution</u> have a planetary health website that centralises ongoing and past research related to health and the environment?	
There is an easy-to-use, adequately comprehensive website that centralises various campus resources related to health and the environment including all of the following: upcoming events, leaders in planetary health at your institution, and relevant funding opportunities. (3 points)	
There is a website that attempts to centralise various campus resources related to health and the environment, but it is hard-to-use, not updated, or not adequately comprehensive. (2 points)	
The institution has an Office of Sustainability website that includes some resources related to health and the environment. (1 point)	
There is no website. (0 points)	
Score Assigned:	2
<p><i>There are a few websites, but most of the initiatives are at the Fort Garry Campus. However, it is hard to navigate as the resources are not centralized.</i> https://news.umanitoba.ca/making-um-more-sustainable-for-everyone/ https://umanitoba.ca/strategic-plan https://umanitoba.ca/sustainability/climate-action-plan https://umanitoba.ca/institute-for-global-public-health/</p>	

2.5. Has your institution recently hosted a conference or symposium on topics related to planetary health?

Yes, the **institution** has hosted at least one conference or symposium on topics related to planetary health in the past year. (4 points)

Yes, the **institution** has hosted at least one conference or symposium on topics related to sustainable healthcare/vetcare in the past year. (3 points)

Yes, the **institution** has hosted a conference on topics related to planetary health / sustainable healthcare/vetcare in the past three years. (2 points)

The **institution** has not hosted any conferences directly, but they have provided financial support for a local planetary health event. (1 point)

No, the **institution** has not hosted a conference on topics related to planetary health in the past three years. (0 points)

Score Assigned:

1

There was a speaker series in the College of Nursing a few months ago, with a focus on planetary health.

<https://news.radyfhs.umanitoba.ca/nursing/margaret-elder-hart-speaker-series-returns-with-focus-on-planetary-health/>

2.6. Is your institution a member of a national or international planetary health or ESH/ESV organisation?

Yes, the institution is a member of a national or international planetary health **or** ESH/ESV organisation. (1 points)

No, the institution is **not** a member of such an organisation. (0 points)

Score Assigned:

1

U of M Max Rady College of Medicine is part of the Academic Health Institutions' Declaration on Planetary Health

https://www.afmc.ca/initiatives/planetaryhealthdeclaration/?fbclid=IwZXh0bgNhZW0CMTEAAR1JWp2_wKBpOKLumqsAgaRvctOdAE2u3L8cFarimzFDhRfMII1Av80kUxM_aem_B4EYOrLdU6SrmVDzpiASXQ

Section Total (9 out of 17)

53%

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Community Outreach and Advocacy

Section Overview: This section evaluates medical school engagement in community outreach and advocacy efforts associated with planetary health. Researching and teaching planetary health is necessary but not sufficient. It is critical that institutions also directly engage with communities most affected by environmental health harms. Although climate change is a problem largely created by those with power and resources, its impacts fall disproportionately on under-resourced populations and communities of colour. Institutions should partner with local communities affected by climate change and pollution to share information about environmental health threats, advocate together for change, and provide opportunities for students to be a part of this work.

3.1. Does your <u>institution</u> partner with community organisations to promote planetary and health?	
Yes, the institution meaningfully partners with multiple community organisations to promote planetary and environmental health. (3 points)	
Yes, the institution meaningfully partners with one community organisation to promote planetary and environmental health. (2 points)	
The institution does not partner with community organisations, but has participating in community focused events relating to planetary health. (1 point)	
No, there is no such meaningful community partnership. (0 points)	
Score Assigned:	3
<p>Yes, the University of Manitoba actively collaborates with various community organizations to promote planetary and environmental health. Housed within UM's Clayton H. Riddell Faculty of Environment, Earth, and Resources, the Centre for Earth Observation Science (CEOs) is a leading research center focusing on understanding the Earth's response to climate change. CEOS engages in numerous community-driven research initiatives and maintains partnerships with local, national, and international organizations to advance environmental research and promote sustainability. UM encourages community involvement through various sustainability events and programs. The university hosts events such as Sustainability Day, Earth Day celebrations, and the Commuter Challenge, which often involve collaboration with community groups.</p> <p>Additionally, UM supports sustainability-focused student groups like the University of Manitoba Efficient and Renewable Technology Hub (UMEARTH) and the Society of Earth Sciences and Environmental Students (SESES), fostering partnerships that promote environmental health within the broader community. The Max Rady College of Medicine also partners with community organization Let's Talk Science which connects medical students in their first and second year with young students to get them interested in science, technology, engineering and mathematics. The medical students can run educational sessions on many topics, some of which include the environment, climate change and sustainability. While the aim of this organization is broader than only the environment, a component of it involves promoting planetary and environmental health.</p> <p>https://umanitoba.ca/health-sciences/community-and-partners https://umanitoba.ca/earth-observation-science/community-and-partners https://umanitoba.ca/sustainability/get-involved</p>	

