



Planetary Health Report Card (Medicine):

University of Saskatchewan



2022-2023 Contributing Team:

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Land Acknowledgement:

We acknowledge that we live & learn on the land of Treaty 4 and Treaty 6 Territory and the Homeland of the Métis. We would like to recognize & pay respect to all the First Nations and Métis People of this land, both past & present. We hope to learn, express gratitude, reaffirm our relationships, and journey towards reconciliation.

Summary of Findings

Overall	C
<u>Curriculum</u>	C +
<ul style="list-style-type: none"> The University of Saskatchewan has been making significant progress towards integrating environmental and planetary health into the curriculum. There is however, a need for more content to be integrated through the curriculum in order for students to be competent and well versed on the issues and their relation to patient health. Recommendations: There is a need to make a distinction in our current curriculum that defines how planetary health differs from environmental health given that a significant amount of time is allocated to environmental hazards but not planetary health and climate change. The respiratory health and climate lecture greatly improved our curriculum score as it briefly touched on other areas evaluated by the report card. Although the report card recognized that many of these topics were briefly touched on, we do not feel that this was sufficient enough to offer students an adequate understanding of the corresponding topics. We would strongly encourage the expansion of such topics in the system-specific modules. 	
<u>Interdisciplinary Research</u>	C+
<ul style="list-style-type: none"> An initiative spearheaded by a member of the College of Medicine UGME is currently underway to host an annual conference on planetary health through collaboration with CASCADES. The First USask hub for the second annual CASCADES Summer Institute for Sustainability will be hosted in the summer of 2023. Recommendations: The University of Saskatchewan may benefit from becoming a part of a planetary health organization, and developing a process by which disproportionately impacted communities can contribute to its research agenda and future efforts. 	
<u>Community Outreach and Advocacy</u>	D
<ul style="list-style-type: none"> The University of Saskatchewan Medical School has had limited engagement with community partners to create meaningful partnerships related to planetary health. Recommendations: Increase community partnerships related to planetary health, including ones that target a public audience. Create a database of institutionally developed patient resources that encompasses geographically- and population-specific education. 	
<u>Support for Student-Led Initiatives</u>	A
<ul style="list-style-type: none"> The College of Medicine is eager to support student-driven curricular change, sustainability efforts and leadership opportunities. The Division of Social Accountability within the College of Medicine has supported student efforts by hosting a planetary health webinar in early 2022 as well. Recommendations: It is recommended that an accountability process be implemented so that student efforts have a lasting impact. 	
<u>Campus Sustainability</u>	D
<ul style="list-style-type: none"> The University of Saskatchewan has made strides towards improving campus sustainability, primarily through the Office of Sustainability. Being a signatory of the Climate Charter for Canadian Universities and initiating a study on decarbonization options are positive initial steps that require further follow through. Recommendations: Though some of these categories are allocated to institutional related change, there are a set of recommendations that the College of Medicine should consider. We recommend further engagement in sustainability initiatives by the College of Medicine, such as advertising sustainable transportation 	

options for students, participating in sustainable procurement and following guidelines for sustainable events within the college.

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 analyzing 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, urbanization, 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 color, 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 medical schools, we have created a Planetary Health Report Card that medical students internationally can use to grade and compare their home institutions on an annual basis. This medical-student-driven initiative aims to compare medical 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 centered 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 vs. Institution:** When “medical school” is specified in the report card, this only refers to curriculum and resources offered by the School 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. 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 providers 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 mold 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.
- **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.
- **Clerkship:** 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 or placements.

Other considerations:

- If there are more than one "tracks" at your medical school 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).

Added to our resources this year, the Planetary Health Report Card [Literature Review by Metric](#) collates the evidence behind each of the metrics in the Planetary Health Report Card. It serves as a 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. 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?	
3	Yes, the medical school has offered more than one elective whose primary focus is ESH/planetary health in the past year.
2	Yes, the medical school has offered one elective whose primary focus is ESH/planetary health in the past year.
1	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.
0	No, the medical school has not offered any electives on planetary health or electives that include ESH/planetary health topics in the past year.
<p><i>Score explanation: The University of Saskatchewan offers a 2-week 4th year clerkship elective that focuses on Environmental Medicine in Saskatoon. According to the elective description, students have the opportunity to explore their own interests, learn about environmental health issues as they pertain to clinical and public health contexts, and partake in research opportunities in the field if desired.</i></p> <p><i>Objectives of the elective: 1. Identify the environmental determinants of health at the individual, family, and community level. 2. Identify environmental risk factors within an individual and community context and develop appropriate care responses and management strategies. 3. Explain the ecosystems approach to health and apply it in the context of environmental problems and the responses to patient's environmental health concerns. 4. Explain the toxicity, pathophysiology and presentations of common and/or important environmentally related conditions. 5. Demonstrate a systematic approach to the medical assessment and diagnosis of environmentally related clinical presentations. 6. Obtain appropriate and accurate patient environmental history through a patient and family-centered interview. 7. Respond appropriately to the patient's environmental concerns and develop a relevant prioritized differential diagnosis through clinical reasoning and integration of clinical, environmental and toxicological information. 8. With consideration of patient context, respond to and communicate appropriately regarding an environmental health concern. 9. Develop and implement an appropriate patient-centered and evidence-informed treatment or management and prevention plan to an environmental issue of concern.</i></p> <p><i>There is also an Indigenous Health 2-week elective where planetary health themes may emerge depending on preceptorship and community experience. However, planetary health is not the primary focus of this elective.</i></p>	

Curriculum: Health Effects of Climate Change

2. Does your <u>medical school</u> curriculum address the relationship between extreme heat, health risks, and climate change?	
3	This topic was explored in depth by the core curriculum.
2	This topic was briefly covered in the core curriculum.
1	This topic was covered in elective coursework.
0	This topic was not covered.
<p><i>Score explanation: The University of Saskatchewan Curriculum includes a “Climate change and Respiratory disease” dedicated lecture and curricular objectives in the Respiratory module of the Foundations course which describes in detail the effects of climate change on extreme heat and their sequelae on human health. The content is testable on exams as per the session objectives.</i></p> <p><i>Previously, a small group case was developed in collaboration with students that worked to complement the lecture. This has since been removed from the curriculum and to our knowledge, integration of planetary health concepts within case based learning has not yet been implemented.</i></p>	

