Planetary Health Report Card (Medicine):

Dalhousie University

2024-2025 Contributing Team:

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Land acknowledgment:

The authors of this report would like to acknowledge that Dalhousie University, and therefore where they live, work and study, is located on the traditional unceded territory of the Wolastoqiyik (Maliseet) and Mi'kmaq Peoples. This territory is covered by the "Treaties of Peace and Friendship" which Wolastoqiyik (Maliseet) and Mi'kmaq Peoples first signed with the British crown in 1725. The treaties did not deal with surrender of lands and resources but in fact recognized Mi'kmaq and Wolastoqiyik (Maliseet) titles and established the rules for what was to be an ongoing relationship between nations.

Summary of Findings

Overall Grade	C

Curriculum	C

Summary:
- All first year students at Dalhousie Medicine receive one lecture on planetary health and complete one tutorial case related to that lecture on planetary health. Tutorials are based on group discussion, so student experiences with this case may vary
- Dalhousie medicine students in first and second year have the option to participate in an interprofessional learning course on planetary health (one of many options to fulfil their interprofessional education requirement)
- In second year there is no dedicated lecture on planetary health, but there are a few lecture slides on environmental toxins and their effects on the respiratory system

Recommendation:
- We recommend Dalhousie University include more lecture content on the climate crisis, specifically in the Med 2 curriculum as there is currently only a lecture on planetary health in Med 1. As the Med 1 lecture addresses the global impacts of climate change more than the local ones, we propose a Med 2 lecture or professional competencies tutorial focused on the impact of the climate crisis and environmental mis/managment in Nova Scotia and New Brunswick, including Indigenous perspectives

Interdisciplinary Research	B+

Summary:
- Dalhousie has a Healthy Populations Institute that does climate related research
- Dalhousie Medicine is a participant in cross-Canada and international planetary health related initiatives
- Dalhousie Medicine has hosted conferences and speaker series focused on planetary health
- Students at Dalhousie Medicine must all complete one research project, there are options to do this project in a planetary health related subject

Recommendation:
- We recommend that Dalhousie University Faculty of Medicine further explore the link between itself and the Healthy Populations Institute, and make students aware of this potential research site for their Research in Medicine (RIM) projects early in first year
- We recommend Dalhousie University Faculty of Medicine establish specific funding for planetary health research and communicate to students early in med that this is available! This could be done through the Dal Med Green Team as a scholarship for continuing research

Community Outreach and Advocacy	C

Summary:
- The student service learning program at Dalhousie Medicine has options for students to volunteer with environmental organisations in the community
- Dalhousie and Dalhousie's Faculty of Medicine have hosted learning events on planetary health that are open to the public as well as students
- Dalhousie Medicine students have participated in advocacy groups such as CAPE
- Students can opt-in to receiving communication and updates about planetary health events and research at the school

Recommendation:
- There is currently no educational material available for patients at any of the teaching hospitals associated with Dalhousie. Given the impact wildfires, changing temperatures, and extreme storms have had on the Canadian maritimes, educational material available at hospitals or on their websites has the potential to be beneficial to those facing difficult decisions on how to best manage their health while living through climate collapse. We recommend Dalhousie University Faculty of Medicine take an initiative in furnishing these materials

Support for Student-Led Initiatives	**B**

Summary:
- There are a number of student groups at Dalhousie Medicine such as the Green Team and the Global Health Initiative that promote advocacy for planetary health and appreciation for the environment. Student initiatives to set up a lab coat library for OSCE, an interprofessional mini course on planetary health, and to attend meetings on curriculum edits have been met with support, and staff at the Global Health Office and Sustainability Office are able to help students work towards these goals and promote information about existing groups
- The school supports a yearly student-led Green Week before Earth Day by protecting time for this in the student calendar

Recommendations:
- There are opportunities for students to do their mandatory research project on something planetary health related, but students may not hear about them in time - a list of potential mentors for planetary health projects should be created in collaboration with the Green Team and circulated to students in their first year

Campus Sustainability	**C**

Summary:
- Dalhousie has a target of carbon neutrality by 2050 and publishes yearly updates on its progress towards this goal. As of 2024, the university has achieved a total reduction in emissions of 46% as compared to its 2009 baseline. Efforts exist on campus buildings to navigate energy usage and waste management in ways that are more sustainable

Recommendations:
- As the new Cape Breton campus is being set up, sustainability should be a priority in both the construction and operation of these buildings
- The faculty of medicine should make a stronger commitment to following the sustainable events guidelines, such as making these a requirement for faculty events rather than a suggestion, and ensuring more people know about them
- Further opportunities should be created for labs within the faculty to connect with the Office of Sustainability Green Labs Program

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.

Instructions for Completing the PHRC

Thank you! We are really pleased to have you and your team on board to complete the PHRC at your institution. Many of you will have already been part of a completed report card or even lead the team at your school but please take a moment to read the instructions below.