3.2. Does your institution offer community-facing courses or events regarding planetary health?

The **institution** offers community-facing courses or events at least once every year. (3 points)

The **institution** offers courses or events open to the community at least once per year, but they are not primarily created for a community audience. (2 points)

The **institution** has promoted community-facing courses or events, but was not involved in planning those courses or events. (1 point)

The **institution** have not offered such community-facing courses or events. (0 points)

Score Assigned:

0

The University of Manitoba and the Max Rady College of Medicine have not offered such community-facing courses or events.

3.3. Does your institution have regular coverage of issues related to planetary health and/or sustainable healthcare in university update communications?

Yes, all students **regularly** receive communication updates dedicated to planetary health and/or sustainable healthcare. (2 points)

Yes, planetary health and/or sustainable healthcare topics are regularly included in communication updates to **some courses**. (1 point)

Students **do not** receive communications about planetary health or sustainable healthcare. (0 points)

Score Assigned:

1

There is a newsletter that students can subscribe to from the Sustainability department at the University of Manitoba where students can receive some passing communications about planetary health or sustainable healthcare. Additionally, students receive emails from Max Rady College Communications infrequently, and they occasionally contain resources to external links which connect students with the Environmental Health and Safety Office and the Office of Sustainability, both of which have further information on planetary health. UM Today, University of Manitoba's news service, also occasionally contains articles on sustainability and planetary health, which are accessible to College of Medicine students. However, this is not specific to the College of Medicine. <https://umanitoba.ca/sustainability/get-involved>

3.4. Does the institution or main affiliated hospital trust engage in professional education activities targeting individuals post graduation with the aim of ensuring their knowledge and skills in planetary health and sustainable healthcare remain up to date during their

professional career?	
Yes, the institution or main affiliated hospital trust offers multiple in-person or online courses relating to planetary health and/or sustainable healthcare for post-graduate providers, including at least one with a primary focus of planetary health. (2 points)	
Yes, the institution or main affiliated hospital trust offers one course relating to planetary health and/or sustainable healthcare for post-graduate provider. (1 point)	
There are no such accessible courses for post-graduate providers. (0 points)	
Score Assigned:	0
<i>There are no such accessible courses for post-graduate providers available at the University of Manitoba or its main affiliate hospital (Health Science Centre).</i>	

3.5. Does your <u>institution</u> or its <u>affiliated teaching hospitals</u> have accessible educational materials for patients about environmental health exposures?	
Yes, all affiliated hospitals have accessible educational materials for patients. (2 points)	
Some affiliated hospitals have accessible educational materials for patients. (1 point)	
No affiliated medical centres have accessible educational materials for patients. (0 points)	
Score Assigned:	0
<i>The University of Manitoba and its affiliate teaching hospitals has some accessible educational materials for staff and students about environmental health exposures that could be applicable to patients. However, the University of Manitoba and its affiliate teaching hospitals do not have accessible educational materials explicitly for patients.</i>	

3.6. Does your <u>institution</u> or its <u>affiliated teaching hospitals</u> have accessible educational materials for patients about the health impacts of climate change?	
Yes, all affiliated hospitals have accessible educational materials for patients. (2 points)	
Some affiliated hospitals have accessible educational materials for patients. (1 point)	
No affiliated hospitals have accessible educational materials for patients. (0 points)	
Score Assigned:	0
<i>The University of Manitoba and its affiliate teaching hospitals has some accessible educational materials for staff and students about the health impacts of climate change that could be applicable to patients. However, the University of Manitoba and its affiliate teaching hospitals do not have accessible educational materials explicitly for patients.</i>	