3. Does your <u>medical school</u> curriculum address the impacts of extreme weather events on individual health and/or on healthcare systems?	
3	This topic was explored in depth by the core curriculum.
2	This topic was briefly covered in the core curriculum.
1	This topic was covered in elective coursework.
0	This topic was not covered.
<p><i>Score explanation: The University of Saskatchewan Curriculum includes a “Climate change and Respiratory disease” lecture in the Respiratory module of the Foundations course which allocates several slides to the in-depth discussion of the relationship between increases in extreme weather events and respiratory health. This topic is linked to an associated testable learning objective which is accessed both at the end of the Respiratory module exam and has the potential to be tested at each of the individual end of semester Foundations exams.</i></p> <p><i>Previously, a small group case was developed in collaboration with students that worked to complement the lecture. This has since been removed from the curriculum and to our knowledge, integration of planetary health concepts within case based learning has not yet been implemented.</i></p>	

4. Does your <u>medical school</u> curriculum address the impact of climate change on the changing patterns of infectious diseases?	
3	This topic was explored in depth by the core curriculum.

2	This topic was briefly covered in the core curriculum.
1	This topic was covered in elective coursework.
0	This topic was not covered.
<p><i>Score explanation: The University of Saskatchewan Curriculum covers this topic briefly in the “Climate change and Respiratory disease” lecture in the Respiratory module of the Foundations course. It describes how extreme weather events increase infectious disease transmission due to overcrowded living conditions, food insecurity, and malnutrition. Additional, non-testable information is offered to students in the presentation speaker notes citing epidemiological studies that found higher rates of respiratory infections following severe flooding events.</i></p>	

5. Does your <u>medical school</u> curriculum address the respiratory health effects of climate change and air pollution?	
3	This topic was explored in depth by the core curriculum.
2	This topic was briefly covered in the core curriculum.
1	This topic was covered in elective coursework.
0	This topic was not covered.
<p><i>Score explanation: The University of Saskatchewan has a designated lecture titled “Changing Climate and Respiratory Disease” as a part of the respiratory module within the foundations course. The lecture works to help students develop an understanding of climate change and the effects that it may have on the individual, the community or on the greater population at a societal level. Furthermore, it explores the mechanisms by which climate change can alter the epidemiology and nature of respiratory illness, environmental risk factors that contribute to declining health, and the acute and chronic health effects resulting from short-term and long-term climate/environmental events.</i></p> <p><i>Previously, a small group case was developed in collaboration with students that worked to complement the lecture. This has since been removed from the curriculum and to our knowledge, integration of planetary health concepts within case based learning has not yet been implemented.</i></p>	

6. Does your <u>medical school</u> curriculum address the cardiovascular health effects of climate change, including increased heat?	
3	This topic was explored in depth by the core curriculum.
2	This topic was briefly covered in the core curriculum.
1	This topic was covered in elective coursework.
0	This topic was not covered.
<p><i>Score explanation: In the speaker notes of the “Changing Climate and Respiratory Disease” lecture it says that increasing temperature is associated with increased cardiovascular events and death. It also states in one of the slides that individuals with chronic cardiac diseases are more vulnerable to health</i></p>	

effects caused by increased heat. These are optional notes. Students can also turn to a syllabus resource provided” climate wise slides <https://www.cwslides.com/>” though they would need to find the appropriate slides to supplement their learning.

7. Does your medical school curriculum address the mental health and neuropsychological effects of environmental degradation and climate change?

3	This topic was explored in depth by the core curriculum.
2	This topic was briefly covered in the core curriculum.
1	This topic was covered in elective coursework.
0	This topic was not covered.

Score explanation: The topic of the impact of climate change on mental health and neuropsychological effects is not directly addressed in the preclerkship foundations courses or the clerkship core rotations. The “Climate Change and Respiratory Diseases” lecture in the respiratory module of the foundations course has additional speaker notes made available that briefly touch on the subject. These are optional notes that discuss the effects of natural disasters such as floods and cyclones on conditions such as depression, anxiety, and stress. Students can also turn to a syllabus resource provided “climate wise slides <https://www.cwslides.com/>” though they would need to find the appropriate slides to supplement their learning. Although this lecture is a part of the core curriculum we do not feel that it merits a score of 2 given that mental health is not the focus of the lecture and it is only mentioned briefly in passing.

8. Does your medical school curriculum address the relationships between health, individual patient food and water security, ecosystem health, and climate change?

3	This topic was explored in depth by the core curriculum.
2	This topic was briefly covered in the core curriculum.
1	This topic was covered in elective coursework.
0	This topic was not covered.

Score explanation: These topics are often an area of discussion in the Making the Links- Global health certificate. This however can be dependent on speaker selection.

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

3	This topic was explored in depth by the core curriculum.
2	This topic was briefly covered in the core curriculum.
1	This topic was covered in elective coursework.

0	This topic was not covered.
<p><i>Score explanation: The University of Saskatchewan has designated a mandatory lecture titled “Environmental health and climate change” as a part of the Health Promotion and Illness Prevention section in the Intro to Biomedical Sciences module within the Foundations in Clinical Medicine I course. This lecture explores the impact of global health and climate change in terms of social determinants of health. This lecture brings light to the health consequences of planetary health and introduces novel ways to protect the natural environment by incorporating social determinants of health into clinical practice. Outreach and intergroup collaboration were emphasized in establishing solutions with communities to achieve human health and wellbeing.</i></p>	

10. Does your <u>medical school</u> curriculum address the unequal regional health impacts of climate change globally?	
3	This topic was explored in depth by the core curriculum.
2	This topic was briefly covered in the core curriculum.
1	This topic was covered in elective coursework.
0	This topic was not covered.
<p><i>Score explanation: The University of Saskatchewan has designated a mandatory lecture titled “Environmental health and climate change” as a part of the Health Promotion and Illness Prevention section in the Intro to Biomedical Sciences module within the Foundations in Clinical Medicine I course. This lecture brings in a regional perspective to environmental health by introducing the ongoing water crisis on the Indigenous reserves in Northern Saskatchewan as a result of climate change.</i></p>	

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

11. Does your <u>medical school</u> curriculum address the reproductive health effects of industry-related environmental toxins (e.g. air pollution, pesticides)?	
3	This topic was explored in depth by the core curriculum.
2	This topic was briefly covered in the core curriculum.
1	This topic was covered in elective coursework.
0	This topic was not covered.
<p><i>Score explanation: The University of Saskatchewan Curriculum covers this topic over a few slides in the “Female Infertility” lecture of the Reproductive module within the Foundations course. It details the negative impacts on female fertility with exposure to poor air quality and endocrine-disrupting chemicals like PCBs. Additionally, in the “Climate change and Respiratory disease” lecture in the Respiratory module of the Foundations course, it is mentioned that sulfur dioxide may be linked to reduced fertility.</i></p>	

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

3	This topic was explored in depth by the core curriculum.
2	This topic was briefly covered in the core curriculum.
1	This topic was covered in elective coursework.
0	This topic was not covered.