For a full comprehensive step-by-step guide to completing your report card please refer to the PHRC User Guide. This page serves as a brief overview of the important methodology.

Completing the report card:

The Planetary Health Report Card is a self assessment tool designed to identify an institution's strengths and areas in need of improvement in regards to its planetary health education. The metric-based report card consists of five sections; 1. Curriculum, 2. Interdisciplinary Research, 3. Community Outreach, 4. Support for Student-Led Initiatives and 5. Campus Sustainability.

- **Metrics.** There are roughly 55 metrics (depending on your discipline). Sections 2-5 are the same across all disciplines. Each metric has different criteria for either scoring 1, 2 or 3 points. Participants should read each metric carefully and answer the question with as much accuracy as possible, drawing upon multiple sources where possible. It is vital sufficient investigation is completed for each metric to give a fair and accurate representation of your institution.

  Most of the Curriculum metrics are graded by inclusion in **elective** coursework, **brief** coverage in the **core curriculum** or **in depth** coverage in the **core curriculum.**

  > **Elective coursework:** This score applies to material that is actively selected by the students such as a module choice, or additional lecture series. By implication, only a given proportion of the cohort will receive this taught material.
  >
  > **Brief** coverage in the **core curriculum**: This score applies where a topic is covered only briefly in a core curriculum session. This implies that the entire cohort receives the same material. Brief inclusion would qualify as inclusion in a single lecture slide in a single year.
  >
  > **In depth** coverage in the **core curriculum:** This score applies where a topic is taught in significant detail or where a topic is repeatedly brought up in different years. This might look like several dedicated lecture slides, or inclusion of the same topic in different lectures and teaching formats. Please consider amongst your team that this is the highest score awarded and a subjective decision must be made as to whether the topic should be awarded this score.
  >
  > (A full list of definitions is provided on the below pages)

- **Types of evidence.** Acceptable forms of evidence include: lecture titles, learning objectives, module descriptions, descriptions of the intended learning, case titles, seminar titles, project titles, webpages, researcher profiles / biographies, news articles, publications, social media output, institutional policy documents. Please be as specific as possible.

  It is essential that you have clearly justified the score for each metric, outlining in the box provided the specific content delivered in your curriculum and why you have assigned the

score. Each report card is reviewed by a member of the leadership team for accuracy and consistency across report cards. An example of the sufficient level of evidence is provided below each metric.

Please do not include **lecturers' names** without permission. The title of the lecture or module with a brief description of the material will suffice.

Where material is publicly available via an institution's website, please include hyperlinks to the webpages.

- **Evidence deadline.** Any material from the previous academic year and the current academic year up to the draft deadline of the **17th February 2025** may be included in this report card. Any teaching planned after this date should not be scored in this report card but can be included in the 2025/26 report. You may wish to make a note of any such teaching for your colleagues producing next year's report card.

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 develiered 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.

- **Extractivisim:** 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 medical school 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:	2
Score explanation: Dalhousie Medical School offers one ESH/planetary health elective course for all students studying in healthcare-related fields. It is an interprofessional education (IPE) mini-course that was developed and organised by students, with support from the Healthy Populations Institute, and is equivalent to 4.5 hours of instruction. Dalhousie medical students are required to complete IPE mini-courses, of which the ESH/planetary health mini-course is an option. Additionally, Dalhousie Medical School offers a summer elective course with the CASCADES Summer Institute on Sustainable Healthcare. Both in-person and virtual attendance is offered, and the course is held each year in June.	

Curriculum: Health Effects of Climate Change

1.2. Does your medical school 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
Score explanation: At Dalhousie Medical School, the first year professional competencies course includes a lecture titled "Planetary Health: The Impact of Healthcare Systems on the Planet," which discusses extreme heat as one of several metrics affecting health outcomes as our climate changes. The accompanying tutorial case, "Anat Stockhart: Planetary Health and Advocacy," mentions the impact of climate change on the incidence of wildfires, flooding, and severe storms. The case also prompts students to explore available resources on these topics. There are learning objectives outlined in the medical school curriculum such as "Describe the effect that climate change has on the health of populations in Canada and globally". Many of the questions in the tutorial also prompt in-depth discussions regarding the impact of climate change, extreme heat, environmental toxins, and other aspects of planetary health on patients.	

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
Score explanation: At Dalhousie Medical School, the first year professional competencies course had a lecture titled: 'Impact of healthcare systems on the planet', which went into great detail regarding the growing frequency of extreme weather events domestically and internationally. The reciprocal financial impact of our carbon footprint on the healthcare system was also discussed as a strong incentive to enact change. There was also an accompanying tutorial case titled: 'Anat Stockhart: Planetary Health and Advocacy' in which students learned about the effects of wildfires and air pollution. Specifically, the case-study described a child with mild persistent asthma presenting with exacerbated symptoms due to the smoke from a wildfire affecting the air quality in her community. Students also discussed various questions about the impacts of changing climate events on the healthcare system in which they are training. This may have included discussions about wildfires, flooding, and other extreme weather-related events.	