Section Total (4 out of 14)	29%
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Support for Student-Led Planetary Health Initiatives

Section Overview: *This section evaluates institutional support for student-led planetary health initiatives, such as funding, fellowships, programming, and student groups. Planetary health is a young field and, as young people facing a future deeply shaped by climate change, students are often some of the first at an institution to engage with it. Institutions should provide support for students to engage in sustainability quality improvement (QI) initiatives, discover mentors in their area of interest, and receive funding for planetary health projects.*

4.1. Does your **institution** offer support for students interested in enacting a sustainability initiative/QI project?

Yes, the **institution** *either* offers grants for students to enact sustainability initiatives/QI projects *or* sustainability QI projects are part of the core curriculum. (2 points)

The **institution** encourages sustainability QI projects (to fulfil clerkship or longitudinal requirements) and offers resources to help students succeed in these projects, **but** there is no student funding available and there is no requirement to participate. (1 point)

No, the institution does not offer opportunities or support for sustainability initiatives or QI projects. (0 points)

Score Assigned:

2

The University of Manitoba offers the Sustainability Ambassador Program - a leadership program that allows students to promote sustainability on campus through events, outreach and initiatives. The University of Manitoba offers the Green Investment Fund which provides financial support for student-led sustainability projects that reduce environmental impact and promote sustainable practices.

The University of Manitoba hosts several student-led groups, such as UMEarth and the Sustainable Development Goals Student Hub, which focus on sustainability education, advocacy and hands-on projects.

<https://umanitoba.ca/sustainability/sustainability-ambassador-program>

<https://umanitoba.ca/sustainability/green-investment-fund>

<https://umanitoba.ca/sustainability/get-involved>

4.2. Does your **institution** offer opportunities for students to do research related to planetary health and/or sustainable healthcare?

The **institution** has a **specific** research program or fellowship for students interested in doing planetary health/sustainable healthcare research. (2 points)

There are research opportunities for students to perform research related to planetary health/sustainable healthcare, but these **require student initiative** to seek these out and carry them out in their spare time. (1 point)

There are **no opportunities** for students to engage in planetary health/sustainable healthcare research. (0 points)

Score Assigned:

1

The Max Rady College of Medicine has a dedicated research webpage (<https://umanitoba.ca/medicine/research>). Researchers can be contacted regarding collaboration for ongoing initiative, or a new project idea (which could entail planetary health or sustainable healthcare). The BSc (Med) program encourages students to participate in a research project during the first and/or second year(s), in any department related to medicine.

Within the Public Health and Preventative Medicine residency program (as well as programs) at the Max Rady College of Medicine, students have the opportunity to choose their own field placement and QI - which may be related to planetary health and/or sustainable healthcare, if the individual has interest in the topic.

<https://umanitoba.ca/medicine/department-community-health-sciences/public-health-and-preventive-medicine-residency>

4.3. Does the institution have a webpage where students can find specific information related to planetary health and/or sustainable healthcare activities and mentors within the institution? For example, projects achieved, current initiatives underway at the medical school and/or contact of information of potential mentors.

The institution has a webpage with specific information related to planetary health or sustainable healthcare that includes up-to-date information on relevant initiatives and contact information of potential mentors. (2 points)

There is an institution webpage that features some information on projects and mentors within planetary health and sustainable healthcare within the medical school, but it lacks key information. (1 point)

There is **no institution** specific webpage for locating planetary health and/or sustainable healthcare projects or mentors. (0 points)

Score Assigned:

1

The Max Rady College of Medicine has a dedicated research webpage <https://umanitoba.ca/medicine/research>. While the page doesn't explicitly highlight sustainable healthcare or planetary health topics, several research themes touch upon related areas, particularly through public health and community-driven initiatives. Some researcher and project information can be found, but is not easily accessible and lacks key information (up-to-date initiatives, opportunities, etc.).