Score explanation The University of Saskatchewan Curriculum "Climate change and Respiratory disease" lecture in the Respiratory module of the Foundations course mentions the effects of nearby wildfires on air quality in Saskatchewan and quantifies the province's CO2 emissions. Very few local examples are included within curriculum that tie in planetary health and human cause environmental threats. A student would have the opportunity to further explore this topic if they applied for the Environmental Health elective.

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

3	Indigenous knowledge and value systems are integrated throughout the medical school's planetary health education
2	Indigenous knowledge and value systems as essential components of planetary health solutions are included briefly in the core curriculum.
1	Indigenous knowledge and value systems as essential components of planetary health solutions are included in elective coursework.
0	This topic was not covered.

Score explanation: The college of medicine at the university of Saskatchewan offers an optional certificate program to medical students as well as to other select health care students titled "making the links - a global health certificate" which requires students to partake in CHEP 402 - Global Health I and CHEP 411 - Rural/Indigenous community practicum. Both courses offer students the opportunity to learn about indigenous history and hear from indigenous leaders about their role in planetary health and sustainability. Additionally, there is an optional elective that students can pursue that focuses on indigenous health. Through this elective students have the opportunity to learn about the importance of indigenous action and planetary health through the indigenous perspective. This is however dependent on preceptorship and the nature of the individual's experience.

A podcast episode created by students with funding from the Division of Social Accountability highlights the importance of Indigenous knowledge and value systems as essential components of planetary health solutions. However, this project was not integrated into the curriculum and was an optional, elective resource for students in previous years.

14. Does your medical school curriculum address the outsized impact of anthropogenic environmental toxins on marginalized populations such as those with low SES, women,

communities of color, children, homeless populations, Indigenous populations, and older adults?	
3	This topic was explored in depth by the core curriculum.
2	This topic was briefly covered in the core curriculum.
1	This topic was covered in elective coursework.
0	This topic was not covered.
<p><i>Score explanation: This topic is not discussed as a component of the core curriculum. There is a possibility that this may be noted in passing through individual lectures; it is however not a testable component of the lectures and is not guaranteed to be a part of the lecture in future years given lecturer variability. The college of medicine does offer an Indigenous Health elective during 4th year, which again may touch on some of these topics. This however is not guaranteed given variability between yearly and lecturers. Alternatively, the Environmental health elective offered in 4th year may offer students knowledge pertaining to these topics.</i></p>	

Curriculum: Sustainability

15. Does your <u>medical school</u> curriculum address the environmental and health co-benefits of a plant-based diet?	
3	This topic was explored in depth by the core curriculum.
2	This topic was briefly covered in the core curriculum.
1	This topic was covered in elective coursework.
0	This topic was not covered.
<p><i>Score explanation: At the University of Saskatchewan's College of Medicine, a lecture on Integrative Medicine is incorporated in every module. The focus of this lecture is mainly on the advantages of diverse diets, including plant-based diets, and lifestyle changes. Some modules also have supplementary lectures and workshops that touch on the topic of nutritional health. Additionally the College of Medicine offers a lecture through the Medicine and Society III course that focuses on environmental health and climate change and offers students the opportunity to learn about its practical application through case based learning.</i></p>	

16. Does your <u>medical school</u> curriculum address the carbon footprint of healthcare systems?	
3	This topic was explored in depth by the core curriculum
2	This topic was briefly covered in the core curriculum.
1	This topic was covered in elective coursework.
0	This topic was not covered.

Score explanation: The core curriculum at the University of Saskatchewan does not currently include information on the carbon footprint of the healthcare system. However, the College supports student-led groups, elective lunch talks, and research opportunities that address this topic and raise awareness of the environmental impact of healthcare.

The University of Saskatchewan College of Medicine Division of Social Accountability will be hosting a USASK hub for the CASCADES Summer institute which will discuss the carbon footprint of healthcare and its implications on health through this.

17. Does your <u>medical school</u> curriculum cover these components of sustainable clinical practice in the <u>core</u> curriculum? (points for each)	
2	The health and environmental co-benefits of avoiding over-medicalisation, over-investigation and/or over-treatment
2	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 fulfill this metric.
1	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	Environmental impact of surgical healthcare on planetary health and the climate crisis, and how can it be mitigated
1	The impact of anaesthetic gases on the healthcare carbon footprint and ways to reduce anesthesia environmental impacts, such as total intravenous anaesthesia or choosing less environmentally harmful anaesthetic gas options with reduced greenhouse gas emissions
1	The impact of inhalers on the healthcare carbon footprint and the environmental benefit of dry powdered inhalers over metered dose inhalers.
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)
	<i>Score explanation: The University of Saskatchewan provides a lecture in Medicine and Society III labeled “Quality Improvement and Resource Stewardship”. The lecture revolves around reducing overmedicalization to avoid injuring patients from the care that is intended to help them. The lecture also emphasizes how overmedicalization can increase wasted material, energy, and supplies and ultimately impact the environment. At the end of the lecture quality improvement cases are presented and are assigned to different groups. The students are expected to tackle the cases by addressing the individuals they would want involved, exploring if there are any established clinical standards, establishing an objective for the improvement initiative, brainstorming interventions, and the variables that must be measured to assess efficiency and effectiveness of intervention. Though the lecture extensively covers the impact and solution to overmedicalization it fails to cover the impact of overprescribing and overmedicalization on climate change. Additionally, the impacts of surgical healthcare and use of anesthetic gasses on carbon emissions, is not established in curriculum.</i>