1.4. Does your <u>medical school</u> 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
Score explanation: The impact of climate change on vector borne diseases is a learning objective at Dalhousie Medical School. This topic was briefly covered during a lecture titled "Introduction to Parasites", but it is not the main focus of any lectures in the curriculum. However, there were several mandatory readings for the tutorial 'Anat Stockhart: Planetary Health and Advocacy' which provided in-depth discussion about the growing incidence of Lyme disease, Vibrio cholera blooms, among other infectious diseases.	

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
Score explanation: Dalhousie Medical School has two learning objectives that emphasize understanding the impact of poor air quality, environmental, and occupational exposures on respiratory health. These topics are covered in a second year lecture on diffuse lung disease. There is also a first year professional competencies tutorial titled 'Anat Stockhart: Planetary Health and Advocacy' which describes a case study of a child with mild persistent asthma. Many of the questions prompt students to discuss the importance of an environmental history, environmental toxins, and climate change to patient health. Respiratory conditions exacerbated by mold and low air quality were the focus of the case, which served to facilitate greater discussion surrounding this topic.	

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:	0
Score explanation: This topic was not covered at Dalhousie Medical School.	

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:	2
Score explanation: At Dalhousie Medical School, as part of the mandatory readings for the tutorial titled: 'Anat Stockhart: Planetary Health and Advocacy', the mental health impact of climate change on Indigenous peoples, agricultural workers, and others who depend more heavily on their natural environment is discussed in-depth in the mandatory readings. Additionally, some questions in the tutorial addressed populations that are disproportionately impacted by climate change, which may have prompted discussions surrounding the mental health and neuropsychological impacts of these phenomena.	

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:	2
Score explanation: At Dalhousie Medical School, as part of the mandatory readings for the tutorial titled: 'Anat Stockhart: Planetary Health and Advocacy', food shortages and water insecurity related to Vibrio cholera blooms, increasingly dry summer weather, and various other factors were briefly discussed. These topics, in conjunction with the subsequent deleterious health impacts, were recurrent themes during tutorial discussion. However, they were not outlined in the objectives and were not specifically mentioned in either the accompanying lecture or tutorial questions.	

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
Score explanation: Dalhousie Medical School included a learning objective related to discussing the inequity in the populations most affected by the impacts of climate change. This topic was addressed in-depth during a Professional Competency course tutorial titled: 'Anat Stockhart: Planetary Health and Advocacy', in which the disproportionate impact of climate change on equity-seeking populations was an integral theme. Tutors would have facilitated discussions related to the social determinants of health, newcomers, children, the homeless population, and possibly other marginalised populations.	

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:	0
Score explanation: This topic was not covered at Dalhousie Medical School.	

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:	0

Score explanation: This topic was not covered at Dalhousie Medical School.

1.12. Does your <u>medical school</u> 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:	0
Score explanation: This topic was not covered at Dalhousie Medical School.	

1.13. To what extent does your <u>medical school</u> 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:	0
Score explanation: This topic was not covered at Dalhousie Medical School.	

1.14. Does your <u>medical school</u> 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:	0
Score explanation: This topic was not covered at Dalhousie Medical School.	

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:	0
Score explanation: This topic was not covered at Dalhousie Medical School.	

1.16. Does your medical school 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
Score explanation: Dalhousie Medical School offers an IPE mini-course called "Healthcare in a Changing Climate: The Need for Planetary Health & Sustainable Health Systems." Topics including the contribution of greenhouse gas emissions by the healthcare system, anesthetic gases, and fossil fuel-powered boilers were addressed among other related points. Additionally, the first year professional competencies course includes a lecture titled: 'Planetary Health: The Impact of Healthcare Systems on the Planet,' which discusses the carbon footprint of the Canadian healthcare system. Specifically, statistics related to the contribution of greenhouse gas emissions by the Canadian healthcare system are quoted, major causes like anesthetic gases and certain medications are stated, and potential solutions are explored.	

1.17. Does your medical school curriculum cover these components of sustainable clinical practice in the core 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) .	0
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)	0
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 anaestheisa's environmental impacts, such as total intravenous anaesthesia or choosing less environmentally harmful anaesthetic gas options with reduced greenhouse gas emissions. (1 point)	1
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

Score explanation:

1. *At Dalhousie Medical School, the tutorial titled: 'Anat Stockhart: Planetary Health and Advocacy' includes a mandatory reading that discusses the negative impact of over-investigation on the environment.*
2. *This topic is not discussed at Dalhousie Medical School*
3. *This topic is not discussed at Dalhousie Medical School*
4. *This topic is not discussed at Dalhousie Medical School*
5. *At Dalhousie Medical School, the lecture titled: "Planetary Health: The Impact of Healthcare Systems on the Planet' mentioned the environmental burden of desflurane and other flurane gases, and the need to switch to more sustainable anesthetic gases.*
6. *At Dalhousie Medical School, the tutorial titled: 'Anat Stockhart: Planetary Health and Advocacy' includes a mandatory reading that discusses the negative impact of MDIs on the environment as compared to DPIs. For example, one of the readings mentions that an MDI containing 100 doses has a carbon footprint equivalent to a 280 km car journey.*
7. *At Dalhousie Medical School, the lecture titled: "Planetary Health: The Impact of Healthcare Systems on the Planet' discusses the extensive use of disposable gowns, gloves, and other equipment in hospitals. Solutions were proposed such as investing in reusable equipment and limiting interventions to those that are 'medically-necessary'.*

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: | 0
Score explanation: This topic is not covered at Dalhousie Medical School.

1.19. In training for patient encounters, does your <u>medical school's</u> 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
Score explanation: Dalhousie Medical School trains students beginning in their first year to take a full social history, which includes asking about environmental and occupational exposure. These skills are continually expanded upon over the years through the Skilled Clinician course, as well as mandatory and elective clerkship rotations.

Curriculum: Administrative Support for Planetary Health

1.20. Is your <u>medical school</u> 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: | 0
Score explanation: According to the Manager for Global and Planetary Health, there are currently no formal full-scale efforts (such as a curriculum review or refresh) underway to integrate planetary health into the curriculum. However, there are ongoing informal efforts in search of additional avenues to introduce Planetary Health content into the curriculum.

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
Score explanation: At Dalhousie Medical School, the majority of content related to ESH/planetary health is covered in a single first year Professional Competency lecture titled "Planetary Health: Impact of Healthcare Systems on the Planet" with a corresponding self-directed study tutorial titled "Anat Stockhart: Planetary Health and Advocacy." Some information is covered in lectures including "Introduction to Parasites" and "Diffuse Interstitial Lung Disease", as well as certain components of the Skilled Clinician course such as the respiratory history and exam. However, these are not significant enough to justify a higher score in this criterion.	

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:	1
Score explanation: The medical school does not currently have a faculty member who is specifically focused on incorporating planetary health and sustainable healthcare as a theme throughout the course. The medical school had plans to hire an academic director but, unfortunately, due to a university-wide hiring freeze, this plan was put on hold for the time being. The medical school does employ Elise Sammons (elise.sammons@dal.ca) for planetary health who has contributed to curriculum updates on planetary health and sustainable healthcare, but this is not the sole focus of this position. There is no faculty member whose sole role is planetary health education.	

Section Total (33 out of 72)	**46%**

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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
Score explanation: While there are no researchers at Dalhousie Medical School solely focused on planetary health or healthcare research, there are faculty members who are active in research in this area. Some examples of this research are the Creating a Sustainable Canadian Health System in a Climate Crisis (CASCADES) project aiming to help Canada's healthcare system transition to a net-zero system and the Sustainable Health Systems research and knowledge translation project from the Healthy Population Institute, a multi-faculty research institute aiming to promote the health of Atlantic Canadians. Individual physicians and researchers associated with Dalhousie medical students' Research in Medicine (RIM) projects may also contribute to research happening on planetary health at the university.	

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:	3

Score explanation: https://www.healthypopulationsinstitute.ca: "The Healthy Populations Institute (HPI) is a multi-faculty research institute at Dalhousie University that aims to improve population health and health equity in Atlantic Canada and beyond by understanding and influencing the complex conditions that affect the health of communities." The HPI Sustainable Health System's Flagship Project Team is a partner in CASCADES (Creating a Sustainable Canadian Health System in a Climate Crisis), a national project working to improve the sustainability of the healthcare system by reducing greenhouse gas emissions linked to health care and finding "green" options for health care.

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 <u>institution</u>?
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:	1

Score explanation: This does not currently exist on any forum easily found and accessed by students and community members, but is a goal of the HPI for the upcoming years, as per 2023 PHRC communication.

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

Score explanation: A few websites, including that of the Office of Sustainability, promote campus and community resources as well as goals for the future, but these are not currently centralised or in communication with each other. The following links are web pages showing some Dalhousie resources on health and environment:

https://www.dal.ca/dept/sustainability.html
https://www.healthypopulationsinstitute.ca/sustainablehealthsystems
https://www.dal.ca/about-dal/impact-on-global-goals.html
https://medicine.dal.ca/departments/core-units/global-health/planetaryhealth.html

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 / sustianable 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:	4

Score explanation: The Healthy Populations Institute hosts a Summer Institute on Sustainable Health Systems, which runs on a yearly basis and Dalhousie is a hub for the conference. In 2024 the school held the Crossroads Conference which had the theme: Moving Forward: Sustainable Approaches for Health. It was held March 1 & 2, 2024.