Furthermore, the University of Manitoba has a Sustainability webpage <https://umanitoba.ca/sustainability/>, which provides resources to students regarding planetary health/sustainability initiatives and information (however, this is not specific to health sciences).

4.4. Does your institution have registered student groups dedicated towards fostering a culture of planetary health engagement, scholarship, and advocacy on campus, supported by

faculty advisors?	
Yes, there is a student organisation with faculty support at my medical school dedicated to planetary health or sustainability in healthcare. (2 points)	
Yes, there is a student organisation at my medical school dedicated to planetary health or sustainability in healthcare but it lacks faculty support . (1 point)	
No, there is not a student organisation at my institution dedicated to planetary health or sustainability in healthcare. (0 points)	
Score Assigned:	1
<p><i>Project Green Healthcare is a student led interest group focused on raising awareness and advocating for environmentally sustainable healthcare practices. The group meets monthly to brainstorm ideas, set goals and work on projects aimed at reducing waste in healthcare systems.</i> https://mmsa.online/community-interest-groups/</p> <p><i>UMEARTH (University of Manitoba Efficient and Renewable Technology Hub) is a student led group that is designed for students interested in sustainable engineering and renewable technology, aiming to promote sustainability and innovation on campus (note: this is not specific to health sciences).</i></p>	

4.5. Is there a student liaison representing sustainability interests who serves on a <u>department or institutional</u> decision-making council to advocate for curriculum reform and/or sustainability best practices?	
Yes, there is a student representative that serves on a department or institutional decision-making council/committee. (1 points)	
No, there is no such student representative. (0 points)	
Score Assigned:	1
<p><i>The University of Manitoba actively involves students in sustainability initiatives and decision-making processes. The Sustainability Advisory Committee includes student representatives from the University of Manitoba Students' Union (UMSU) and the Graduate Students' Association (GSA) who collaborate with faculty and staff to advise on sustainability -related directions and activities.</i> https://umanitoba.ca/sustainability/sites/sustainability/files/2024-04/Sustainability%20Committee%20Terms%20of%20Reference%20-%202023.pdf</p>	

4.6. In the past year, has the <u>institution</u> had one or more co-curricular planetary health programs or initiatives in the following categories? (1 point each)	Score
Projects where students are able to gain experience in organic agriculture and sustainable food systems, such as gardens, farms, community supported agriculture (CSA), fishery programs, or urban agriculture projects.	1

Panels, speaker series, or similar events related to planetary health that have students as an intended audience.	1
Events in which students learn directly from members of a local environmental justice community about the climate and environmental challenges they face, and how health professionals can partner with their community to address these exposures and impacts.	0
Cultural arts events, installations or performances related to planetary health that have students as an intended audience.	0
Local volunteer opportunities related to building community resilience to anthropogenic environmental impacts.	1
Wilderness or outdoors programs (e.g., that organise hiking, backpacking, kayaking, or other outings for students)	1
<ol style="list-style-type: none"> 1. <i>Rural week - a mandatory (faculty-supported) program for year 1 medical students, many stay on farms in Manitoba and get agricultural experience</i> https://healthcareersmanitoba.ca/wp-content/uploads/StudentGuide2024.pdf. There are also medical student-led interest groups, such as the Rural and Northern Remote interest groups https://mmsa.online/community-interest-groups/. 2. <i>Global health/EDI conferences - all are put on by student-led groups, such as the Global Health Portfolio within the Canadian Federation of Medical Students</i> https://www.cfms.org/what-we-do/global-health/ - these programs would benefit from more support (very limited spaces/funding and depend solely on student initiative). 3. <i>The University of Manitoba has some events allowing students to learn about environmental issues in the local community, such as community exposure learning (ex. Land and Water: Indigenous Land-based Education). However, these events are not specific to health sciences, nor are they advertised/specific to medical students.</i> 4. <i>While there are no such events specifically related to sustainable healthcare/planetary health at the University of Manitoba, there have been notable past initiatives that align with this theme, such as Celebrating Indigenous Health Principles Through Art, Bioart Exhibit Inspired by Herbarium Plant Collection, and Sustainability Night: Exploring Passion for the Environment (these are not specific to health sciences).</i> 5. <i>Service Learning - The Service Learning (SL; mandatory) program is an opportunity for UGME students to improve their understanding of the social determinants of health through working with community organizations (community co-educator) and engaging in critical reflection. The strength and longitudinal nature of student relationships with these organizations are foundational to the success of the program. Service Learning is not "volunteering" as it is a curricular requirement. Service learning is formally assessed and focused on reciprocity, respect and relationship building.</i> 6. <i>The Wilderness Medicine Interest Group offers education and hands-on experience for students interested in emergency and wilderness medicine, particularly in outdoor and low resource settings, Their mission is to support students exploring careers in wilderness medicine, provide practical skill training and encourage continued learning in the field.</i> https://mmsa.online/community-interest-groups/ 	