	<i>Certain Choosing Wisely slides are well incorporated within the curriculum through all years of medical education with a main emphasis on reducing unnecessary testing that indirectly teaches about principles of sustainability.</i>
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Curriculum: Clinical Applications

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?	
2	Yes, there are strategies introduced for having conversations with patients about climate change in the core curriculum.
1	Yes, there are strategies introduced for having conversations with patients about climate change in elective coursework.
0	No, there are not strategies introduced for having conversations with patients about climate change
<i>Score explanation: The College of Medicine at the University of Saskatchewan does not currently have strategies introduced in clinical skills courses or topics in lecture that directly address strategies to have conversations with patients about the health effects of climate change. Topics such as the effects of environmental pollutants on health come up in an Integrative Medicine lecture but there is no emphasis on how to make the links in clinical practice or on how to disseminate knowledge and resources to patients in a clinical encounter.</i>	

19. In training for patient encounters, does your <u>medical school's</u> curriculum introduce strategies for taking an environmental history or exposure history?	
2	Yes, the core curriculum includes strategies for taking an environmental history.
1	Only elective coursework includes strategies for taking an environmental history.
0	No, the curriculum does not include strategies for taking an environmental history.
<i>Score explanation: The College of Medicine at the University of Saskatchewan trains students to take a comprehensive environmental history and exposure history. For instance, students in the Respiratory module are required to learn how to take an occupational and work exposure history related to lung diseases as part of the curriculum objective. There are environmental health lectures across pre-clerkship and in clerkship with case studies that examine environmental exposures.</i>	

Curriculum: Administrative Support for Planetary Health

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

4	Yes, the medical school is currently in the process of making major improvements to ESH/planetary health education.
2	Yes, the medical school is currently in the process of making minor improvements to ESH/planetary health education.
0	No, there are no improvements to planetary health education in progress.
<p><i>Score explanation: Academic leadership has met with members of the student body in an effort to increase the amount of planetary health content in the current foundation's curriculum. Student leadership has been invited to present the climate wise slides created by – to the individual module directors during the next module team meeting. This will not only increase the amount of planetary health content within the curriculum but it will also allow for a more integrative approach to the content. Academic leadership has also expressed interest in supporting the development of a USASK hub for CASCADES Summer Institute for Sustainability.</i></p>	

21. How well are the aforementioned planetary health/Education for Sustainable Healthcare topics integrated longitudinally into the <u>core</u> curriculum?	
6	Planetary health/ESH topics are well integrated into the core medical school curriculum.
4	Some planetary health/ESH topics are appropriately integrated into the core medical student curriculum.
2	Planetary health/ESH is not integrated and is primarily addressed in (a) standalone lecture(s).
0	There is minimal/no education for sustainable healthcare.
<p><i>Score explanation: The University of Saskatchewan's college of medicine has been directing efforts towards increasing the amount of planetary health education within the pre-clerkship and clerkship curriculum. Although topics such as occupational hazard exposure and environmental health are present throughout different stages of the curriculum it is not sufficiently integrated into the individual components to be awarded 6 points.</i></p>	

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?	
1	Yes, the medical school has a specific faculty/staff member responsible for overseeing curricular integration of planetary health and sustainable healthcare
0	No, the medical school does not have a specific faculty/staff member responsible for overseeing curricular integration of planetary health and sustainable healthcare.
<p><i>Score explanation: There is no designated faculty or staff within the medical school that is responsible for planetary health content or sustainability in healthcare. The College of medicine has moved away from designating individual leads for vertical themes as they have found collaborative efforts to be a more effective way to integrate these topics into the longitudinal curriculum.</i></p>	

Section Total (40 out of 72)	40
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Are there additional curriculum resources offered at your medical school or institution not yet asked about that you would like to describe? If so, please do so below.

Interdisciplinary Research

Section Overview: This section evaluates the quality and quantity of interdisciplinary planetary health research at the medical school and 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, medical schools 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 emphasized.

1. Are there researchers engaged in planetary health research and healthcare sustainability research at your <u>medical school</u> ?	
3	Yes, there are faculty members at the medical school who have a primary research focus in planetary health or healthcare sustainability.
2	Yes, there are individual faculty members at the medical school who are conducting research related to planetary health or healthcare sustainability, but it is not their primary research focus.
1	There are planetary health and/or healthcare sustainability researchers at the institution , but none associated with the medical school.
0	No, there are no planetary health and/or healthcare sustainability researchers at the institution or medical school at this time.
<p><i>Score explanation: There are 21 researchers at the College of Medicine of University of Saskatchewan who focus on topics related to sustainability and healthcare. The Office of Sustainability website lists their names and topics of interest among a comprehensive list of all sustainability-related researchers at the University of Saskatchewan.</i></p>	

2. Is there a dedicated department or institute for interdisciplinary planetary health research at your <u>institution</u> ?	
3	There is at least one dedicated department or institute for interdisciplinary planetary health research.
2	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.
1	There is an Occupational and Environmental Health department , but no interdisciplinary department or institute for planetary health research.
0	There is no dedicated department or institute.
<p><i>Score explanation: The University of Saskatchewan is home to the Global Institute for Water Security and the School of Environment and Sustainability, which aims to address sustainability issues via bridging academic disciplines including natural, physical, and social sciences. Many of University of Saskatchewan's Signature Areas of Research are also directly related to planetary health topics.</i></p>	

Additionally, the Office of Sustainability aims to identify opportunities for sustainability-related academic research and support student-run initiatives.

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 medical school?

3	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.
2	Yes, there is a process in which community members impacted by climate and environmental injustice advise the climate + environmental research agenda.
1	No , but there are current efforts to establish a process for community members to advise or make decisions on the research agenda.
0	There is no process, and no efforts to create such a process.

Score explanation: There is no formal process where disproportionately impacted communities give input or make decisions with regards to the research agenda. However, individual researchers may interact with communities that are impacted as it is related to their specific research.

4. Does your institution have a planetary health website that centralizes ongoing and past research related to health and the environment?

3	There is an easy-to-use, adequately comprehensive website that centralizes 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.
2	There is a website that attempts to centralize various campus resources related to health and the environment, but it is hard-to-use, not updated, or not adequately comprehensive.
1	The institution has an Office of Sustainability website that includes some resources related to health and the environment.
0	There is no website.