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
Score explanation: Dalhousie Medical School is a member of the Global Consortium on Climate and Health Education and Planetary Health Alliance. The medical school, through the Dalhousie Medicine Green Team also has strong ties to the Canadian Federation of Medical Students Health and Environment Adaptive Task Force (CFMS HEART). Dalhousie medicine faculty and students are also part of the Canadian Association of Physicians for the Environment, Nova Scotia chapter (CAPE NS) and New Brunswick chapter (CAPE NB). Dalhousie Medical School is a founding faculty of the Healthy Populations Institute which is a member of the national group on planetary health and sustainable health systems titled CASCADES (Creating a Sustainable Canadian Health System in a Climate Crisis).	

Section Total (13 out of 17)	**76%**

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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 institution 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:	0

Score explanation: There are a few ways Dalhousie encourages partnerships with community organisations focused on planetary and environmental health.

Students in first and second year of the MD program are encouraged through the Service Learning program to become involved in a community organisation and to become more aware of community needs. The Service Learning program and the Dalhousie Green Team are working on providing more avenues for students to become involved with environmental or planetary health focused organisations through this program.

The Office of Community Partnerships and Global Health for Dalhousie Medicine has numerous partnerships that conduct community outreach and advocacy at local and global scales. Because many communities experience disproportionate impacts related to climate change, waste, and environmental health, the Office of Community Partnerships and Global Health provides learners with opportunities in Global Health that inherently incorporate Planetary Health learning and advocacy experience with EDIA (Equity, Diversity, Inclusion, Accessibility) principles. The Office also has a membership in the Planetary Health Alliance.

Several medical school faculty members are actively involved in the Canadian Association of Physicians for the Environment (Nova Scotia and New Brunswick chapters).

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/medical school** have not offered such community-facing courses or events. (0 points)	
Score Assigned:	0
Score explanation: *The Dalhousie College of Sustainability Environment, Sustainability and Society hosts weekly lectures open to the public on a variety of topics related to sustainability. They have included topics on planetary health, for example, Dr. Nicole Redvers spoke on "The Determinants of Planetary Health" in January 2025.* *The Healthy Populations Institute, together with the Dalhousie School of Health and Human Performance, hosts the Crossroads Interdisciplinary Health Research Conference which is open to the community. The conference has included a panel on environmental health and inequalities in years past. The March 2024 conference had sustainability in healthcare as the conference theme.* *In January 2024, the Dalhousie Mini-Medical School, which is aimed at the public included a lecture "Planetary Health: What We Can Do" by Dr. Nabha Shetty.* *In March 2024, a Fireside Chat with Dr. Fiona Miller from the Collaborative Centre for Climate, Health & Sustainable Healthcare at University of Toronto was open to the public.* *In October 2024, a panel discussion co-hosted by the Office of Sustainability, HPI, and the Office of Community Partnerships and Global Health in the Faculty of Medicine took place and was open to the public. "Nourishing People, Planet and Communities: A Panel Discussion on Sustainable and Healthy Dietary Patterns"*	

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:	0

Score explanation: Medical student members of the CAPE Nova Scotia chapter manage the social media for that group , and have published a letter to the editor in a regional paper. The Healthy Populations Institute has a monthly newsletter which promotes their involvement with Sustainable Health Systems and CASCADES Canada. There is also a biweekly newsletter from the Office of Community Partnerships and Global Health students are able to electively sign up to receive. While this newsletter occasionally includes topics or highlights events related to planetary health, the medical school does not have regular coverage of Planetary Health or related issues in university update communications to all medical students, staf , faculty, the wider institution community, or the public as students must opt-in to receive these communications.

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
Score explanation: Planetary Health is identified as a priority in the Dalhousie Continuing Professional Development and Medical Education. CASCADES Canada, a partner institution to the Healthy Populations Institute, also runs free CPD courses for Canadian healthcare professionals on planetary health and sustainable healthcare. *The university also hosts visiting speakers through the Global Health of ice who discuss planetary health at events open to learners of all levels. Clinical departments are increasingly including topics on planetary health and/or sustainable healthcare in their Grand Rounds presentations and in academic sessions for medical residents.*	

3.5. Does your institution or its affiliated teaching hospitals have accessible educational materials for patients about environmental health exposures?	
Yes, the **medical school** or **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

Score explanation: Easily acceptable patient resources on environmental health exposure could not be found on the websites for the IWK, the QEII, the Saint John Regional Hospital, and Saint Joseph's Hospital, the four hospitals affiliated with Dalhousie Medical School teaching.

3.6. Does your institution or its affiliated teaching hospitals have accessible educational materials for patients about the health impacts of climate change?	
Yes, the **medical school** or **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
Score explanation: Easily acceptable patient resources on climate change and health impacts could not be found on the websites for the IWK, the QEII, the Saint John Regional Hospital, and Saint Joseph's Hospital, the four hospitals af iliated with Dalhousie Medical School teaching.	