Section Total (10 out of 15)	67%
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Campus Sustainability

Section Overview: This section evaluates the support and engagement in sustainability initiatives by the institution. The healthcare industry is a major contributor to greenhouse gas emissions as well as pollution that harms local, regional, and global ecosystems. While healthcare is, by nature, a resource-intensive endeavour, the healthcare sector is well poised to lead the world to a more sustainable future. This will involve scrutinising every aspect of how our systems operate, from where we source our energy, to how we build our infrastructure, to what companies we invest in. Our medical schools, clinics, and hospitals must set the standard for sustainable practices, and show other sectors what is possible when it comes to minimising environmental impact.

5.1. Does your <u>institution</u> have an Office of Sustainability?	
Yes, there is an Office of Sustainability with multiple full-time staff dedicated to campus sustainability. If the Office of Sustainability serves the entire campus, there is at least one designated staff member for sustainability at the hospital. (3 points)	
There is an Office of Sustainability with one or more full-time staff dedicated to campus sustainability, but no specific staff member in charge of hospital sustainability. (2 points)	
There are no salaried sustainability staff , but there is a sustainability task force or committee. (1 point)	
There are no staff members or task force responsible for overseeing campus sustainability. (0 points)	
Score Assigned:	2
<i>The Office of Sustainability has multiple full-time staff members situated in the University of Manitoba's Fort Garry campus, although there is no identifiable staff member dedicated to hospital sustainability nor sustainability efforts specific to the Bannatyne campus (Max Rady College of Medicine).</i>	

5.2. How ambitious is your <u>institution's</u> plan to reduce its own carbon footprint?	
The institution has a written and approved plan to achieve carbon neutrality by 2030 (5 points)	
The institution has a written and approved plan to achieve carbon neutrality by 2040 (3 points)	
The institution has a stated goal of carbon neutrality by 2040 but has not created a plan to reach that goal or the plan is inadequate (1 point)	
The institution/medical school does not meet any of the requirements listed above (0 points)	
Score Assigned:	0

The University of Manitoba's Climate Action Plan, which encompasses the Max Rady College of Medicine, aims to cut the university's greenhouse gas emissions in half and to achieve carbon neutrality by 2050, which does not meet any of the requirements listed for this criterion. More information regarding the Climate Action Plan can be found [here](#).

5.3. Do buildings/infrastructure used by the institution for teaching (not including the hospital) utilize renewable energy?

Yes institution buildings are **100%** powered by renewable energy. (3 points)

Institution buildings source **>80%** of energy needs from off-site and/or on-site renewable energy. (2 points)

Institution buildings source **>20%** of energy needs from off-site and/or on-site renewable energy. (1 point)

Institution buildings source **<20%** of energy needs from off-site and/or on-site renewable energy. (0 points)

Score Assigned:

0

*Hydro, which powers most of the University of Manitoba, is not necessarily considered renewable energy. As well, most energy sources utilized by the university are off-site.
<https://reports.aashe.org/institutions/university-of-manitoba-mb/report/2022-08-05/OP/energy/OP-6/>*

5.4. Are sustainable building practices utilised for new and old buildings on the institution's campus, with design and construction of new buildings and remodelling of old buildings conforming to a published sustainability rating system or building code/guideline?