Score explanation: University of Saskatchewan's Office of Sustainability offers an intuitive website that links to sustainability programs and events, opportunities for student involvement, campus footprint reports, an inventory of researchers who focus on sustainability-related topics, as well as related resources. Links to each page are organized and easily accessible through drop-down menus present on the top of the website.

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

4	Yes, the medical school has hosted at least one conference or symposium on topics related to planetary health in the past year.
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3	Yes, the institution has hosted at least one conference or symposium on topics related to planetary health in the past year.
2	Yes, the institution has hosted a conference on topics related to planetary health in the past three years.
1	The institution has not hosted any conferences directly, but they have provided financial support for a local planetary health event.
0	No, the institution has not hosted a conference on topics related to planetary health in the past three years.

Score explanation: The University of Saskatchewan annually hosts two research symposiums: Summer Professional Symposium and the Spring Research Symposium, where students are given the opportunity to present on their research related to sustainability and environment. These symposiums are held annually, and may include topics related to planetary health, but that is not the focus. However, a designated Planetary Health themed conference known as the People Around the World (PAW) conference occurred in 2019. To the best of our knowledge, a designated planetary health conference has not occurred since then.

However, the College of Medicines division of social accountability has joined forces with CASCADES to host a USASK hub for their annual Summer Institute for Sustainability. The first of which will be held in the summer of 2023.

6. Is your medical school a member of a national or international planetary health or ESH organization?

1	Yes, the medical school is a member of a national or international planetary health or ESH organization
0	No, the medical school is not a member of such an organization

Score explanation: The University of Saskatchewan's College of Medicine is not currently a member of either a national or international planetary health or ESH organization. Although the college is a member of a national/international planetary health organization they have partnered with CASCADES in order to offer a USASK hub for the summer institute for sustainability conference.

Section Total (10 out of 17)	10
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Are there additional research resources offered at your medical school or institution not yet asked about that you would like to describe? If so, please do so below.

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 color. 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.*

1. Does your medical school partner with community organizations to promote planetary and environmental health?	
3	Yes, the medical school meaningfully partners with multiple community organizations to promote planetary and environmental health.
2	Yes, the medical school meaningfully partners with one community organization to promote planetary and environmental health.
1	The institution partners with community organizations, but the medical school is not part of that partnership.
0	No, there is no such meaningful community partnership.
<p><i>Score explanation: The UofS College of Medicine Division of Social Accountability offers the Community Reciprocity Fund which has provided money to “Garden Patch” which is a local initiative by the Saskatoon Food Bank and Learning Center to provide emergency food baskets for those in need. This local community organization also emphasizes the benefit of being outside gardening. Additionally, the College of Medicine also offers students in their 2nd year of the program the opportunity to complete their Community Learning Experience at CHEP Good Food Inc which is a local organization that, in addition to providing people with access to healthy foods, also offers education on nutrition and supports 47 community gardens in Saskatoon. While these opportunities are a good first step, they do not constitute ‘meaningful’ relationships nor do they specifically focus on promoting planetary and environmental health.</i></p>	

2. Does your medical school offer community-facing courses or events regarding planetary health?	
3	The medical school offers community-facing courses or events at least once every year.
2	The medical school offers courses or events open to the community at least once per year, but they are not primarily created for a community audience.
1	The institution has offered community-facing courses or events, but the medical school was not involved in planning those courses or events.
0	The institution/medical school have not offered such community-facing courses or events.

Score explanation: The U of S College of Medicine Division of Social Accountability partnered with the Canadian Association of Physicians for the Environment (CAPE) Saskatchewan division in January 2022 to provide a one-time webinar on “Health in a changing climate, and the role of healthcare professionals in the climate crisis”. Additionally, the Planetary Health Student Group partnered with the Saskatchewan Medical Students Association Global Health Committee and the Refugee Engagement and Community Health clinic in April 2022 to host a community walk that supported both being outdoors and social justice. While community members were welcome to both these events, they were not primarily created for a community audience and are more geared toward academics. These events described have been student-driven events that gained support from divisions of the College of Medicine. Therefore, these events are not considered “annual” as they occurred once on the basis of opportunity.

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

2	Yes, all students regularly receive communication updates dedicated to planetary health and/or sustainable healthcare.
1	Yes, planetary health and/or sustainable healthcare topics are sometimes included in communication updates.
0	Students do not receive communications about planetary health or sustainable healthcare.

Score explanation: The U of S College of Medicine shares communication updates through emails and on their website. These occasionally will include topics related to planetary health and/or sustainable healthcare. For example, on November 18, 2022, they put out an article in their weekly communications on “USask Research Awarded \$3 million to help build better cities” which focused on a project aiming to study how cities can build more sustainable and efficient infrastructure. Another example includes a September 21, 2022 article on “Sophisticated tools enable USask researchers to advance water security, human health” which discusses research looking at water quality and its association with cases of inflammatory pulmonary disease. There is a U of S Office of Sustainability that is not housed within the College of Medicine, however, that does put out regular communications on these topics but this is not with a health professional audience in mind and rather the greater university community.

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?

2	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.
1	Yes, the institution or main affiliated hospital trust offers one course relating to planetary health and/or sustainable healthcare for post-graduate providers
0	There are no such accessible courses for post-graduate providers

Score explanation: The 2022 Highlights in Medicine Conference and Reunion, which is a conference geared toward U of S College of Medicine Alumni, held a public lecture on “Planetary health and One

Planet health care: Integrating the ecological determinants of health with medicine.” However, neither the Division of Continuing Medical Education or the Saskatchewan Health Authority offers any courses related to planetary health.

5. Does your medical school or its primary affiliated hospital have accessible educational materials for patients about environmental health exposures?

2	Yes, all affiliated hospitals have accessible educational materials for patients.
1	Some affiliated hospitals have accessible educational materials for patients.
0	No affiliated medical centers have accessible educational materials for patients.

Score explanation: The Saskatchewan Health Authority (SHA), which oversees all hospitals associated with the U of S College of Medicine, houses an extensive list of patient education resources on their website. The SHA does link to Healthline Online which provides patient friendly information. A quick search of “Environmental Health” brings up a page on exposures to Lead, Radon, carbon monoxide, etc... However, there are no internal or centralized projects within the SHA that have produced patient friendly materials; including ones on Environmental Health. Educational materials for patients are not found on the U of S College of Medicine website.