Section Total (7 out of 14)	**50%**

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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, **neither** the medical school or the institution offer opportunities or support for sustainability initiatives or QI projects. (0 points)	
Score Assigned:	1
Score explanation: The Research in Medicine (RIM) component of the Medical curriculum at Dalhousie Medical School is a 4-year longitudinal program, beginning in September of the first year. All Dalhousie medical students are required to complete a RIM project during medical school. The RIM program allows students to explore research topics aligned with their interests. Students receive $5,000 for research. The program does not require a clinical focus and is not competitive. Research in Planetary Health or sustainable healthcare is an option. The associated grant is not specifically for sustainability initiatives or quality improvement projects.	

4.2. Does your institution offer opportunities for students to do research related to planetary health and/or sustainable healthcare/vetcare?	
The **institution** has a **specific** research program or fellowship for students interested in doing planetary health/sustainable healthcare/vetcare 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:	2
Score explanation: The Research in Medicine (RIM) component of the Medical curriculum at Dalhousie Medical School is a 4-year longitudinal program, beginning in the first year with	

completion in the fourth year. Dalhousie medical students must undertake a RIM project as part of their schooling. This program offers students research opportunities aligned with their interests, including Planetary Health and sustainable healthcare. The Dalhousie Medical Green Team facilitates networking for regional students and researchers. In the past, bursaries have been available to students through the Global Health Office, though this is not the case currently.

4.3. Does the institution have a webpage where students can find specific information related to planetary health and/or sustainable healthcare/vetcare 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/vetcare 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:	0
Score explanation: The Dalhousie Global Health Office has a Planetary Health page that displays ongoing medical school initiatives related to Planetary Health and sustainability. There is no specific information available on faculty mentors within the medical school involved in Planetary Health initiatives, however it does link to the Dalhousie Medical Student Society Green Team page which shares Planetary Health initiatives and information on how to get involved in research, and this content is specifically directed at the medical student body. However, this page is student run and not formally endorsed by the Faculty of Medicine. The Faculty of Medicine itself does not have a webpage with information on Planetary Health and/or sustainable healthcare activities.	

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:	2

Score explanation: The Dalhousie Medicine Green Team was founded by four Dalhousie University medical students with a shared interest in environmental health and sustainability. The network was crafted with the purpose of advancing eco-friendly healthcare initiatives in our learning and work environments throughout the Maritime provinces. The Green Team aims to establish connections among students, healthcare providers, and other stakeholders who are enthusiastic about participating in sustainability projects within the healthcare sector. The team is currently engaged in several initiatives, such as a formal curriculum update focused on adding planetary health related questions to case-based tutorials at the school, advocating for in-hospital Green Teams and working with specific groups within the hospital to accomplish green initiatives (ex recycling in Clinic 1 at the SJRH in New Brunswick), creating a lab-coat library for OSCEs to reduce waste associated with students purchasing their own lab coats, and establishing an interprofessional mini-course, among others. Members of the team can be found at both the Nova Scotia and New Brunswick Dalhousie Medical School campuses, and any interested students are welcome to join. The team works with the New Brunswick and Nova Scotia chapters of the Canadian Association of Physicians for the Environment (CAPE) on provincial advocacy for planetary health. In 2018, Dalhousie Medical School's Global Health Initiative created the position of a Local Officer of Environmental Health and Sustainability. This role serves to organize local awareness events and initiatives within our medical community and also becomes a member of the Dal Med Green Team.

4.5. Is there a student liaison representing sustainability interests who serves on a department or institutional 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:	0
Score explanation: There is no such student representative, however members of the Green Team have been invited to sit in the faculty of medicine's Case Diversification Committee meetings as of February 2025, hopefully paving the way for more formal advocacy roles in the future.	

4.6. 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)	**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.	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 organise hiking, backpacking, kayaking, or other outings for students)	1
Score explanation: The Dalhousie agricultural campus (in Truro, Nova Scotia) community garden brings together students, staff, and community members with a range of experience growing food. Across campus and throughout the greater Truro area, the community garden brings people together. Each plot in the garden costs $20, and there are approximately 40 plots in total. Students at Dalhousie University's Studley Campus run and fund the Dalhousie Urban Garden on the campus of Dalhousie University in Halifax. The Dalhousie Urban Garden Society (DUGS) values skill sharing and collaborative learning, by offering a wide range of workshops on diverse subjects, including food preservation, container gardening, and herbal medicine. The partnerships with organizations such as Loaded Ladle and the Dalhousie Food Bank enable us to give back to the community. They strive to make the most of the land and prevent food waste.The Loaded Ladle provides accessible, sustainable, locally-sourced free food on the Dalhousie University campus. They have events that examine barriers to food sovereignty, security, and justice. Both the Global Health Office and a few departments' individual Grand Rounds presentations have held presentations and speaker series at Dalhousie Medical School that focused on teaching students about planetary health, including a presentation in 2025 on the UN's sustainable development goals and presentations associated with the opt-in mini course on planetary health . There are student led clubs, such as both the Nova Scotia and the New Brunswick Dalhousie Run Club that bring students into contact with the natural environment around them (ex: trail running at Iriving Nature Park), and the student Global Health and Green Team groups hold a yearly Green Week before Earth Day that often involves an outdoors activity (ex: scavenger hunt for native species) and presentations from advocacy groups such as CAPE, and individual physicians working for change. Through the Green Team or the Global Health Initiative, students have the chance to participate in volunteer opportunities in the community, such as circulating a petition for electric school buses in Nova Scotia in the Autumn of 2024.	