Yes, sustainable building practices are utilised for new buildings on the institution's campus and the **majority** of old buildings **have been retrofitted** to be more sustainable. (3 points)

Sustainable building practices are utilised for new buildings on the institution's campus, but most old buildings have **not been retrofitted**. (2 points)

Sustainable building practices are **inadequately or incompletely** implemented for new buildings. (1 point)

Sustainability is **not considered** in the construction of new buildings. (0 points)

Score Assigned:

0

Sustainability guidelines to be applied in the construction of future buildings, although guidelines are not publicly available at the moment. No new buildings are being built at the Max Rady College of Medicine with these guidelines in mind per the Office of Sustainability.

5.5. Has the institution implemented strategies to encourage and provide environmentally-friendly transportation options for students and reduce the environmental impact of commuting?

Yes, the institution has implemented strategies to encourage and provide **environmentally-friendly transportation options** such as safe active transport, public transport, or carpooling and these options are well-utilised by students. Alternatively, the campus location is not amenable to unsustainable forms of transportation by default. (2 points)

The institution has implemented **some** strategies to provide environmentally-friendly transportation options, but the options are **unsatisfactorily** accessible or advertised. (1 point)

The institution has **not** implemented strategies to encourage and provide environmentally-friendly transportation options. (0 points)

Score Assigned:

1

The University of Manitoba offers a universal, subsidized Universal Transit Pass (U-Pass) incentivizing students to use public transportation. There are no electric-powered shuttles nor carpool programs implemented at Bannatyne campus, although there is a dedicated bus stop connecting the Bannatyne campus and the Fort Garry campus. There is a bike route going through the Bannatyne campus, which also offers multiple bike parking spots, as shown in this [document](#). However, certain off-campus clinical sites and service learning sites are difficult to get to without a car. Additionally, environmentally-friendly transit options were not emphasised during the orientation week for medical students.

5.6. Does your institution have an organics recycling program (compost) and a conventional recycling program (aluminium/paper/plastic/glass)?

Yes, the institution has **both** compost **and** recycling programs accessible to students and faculty. (2 points)

The institution has **either** recycling **or** compost programs accessible to students and faculty, but not both. (1 point)

There is **no** compost or recycling program at the medical school. (0 points)

Score Assigned:

2

The University of Manitoba's Bannatyne campus has both compost and recycling bins that are easily accessible to students and faculty, being situated along hallways and dining areas across the campus.

5.7. Does the institution apply sustainability criteria when making decisions about the campus food and beverage selections (e.g. local sourcing, reduced meat, decreased plastic packaging)?

Yes, the institution has **adequate** sustainability requirements for food and beverages, including meat-free days or no red-meat, and **is engaged** in efforts to increase food and beverage sustainability. (3 points)

There are sustainability guidelines for food and beverages, but they are **insufficient or optional**. The institution **is engaged** in efforts to increase food and beverage sustainability. (2 points)

There are sustainability guidelines for food and beverages, but they are **insufficient or optional**. The institution is **not** engaged in efforts to increase food and beverage sustainability. (1 point)

There are **no** sustainability guidelines for food and beverages. (0 points)

Score Assigned:

1

Aramark contract for the Bannatyne campus - have their own sustainability criteria. No policy written on UManitoba's end.

5.8. Does the institution apply sustainability criteria when making decisions about supply procurement?

Yes, the institution has **adequate** sustainability requirements for supply procurement **and is engaged** in efforts to increase sustainability of procurement. (3 points)

There are sustainability guidelines for supply procurement, but they are **insufficient or optional**. The institution is **engaged** in efforts to increase sustainability of procurement. (2 points)

There are sustainability guidelines for supply procurement, but they are **insufficient or optional**. The institution is **not engaged** in efforts to increase sustainability of procurement. (1 point)

There are **no** sustainability guidelines for supply procurement. (0 points)

Score Assigned:

3

University of Manitoba has a UM purchasing policy which ensures consideration will be given to the impact on the environment, human health, and social well-being. UM is also guided by the Province of Manitoba's Green Procurement Guidelines. These guidelines also include promoting environmental sustainable economic development, conserving resources, conserving energy, promoting pollution prevention, waste reduction and diversion, and evaluating value, performance and need.