6. Does your medical school or its primary affiliated hospital have accessible educational materials for patients about climate change and health impacts?

2	Yes, all affiliated hospitals have accessible educational materials for patients.
1	Some affiliated hospitals have accessible educational materials for patients.
0	No affiliated hospitals have accessible educational materials for patients.

Score explanation: The Saskatchewan Health Authority (SHA), which oversees all hospitals associated with the U of S College of Medicine, houses an extensive list of patient education resources on their website. However, information regarding climate change and health impacts is not found directly on the SHA website and could potentially be sourced indirectly from these resource links provided. Again, there are no internal SHA patient forward materials for education on any topics. Educational materials for patients are not found on the U of S College of Medicine website.

Section Total (4 out of 14)	4
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Are there additional community engagement and advocacy resources offered at your medical school or institution not yet asked about that you would like to describe? If so, please do so below.

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.*

1. Does your <u>medical school</u> or your <u>institution</u> offer support for medical students interested in enacting a sustainability initiative/QI project?	
2	Yes, the medical school or institution <i>either</i> offers grants for students to enact sustainability initiatives/QI projects <i>or</i> sustainability QI projects are part of the core curriculum.
1	The medical school or institution encourages sustainability QI projects (to fulfill 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.
0	No, neither the medical school or the institution offer opportunities or support for sustainability initiatives or QI projects.

Score explanation: The Division of Social Accountability within the College of Medicine offers \$3000 of funding per project via the Social Accountability Lab for Learning and Teaching (SALLT). Projects are student-developed and faculty/community member-supported initiatives aimed towards adding to the growing body of advocacy work aimed towards community engagement and health equity principles in the realm of social accountability, including planetary health or sustainability. They also offer funding for College of Medicine student groups involved with social accountability, advocacy, and health-equity. While the funding is not specific for sustainability projects, they are included within the eligibility criteria.

The College of Medicine Division of Research also offers funding for summer research projects, of which some projects may be related to sustainability initiatives or quality improvement. Students can work with faculty to develop projects and apply for this funding.

The University of Saskatchewan's Office of Sustainability and the USSU Sustainability Committee have partnered to offer \$10 000 for student-developed sustainability projects at the University of Saskatchewan since 2016.

2. Does your <u>institution</u> offer opportunities for medical students to do research related to planetary health and/or sustainable healthcare?	
2	The institution has a specific research program or fellowship for students interested in doing planetary health/sustainable healthcare research.
1	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.

0	There are no opportunities for students to engage in planetary health/sustainable healthcare research.
<p><i>Score explanation: The College of Medicine's Office of the Vice Dean of Research offers students opportunities to become involved in different types of research, including planetary health or sustainable healthcare research, though it is not specific to planetary health/sustainable healthcare research. Students can reach out to faculty interested in sustainability to create research projects and apply for funding from this division. Faculty can also post research opportunities related to planetary health or sustainability through this division which will then be shared with students.</i></p> <p><i>The University of Saskatchewan's Sustainability Education Research Institute within the College of Education offers a collaborative environment for faculty, postdoctoral fellows, graduate students, staff, and other partners conducting research on environment and sustainability in relation to education. Unfortunately, there is currently no partnership with the College of Medicine and interested medical students would be required to either enroll in a graduate program or contact the institute to determine how they can partake in sustainable research endeavors listed through this group.</i></p> <p><i>The Office of Sustainability of the University of Saskatchewan has a comprehensive list of sustainability and planetary health research occurring at the university with some representation from the College of Medicine. Interested students must contact relevant faculty on their own to become involved with such research projects.</i></p>	

<p>3. Does the <u>medical school</u> have a webpage where medical students can find specific information related to planetary health and/or sustainable healthcare activities and mentors within the medical school? For example, projects achieved, current initiatives underway at the medical school and/or contact of information of potential mentors.</p>	
2	The medical school 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.
1	There is a medical school webpage that features some information on projects and mentors within planetary health and sustainable healthcare within the medical school, but it lacks key information.
0	There is no medical-school specific webpage for locating planetary health and/or sustainable healthcare projects or mentors.
<p><i>Score explanation: The University of Saskatchewan's Office of Sustainability has numerous webpages dedicated to research, workshops, and learning opportunities for students to be engaged with sustainability initiatives. The research inventory page has the names of some faculty within the College of Medicine involved in sustainability research. However, the College of Medicine does not specifically have a webpage dedicated to sustainable healthcare or planetary health. It does have a page dedicated to research that is easily accessible to students should any opportunities for planetary health research arise.</i></p> <p><i>The Planetary Health Student Group of the Student Medical Society of Saskatchewan (SMSS) has social media pages on which planetary health news and activities are shared, however they are not a formal part of the College of Medicine and not listed specifically on the College of Medicine's website. While the College of Medicine does outline Social Accountability as one of its core directions for the Strategic Plan and Sustainability is listed as a core principle, there is no specific reference to planetary health or sustainable healthcare within the Strategic Plan at this time.</i></p>	

4. Does your medical school have registered student groups dedicated towards fostering a culture of planetary health engagement, scholarship, and advocacy on campus, supported by faculty advisors?

2	Yes, there is a student organization with faculty support at my medical school dedicated to planetary health or sustainability in healthcare.
1	Yes, there is a student organization at my medical school dedicated to planetary health or sustainability in healthcare but it lacks faculty support .
0	No, there is not a student organization at my institution dedicated to planetary health or sustainability in healthcare.

Score explanation: The Student Medical Society of Saskatchewan (SMSS) has both an Environment and Sustainability Representative and a registered Planetary Health Student group aimed towards advocating for increasing student engagement with planetary health concepts with many events involving renowned speakers who have created successful initiatives with an emphasis on planetary health. These initiatives have worked very closely and have been supported by faculty, particularly course directors and the Associate Dean for Undergraduate Medical Education.

5. Is there a student liaison representing sustainability interests who serves on a medical school or institutional decision-making council to advocate for curriculum reform and/or sustainability best practices?

1	Yes, there is a student representative that serves on a medical school or institutional decision-making council/committee.
0	No, there is no such student representative.