Section Total (9 out of 15)	**60%**

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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 institution 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
Score explanation: The Office of Sustainability at Dalhousie University (https://www.dal.ca/dept/sustainability.html) works to improve the sustainability of campus activities and infrastructure as a whole, but currently there is no specific staff member in charge of medical school or hospital sustainability. *No official position for incorporating sustainability into hospital infrastructure exists at Nova Scotia Health, Horizon Health or Dalhousie Medical School, although some staff members work independently to integrate this objective. The Nova Scotia Health Authority does employ a staff member to oversee environmental stewardship (https://policy.nshealth.ca/site_published/nsha/policy_details.aspx?policyDetails.QueryId.Id=72523)*	

5.2. How ambitious is your institution's 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:	1
Score explanation: Dalhousie has a University Operations Climate Change Plan with a goal for carbon neutrality by 2050, and incremental targets in 2025, 2030, and 2040. Dalhousie's Greenhouse Gas Inventory Report indicates it has achieved a 46% reduction in total emissions in 2024, as compared to 2009 (the first year in which this data was collected at Dalhousie). This means the school is on track for its 50% reduction target in 2030. However, data is not available on the satellite campuses for medicine in Saint John New Brunswick and in Cape Breton, Nova Scotia, or the impact of the construction of the Cape Breton site on total emissions.	

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
Score explanation: Dalhousie University uses renewable energy technologies like solar and waste biomass residue to power 10% of its campus. Dalhousie is part of a plan with the government of Nova Scotia to source its energy from 6 new local wind farms by 2028.	

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 intitution'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:	3

Score explanation: Dalhousie has passed an energy and green buildings plan that recommends all new buildings should be built to LEED® Gold Certified standards or higher and existing building upgrades follow a green building standard. Dalhousie is a member of the Canada Green Building Council.
The Tupper building, which is the main building used for medical education in Halifax, underwent sustainable upgrades leading to a significant reduction in energy and water usage. Here is a video and education material for all projects including the Tupper building on the green building site. Dalhousie medicine is building a new satellite campus in Cape Breton, and has not yet described what sustainable efforts will be in place in these newly constructed buildings or in the construction process.

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:	2
Score explanation: Dalhousie University offers a subsidized bus pass to students and employees, included in the fees, providing access to public transportation. Additionally, there is a good bike infrastructure on campus. The campus offers car sharing services with discounts for ride sharing. Other active transportation and commuter education and supportive programs are provided.	

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
Dalhousie's medical school has implemented a thoughtful waste management system with 3-in-1 waste bins for trash, recycling, and composting. This promotes a cleaner and more sustainable	

environment. Waste standards, posters and guides, including information for lab-specific recycling, composting and solid waste management are also available.

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 a**dequate s**ustainability 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:	2

Score explanation: Dalhousie has a Sustainable and Healthy Food Plan that was developed in 2016. The framework sets the policy direction for sustainable food sourcing such as ethical considerations and reports to STARS. Regarding supplies, Dalhousie has sustainability embedded in the purchasing policy including criteria such as ethical considerations.

Food Services at Dalhousie incorporates local produce in their menus by sourcing from local farmers and distributors. They change their list of suppliers throughout the year to accommodate seasonality and availability. The Chef's Garden on Dalhousie's Agricultural Campus provides organic produce to the Agricultural Campus dining services and a portion of the produce used in Food Services on the Halifax Campus. They produced 11,000 lbs of food in 2019 with 20% going to campus food service, 60% in direct sales to staff/students, and 5% to Halifax campus food service. The remaining 15% was donated to food banks, Maggie's Place, and other local charities.

Aramark, the food provider at Dalhousie's dining halls, has pledged to a sustainable sourcing policy for 2025 that includes ocean health, ethical labor, transparency, and a renewable seafood industry; focuses on funding deforestation; buying local; and reducing packaging waste.

Aramark emphasizes plant-forward movement that focuses on vegetables, fruits, whole grains, legumes, nuts, and seeds as the main ingredients. Animal products are used in smaller portions for flavoring or garnish. Several programs are implemented, including vegan dining, trayless dining, lean path, local farm and fair trade education, and full organics diversion.

Fair trade tea and coffee are served at all dining halls and in all cafes and retail locations as a part of Dalhousie's "Being Green" effort.