<https://reports.aashe.org/institutions/university-of-manitoba-mb/report/2022-08-05/OP/purchasing/OP-11/>

5.9. Are there sustainability requirements or guidelines for events hosted at the institution?

Every event hosted at the institution **must** abide by sustainability criteria. (2 points)

The institution **strongly recommends or incentivizes** sustainability measures, but they are **not required**. (1 point)

There are **no** sustainability guidelines for institution events. (0 points)

Score Assigned:	1
<i>Green in-person event guidelines are strongly recommended. Most incentives to run green in-person events are student-led.</i>	

5.10. Does your <u>institution</u> have programs and initiatives to assist with making lab spaces more environmentally sustainable?	
Yes, the institution has programs and initiatives to assist with making lab spaces more environmentally sustainable. (2 points)	
There are guidelines on how to make lab spaces more environmentally sustainable, but not programs or initiatives. (1 point)	
There are no efforts at the institution to make lab spaces more sustainable. (0 points)	
Score Assigned:	0
<i>Waste disposal procedures in lab are in place, however there is no formal program or guideline.</i>	

5.11. Does your <u>institution's</u> endowment portfolio investments include fossil-fuel companies?	
The institution is entirely divested from fossil fuels and has made a commitment to reinvest divested funds into renewable energy companies or renewable energy campus initiatives. (4 points)	
The institution is entirely divested from fossil fuels. (3 points)	
The institution has partially divested from fossil fuel companies or has made a commitment to fully divest , but currently still has fossil fuel investments. (2 points)	
The institution has not divested from fossil-fuel companies, but faculty and/or students are conducting organised advocacy for divestment. (1 point)	
Yes, the institution has investments with fossil-fuel companies and there have been no efforts to change that. (0 points)	
Score Assigned:	2
<i>Fossil-fuel purchasing has stopped at the University of Manitoba. Investments into fossil-fuel companies should be terminated by 2030, according to the following commitment.</i> https://umanitoba.ca/treasury-services/treasury-services/responsible-investment	

Section Total (12 out of 32)	38%
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Grading

Section Overview

This section focuses on the grading of the report card. The institution received a grade for each of the individual sections as well as an overall institutional grade. Section point totals were tallied, divided by the total points available for the section, and converted to a percentage. The overall institutional grade is a weighted average of the section grades, with curriculum receiving a higher weight owing to its larger number of metrics. Letter grades for each section and the institution overall were then assigned according to the table below.

Letter Grade*	Percentage
A	80% - 100%
B	60% - 79%
C	40% - 59%
D	20% - 39%
F	0% - 19%

**Within each grade bracket, a score in the top 5% (_5 to _9%), receives a “+”, and a score in the bottom 5% (_0- _4%) receives a “--”. For example, a percentage score of 78% would be a B+.*

Planetary Health Grades for the University of Manitoba - Max Rady College of Medicine

The following table presents the individual section grades and overall institutional grade for the University of Manitoba - Max Rady College of Medicine on this medical-school-specific Planetary Health Report Card.

Section	Raw Score %	Letter Grade
Planetary Health Curriculum (30%)	$(57/72) \times 100 = 79\%$	B+
Interdisciplinary Research (17.5%)	$(9/17) \times 100 = 53\%$	C
Community Outreach and Advocacy (17.5%)	$(4/14) \times 100 = 29\%$	D
Support for Student-led Planetary Health Initiatives (17.5%)	$(10/15) \times 100 = 67\%$	B
Campus Sustainability (17.5%)	$(12/32) \times 100 = 38\%$	D+
Institutional Grade	$(79 \times 0.3 + 53 \times 0.175 + 29 \times 0.175 + 67 \times 0.175 + 38 \times 0.175) = 56\%$	C+

Report Card Trends

Section Overview

In future years, this graph will demonstrate trends in overall and section grades for each year in which the University of Manitoba - Max Rady College of Medicine has participated in the Planetary Health Report Card initiative.

Planetary Health Report Card Trends for University of Manitoba