Score explanation: The Student Medical Society of Saskatchewan has an Environment and Sustainability Representative tasked with advocating for and increasing awareness of national planetary health initiatives in collaboration with relevant groups such as the Planetary Health Student Group.

6. In the past year, has the institution had one or more co-curricular planetary health programs or initiatives in the following categories? (1 point each)

1	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.

1	Cultural arts events, installations or performances related to planetary health that have students as an intended audience.
1	Local volunteer opportunities related to building community resilience to anthropogenic environmental impacts.
1	Wilderness or outdoors programs (e.g., that organize hiking, backpacking, kayaking, or other outings for students)
<p><i>Score explanation: The College of Agriculture and Biosciences has a Gardening at USask public resource which provides advice and additional resources about sustainable agricultural practices. The Planetary Health Student Group hosts events throughout the year featuring speakers involved with planetary health. Additionally, the USask Health Sciences and College of Education hosted a Food for Thought Planetary Health Series which was aimed towards addressing the global food insecurity crisis with an understanding of the relationships between humans and planetary health. The Office of Sustainability also hosts an annual EcoHack to create solutions to problems with a focus on sustainability. ART*Cycled is a partnership between the USask Office of Sustainability and UofS Art students where students used university-surplus goods destined for the landfill to create sustainable art. The Office of Sustainability outlines numerous volunteer opportunities dedicated to promote sustainability and improve planetary health such as PlantForever, a group dedicated to planting trees in the city. There are numerous sustainability-focused and sustainability-related groups at the University of Saskatchewan which promote outdoor programs for students.</i></p>	

Section Total (13 out of 15)	13
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Are there additional student-led initiative resources offered at your medical school or institution not yet asked about that you would like to describe? If so, please do so below.

Campus Sustainability

Section Overview: This section evaluates the support and engagement in sustainability initiatives by the medical school and/or 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 endeavor, the healthcare sector is well poised to lead the world to a more sustainable future. This will involve scrutinizing 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 minimizing environmental impact.

1. Does your <u>medical school</u> and/or <u>institution</u> have an Office of Sustainability?	
3	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 and/or medical school.
2	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 medical school and/or hospital sustainability.
1	There are no salaried sustainability staff , but there is a sustainability task force or committee
0	There are no staff members or task force responsible for overseeing campus sustainability
<p><i>Score explanation: The University has an Office of Sustainability: There is a staff of 3 members: chief sustainability officer, community engagement coordinator, and energy and emissions officer. Two of which are full-time salaried employees in the office. In the past there have been up to 4 full-time salaried employees. The College of Medicine does not have a role formally dedicated to sustainability. However, there is a Division of Social Accountability and staff with interest in this topic. There is currently no Office of Sustainability through the Saskatchewan Health Authority, though there is an Executive Director of Environmental Services.</i></p>	

2. How ambitious is your <u>institution/medical school</u> plan to reduce its own carbon footprint?	
5	The institution/medical school has a written and approved plan to achieve carbon neutrality by 2030
3	The institution/medical school has a written and approved plan to achieve carbon neutrality by 2040
1	The institution/medical school has a stated goal of carbon neutrality by 2040 but has not created a plan to reach that goal or the plan is inadequate
0	The institution/medical school does not meet any of the requirements listed above
<p><i>Score explanation: The University of Saskatchewan has a goal for net-zero emissions by 2050. The plan is somewhat vague on how this will be achieved, stating they will invest responsibly into</i></p>	

operational solutions, design climate-sensitive policies and practices to address emissions and align finance with emission goals. There is currently no plan for carbon neutrality, although there is a goal of reducing greenhouse gas emissions by 45% from the 2010 level by 2030. A step in this process is to study the decarbonization options for the district energy system on campus, and the results of this study will be available in late 2023.

3. Do buildings/infrastructure used by the medical school for teaching (not including the hospital) utilize renewable energy?

3	Yes medical school buildings are 100% powered by renewable energy
2	Medical school buildings source >80% of energy needs from off-site and/or on-site renewable energy.
1	Medical school buildings source >20% of energy needs from off-site and/or on-site renewable energy.
0	Medical school buildings source <20% of energy needs from off-site and/or on-site renewable energy.

Score explanation: The buildings on campus are powered by grid electricity and natural gas directly and indirectly. Focus seems to be on managing energy use and adding retrofits to reduce consumption (e.g. parking lot plug-ins to regulate electricity use and better lighting retrofits). The campus has two solar PV arrays; the Horticulture Department and the John Mitchell Building.

4. Are sustainable building practices utilized for new and old buildings on the medical school campus, with design and construction of new buildings and remodeling of old buildings conforming to a published sustainability rating system or building code/guideline?

3	Yes, sustainable building practices are utilized for new buildings on the medical school campus and the majority of old buildings have been retrofitted to be more sustainable.
2	Sustainable building practices are utilized for new buildings on the medical school campus, but most old buildings have not been retrofitted.
1	Sustainable building practices are inadequately or incompletely implemented for new buildings.
0	Sustainability is not considered in the construction of new buildings.

Score explanation: The U of S College of Medicine is located primarily in one building which underwent several renovations with sustainability in mind. The D-Wing renovations which were conducted from July 2007 to December 2012 led to a LEED Silver certification for this area in September 2017. The E-Wing renovations led to a LEED Gold certification for this area in February 2016. The A-wing was renovated in accordance with LEED Gold principles. Sustainability has been taken into account with new renovations but there are no guidelines that have to be adhered to.

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

2	Yes, the medical school 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-utilized by students. Alternatively, the campus location is not amenable to unsustainable forms of transportation by default.
1	The medical school has implemented some strategies to provide environmentally-friendly transportation options, but the options are unsatisfactorily accessible or advertised.
0	The medical school has not implemented strategies to encourage and provide environmentally-friendly transportation options.

Score explanation: Transportation advertisement at medical school orientations is primarily focused on an inter-hospital shuttle offered between the various hospitals at regular intervals during daylight hours. At the secondary campus site (Regina), information about the city bus service and a park-and-ride shuttle from an off-site parking lot were discussed at orientation. However, the University of Saskatchewan advertises the various other transportation options for students (e.g. biking). The University of Saskatchewan automatically includes a bus pass (U-pass) for Saskatoon Transit within undergraduate medical student fees for the Fall and Winter semesters (September-April), however the medical school terms run from August-May. This can only be opted-out of under the following conditions: students residing outside of the city limits, students with a disability preventing them from using the bus or students living in on-campus residencies. The campus contains a bus mall where many buses can be accessed for transportation across the city. There are on-campus parking lots in which students can enter into a lottery to purchase a parking pass. There are also pay-per-visit lots and parking meters across the campus.