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:	2
Score explanation: Dalhousie purchases items via the InterUniversity Services Inc (ISI) (ISI), a purchasing cooperative that several universities and colleges participate in. ISI adheres to sustainability standards when purchasing, as outlined in its Sustainability Policy. Dalhousie and other academic institutions in Atlantic Canada actively engage in the ISI sustainability committee, exchanging ideas and knowledge on sustainable procurement practices. *The University can purchase through Nova Scotia government tenders as part of the municipalities, academia, schools, and hospital sector (MASH). The Nova Scotia government has passed a Sustainability Policy and criteria in purchasing regulations.* *Dalhousie University has included sustainability criteria in its Purchasing Policy to guide university purchasers. The university evaluates and adds sustainability criteria in individual Request for Proposals and Tender documents. A Sustainability Purchasing Checklist can be used by individual purchasers using purchasing cards to guide purchasing decisions. Educational programming efforts include lunch and learn workshops, lectures, and other events focused on sustainable purchasing practices. These initiatives aim to promote awareness and understanding of sustainable purchasing among participants.*	

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
Score explanation: Dalhousie has a sustainable event certification and a sustainable events checklist available to students and staff through the school's sharepoint, and events planned at Dalhousie are encouraged to follow these. However, this is not mandatory and not very well promoted, so many events held at Dalhousie still do not follow these guidelines.	

5.10. Does your institution 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:	1

At Dalhousie University, there are established institutional guidelines aimed at promoting environmental sustainability in laboratory spaces.

However, it should be noted that these guidelines do not specifically apply to the medical school and affiliated hospital labs.

As a member of Canada's prestigious U15 group of research-intensive universities, Dalhousie has over 1450 laboratory spaces across its four campuses. To further promote sustainability, the Office of Sustainability has implemented a Green Labs program, which is designed to develop standards, oversee their implementation, and encourage behavioural changes throughout the scientific community. Currently, the pathology lab in the affiliated academic hospital is enrolled in the program. There have been indications of interest from the microbiology lab in another hospital. The microbiology lab at the SJRH has implemented dried blood spot testing to reduce waste.

The Department of Pathology Strategic Plan 2024 to 2028 includes sustainability:

- *Assess capability to pursue One Health and "green laboratories" to improve sustainability.*
- *Continue to guide appropriate Utilization and Lab Stewardship.*
- *Work towards a sustainable evidence-based service with an enhanced environmental lens and develop initiatives for Population-Scale Disease Prevention.*

The Department of Pathology has a Green Team which makes recommendations on sustainable lab practices to the Clinical Laboratory Administration Committee and welcomes suggestions from all Department members.
The Division of Anatomical Pathology has a Wellness and Green Healthcare Committee and an AP Green Team which make recommendations on sustainable lab practices to the AP leadership and welcome suggestions from all Division members.
The Cytopathology Section and the AP lab as a whole underwent green lab certification and subscribes to a continuing green lab self-assessment through the Dalhousie Office of Sustainability.
The AP Green Team developed a national AP Green Lab Playbook that will be published by CASCADES towards the end of March this year.

The Division of Clinical Chemistry is a national leader in Choosing Wisely Canada's Using Labs Wisely initiative, and over the last few years saved almost $1 million through reducing unnecessary laboratory testing.

The IWK AP lab is also completing green lab certification through My Green Lab.

5.11. Does your institution's 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

Score explanation: Dalhousie University was one of 15 Universities to sign the Climate Change Charter.

This charter is a pledge to: "Adopt a responsible investing framework to guide investment decision-making, in line with recognized standards such as the UN-supported Principles of Responsible Investment (UN-PRI). Such a framework should:

- *Incorporate ESG factors into investment management practices*
- *Encourage active engagement with companies to foster disclosure of ESG(including climate) related risks, and adoption of operational practices that reduce carbon emissions and foster ESG-positive behaviour more broadly*

2. *Regularly measure the carbon intensity of our investment portfolios, and set meaningful targets for their reduction over time*
3. *Evaluate progress towards these objectives on a regular basis, and share the results of such assessments publicly*
4. *Ensure that the performance evaluation of our investment managers takes into account their success in achieving such objectives, alongside the other criteria for assessing their performance.*"

Section Total (18 out of 32)	**56.25%**

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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+.*

[Please input your scores HERE]

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

Section	Raw Score %	Letter Grade
Planetary Health Curriculum (30%)	(33/72) x 100 = 46%	C
Interdisciplinary Research (17.5%)	(13/17) x 100 = 76%	B+
Community Outreach and Advocacy (17.5%)	(7/14) x 100 = 50%	C
Support for Student-led Planetary Health Initiatives (17.5%)	(9/15) x 100= 60%	B
Campus Sustainability (17.5%)	(18/32) x 100 = 52%	C
Institutional Grade	**(Ax0.3 + Bx0.175 + Cx0.175 + Dx0.175 + Ex0.175) = 55.45%**	**C**

Report Card Trends

Section Overview
This graph demonstrates trends in overall and section grades for the years in which Dalhousie has participated in the Planetary Health Report Card initiative.