The U of S campus contains some bike racks and more secure bike lockers are available for rent (\$20/month) whereas medical students can make use of bike lockers for free at the hospitals. Saskatoon is a widespread city and experiences intense winter weather which reduces utilization of cycling as a mode of transport.

6. Does your medical school have an organics recycling program (compost) and a conventional recycling program (aluminum/paper/plastic/glass)?

2	Yes, the medical school has both compost and recycling programs accessible to students and faculty.
1	The medical school has either recycling or compost programs accessible to students and faculty, but not both.
0	There is no compost or recycling program at the medical school.

Score explanation: The University of Saskatchewan's medical school building (Health Sciences Building) has multiple waste bins for trash and single stream recycling within the building. These are located in atriums, and near doors for access by students, faculty, and the public. There is no compost program across campus. There is a mask recycling program for disposable masks in some of the campus buildings, including the medical school building.

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

3	Yes, the medical school 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.
2	There are sustainability guidelines for food and beverages, but they are insufficient or optional . The medical school is engaged in efforts to increase food and beverage sustainability.
1	There are sustainability guidelines for food and beverages, but they are insufficient or optional . The medical school is not engaged in efforts to increase food and beverage sustainability.
0	There are no sustainability guidelines for food and beverages.
<p><i>Score explanation: There are no official policies or sustainable procurement guidelines for foods and beverages on campus. The U of S Culinary Services has made a number of efforts to reduce waste and lessen their footprint including: biodegradable take-out containers, sourcing 17% of ingredients locally, in 2020 and discount incentives for using reusable mugs. There are a number of branded retail locations (e.g. Tim Hortons™, Subway™ and Starbucks™) that may not adhere to these programs. It should be noted that the College of Medicine does not participate in food and beverage procurement at the University.</i></p>	

8. Does the <u>medical school</u> or <u>institution</u> apply sustainability criteria when making decisions about supply procurement?	
3	Yes, the medical school has adequate sustainability requirements for supply procurement and is engaged in efforts to increase sustainability of procurement.
2	There are sustainability guidelines for supply procurement, but they are insufficient or optional . The medical school is engaged in efforts to increase sustainability of procurement.
1	There are sustainability guidelines for supply procurement, but they are insufficient or optional. The medical school is not engaged in efforts to increase sustainability of procurement.
0	There are no sustainability guidelines for supply procurement.
<p><i>Score explanation: The U of S Sustainability guidelines for supply procurement are optional and found here. It should be noted that the U of S College of Medicine and Saskatchewan Health Authority are not involved in sustainable procurement.</i></p>	

9. Are there sustainability requirements or guidelines for events hosted at the <u>medical school</u>?	
2	Every event hosted at the medical school must abide by sustainability criteria.
1	The medical school strongly recommends or incentivizes sustainability measures, but they are not required.
0	There are no sustainability guidelines for medical school events.

Score explanation: The Saskatchewan Medical Student Society (SMSS) has a sustainability policy for all student-led events:

- *Student Society groups that host ≥ 4 sustainable events are eligible for an extra \$100 in funding as an incentive for medical student events.*
- *The U of S also has a guide to sustainable events on campus that medical students could refer to for tips, however there is not an incentive with this.*

10. Does your medical school have programs and initiatives to assist with making lab spaces more environmentally sustainable?

2	Yes, the medical school has programs and initiatives to assist with making lab spaces more environmentally sustainable.
1	There are guidelines on how to make lab spaces more environmentally sustainable, but not programs or initiatives.
0	There are no efforts at the medical school to make lab spaces more sustainable.

Score explanation: There is a Work Green initiative on Work Green Labs spearheaded by the Office of Sustainability. Small grants of up to \$300 can help Work Green Units invest in greener practices. The College of Medicine Dean's Office and Biomedical Sciences Main Office have been awarded Work Green Gold Certification through this program. The Green Labs initiative is ongoing, where U of S staff are able to reach out for financial support to make small sustainable changes to their lab space. There are also efforts to increase signage for labs to keep variable flow fume hood sashes closed when not in use. On the back-end of things, it works with facilities for building decommissioning and renewal to bring older buildings up to more modern energy-efficiency standards. The College of Medicine is not involved in leading these initiatives.

11. Does your institution's endowment portfolio investments include fossil-fuel companies?

4	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.
3	The institution is entirely divested from fossil fuels.
2	The institution has partially divested from fossil fuel companies or has made a commitment to fully divest , but currently still has fossil fuel investments.
1	The institution has not divested from fossil-fuel companies, but faculty and/or students are conducting organized advocacy for divestment.
0	Yes, the institution has investments with fossil-fuel companies and there have been no efforts to change that.

Score explanation: The University utilizes highly rated investment solutions offered by professional management firms. There are no screens to exclude fossil fuel companies as investment options. In December 2019, investments including fossil fuel companies were just over 4% of the total investment holdings for the university. Financial operations are moving forward in the incorporation of environmental and social governance strategies and carbon intensity measures as a signatory to the Climate Charter for Canadian Universities.

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Are there additional sustainability resources offered at your medical school or institution not yet asked about that you would like to describe? If so, please do so below.

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 Saskatchewan College of Medicine

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

Section	Raw Score %	Letter Grade
Planetary Health Curriculum (30%)	$(40/72) \times 100 = 56\%$	C+
Interdisciplinary Research (17.5%)	$(10/17) \times 100 = 59\%$	C+
Community Outreach and Advocacy (17.5%)	$(4/14) \times 100 = 29\%$	D
Support for Student-led Planetary Health Initiatives (17.5%)	$(13/15) \times 100 = 87\%$	A
Campus Sustainability (17.5%)	$(10/32) \times 100 = 31\%$	D
Institutional Grade	$(56 \times 0.3 + 59 \times 0.175 + 29 \times 0.175 + 87 \times 0.175 + 31 \times 0.175) = 52.60\%$	C