



Planetary Health Report Card (Medicine):

University of Minnesota Medical School



2024-2025 Contributing Team:

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Land acknowledgment: The University of Minnesota-Twin Cities campus is built within the traditional homelands of the Dakota people. Minnesota comes from the Dakota name for this region, Mni Sota Makoce, which loosely translates to *the land where the waters reflect the skies*.

Summary of Findings

Overall Grade	A-
Curriculum	A
<ul style="list-style-type: none"> The SERVE curriculum integrates planetary health topics by including a comprehensive focus on the health effects of climate change. However, the school lacks dedicated electives focused specifically on planetary health, limiting opportunities for students to explore these topics in greater depth. Additionally, Indigenous knowledge and environmental stewardship is only briefly incorporated into the curriculum. Recommendations: Expand elective offerings to provide students with more opportunities for in-depth study on planetary health and sustainable healthcare. Integrating Indigenous perspectives into courses, especially in relation to Minnesota, would enhance students' understanding of environmental stewardship. 	
Interdisciplinary Research	A
<ul style="list-style-type: none"> The medical school continues to be a part of the GCCHE. The university has a centralized website housing the university's climate efforts. The University hosts an annual Sustainability Symposium in the spring. Recommendations: There appear to be only two faculty members within the medical school doing research at the intersection of climate, sustainability, and health. We recommend increased efforts to recruit faculty within this area and the encouragement of interdisciplinary collaboration. 	
Community Outreach and Advocacy	B
<ul style="list-style-type: none"> The UMN Extension Regional Sustainable Development Partnerships (RSDP) supports numerous state-wide projects focused on building climate resilient communities. In addition, the Institute on the Environment (IonE) and School of Nursing's Center for Planetary Health and Environmental Justice pursue research-based climate solutions and justice in partnership with community members. Recommendations: Increase community-facing programs and update educational materials regarding the health impacts of climate change with community perspectives at the center of these resources. Incorporate the Medical School into the programs above, thereby facilitating opportunities for student involvement. 	
Support for Student-Led Initiatives	A
<ul style="list-style-type: none"> The UMN as a whole has opportunities for funding student-led initiatives, along with a centralized Office of Sustainability webpage to locate projects and research. There are ways to get involved in student representation, speaker events, volunteering, and outdoors programs. Many of the opportunities are university-wide, rather than specific to or advertised by the Medical School. Recommendations: We encourage the Medical School to place a greater focus on collaborating with and advertising these planetary health initiatives, whether through planetary health student group funding and faculty support, centralized webpages, mentorship opportunities, or general promotion. 	
Campus Sustainability	C+
<ul style="list-style-type: none"> The UMN has committed to improving sustainability practices and has made strides towards a carbon neutral campus which will be tackled more aggressively in the coming 10 years, with carbon neutrality by 2050. Most campus buildings have been retrofitted with LED lights to cut consumption and incentivization programs have been rolled out in lab spaces to promote energy efficiency and conservation. Recommendations: We suggest that the Office of Sustainability update their website with current information on renewable energy usage. Incorporate the 2023 Climate Action Plan more in the medical school, which may benefit from a designated staff member for hospital/medical school sustainability. Improve local and sustainable sourcing for food procurement, potentially partnering with The Good Acre. 	

Statement of Purpose

Planetary health is human health.

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

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

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

Definitions & Other Considerations

Definitions:

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

specifically targeted for medical students, can meet this metric.

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

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

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

Other considerations:

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

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

Planetary Health Curriculum

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

Curriculum: General

1.1. Did your <u>medical school</u> offer elective courses (student selected modules) to engage students in Education for Sustainable Healthcare or Planetary Health in the last year?	
Yes, the medical school has offered more than one elective whose primary focus is ESH/planetary health in the past year. (3 points)	
Yes, the medical school has offered one elective whose primary focus is ESH/planetary health in the past year. (2 points)	
The medical school does not have any electives whose primary focus is ESH/planetary health, but there are one or more electives that include a lecture on planetary health. (1 points)	
No, the medical school has not offered any electives on planetary health or electives that include ESH/planetary health topics in the past year. (0 points)	
Score Assigned:	1
Score explanation: The school offers INMD 7523 Occupational & Environmental Medicine , an elective focused on clinical care for work-related conditions, corporate medical direction, and workplace safety, rather than sustainable healthcare or planetary health.	

Curriculum: Health Effects of Climate Change

1.2. Does your <u>medical school</u> curriculum address the relationship between extreme heat, health risks, and climate change?	
This topic was explored in depth by the core curriculum. (3 points)	
This topic was briefly covered in the core curriculum. (2 points)	
This topic was covered in elective coursework. (1 point)	
This topic was not covered. (0 points)	
Score Assigned:	3

Score explanation: In the initial phase of the SERVE curriculum, implemented in Fall 2023, second-year medical students are required to take the course "MPACT IV." This course prominently features health and climate change as a major core theme. Extreme heat is specifically highlighted as a core objective, integrated into various student projects. For example, an interactive case-based learning session explored heat stroke, heat exhaustion, and heat stress as well as the diagnostics and treatments. The module used can be found [here](#).

Two learning objectives covered in "MPACT IV" include:

1. Considering how Planetary Health impacts students' lives during medical training.
2. Examining how Planetary Health will influence future roles as residents and physicians.

There is also a lecture titled "Clinical Toxicology and Environmental Health: Disproportionate Impacts and Environmental [In]Justice" in the "Fundamentals of Medicine" course that explores the disproportionate impact of climate change as well as related harmful environmental exposures. The presenter includes exploration of race, socioeconomic status, and other social determinants of health as they relate to an individual's exposure to extreme heat caused by climate change and the resulting health effects.

1.3. Does your medical school 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: In the initial phase of the SERVE curriculum, there is a lecture titled "Clinical Toxicology and Environmental Health: Disproportionate Impacts and Environmental [In]Justice" within the "Fundamentals of Medicine" block, addressing the unequal effects of climate change and hazardous environmental exposures. For example, a slide from the presentation examines how different social determinants, including race and socioeconomic status, influence an individual's vulnerability to extreme heat and its associated health consequences.

Additionally, the previously mentioned "MPACT IV" course has team-paced, interactive materials that covered extreme weather events, including water-related disasters based on [this](#) case study.

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

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

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

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

This topic was not covered. (0 points)	
Score Assigned:	3
<p><i>Score explanation:</i> In the “MPACT IV” course required in the initial phase of the SERVE curriculum, there is a team-paced, case-based session that covers the emerging zoonoses, including the environmental risk factors of climate change, animal migration, flooding, human contact with wildlife, vector/rodent infestation, and local habitat destruction.</p> <p>In the “MPACT II” course required in the initial phase of the SERVE curriculum, there is a session entitled “Rural Environmental Disparity, Climate, & Health Equity.” The session includes a required presentation called “Multidimensional Impacts of Climate Change on Health,” which discusses the wide variety of health implications of climate change, including increased infectious diseases rates. Specifically, the lecture included graphics about changes in vector ecology leading to infectious diseases such as malaria, dengue, and Lyme disease, as well as water quality impacts leading to infectious diseases such as cholera and leptospirosis. The session also provided optional reading entitled “The Changing Climate: Managing Health Impacts.”</p>	

1.5. Does your <u>medical school</u> 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
<p><i>Score explanation:</i> In the “Fundamentals of Medicine” course in the initial phase of the SERVE curriculum, the lecture “Clinical Toxicology and Environmental Justice: Disproportionate Impacts and Environmental [In]Justice” discusses the respiratory health effects of climate change and air pollution, highlighting differences in air quality between urban and rural areas. The lecture also addresses how agriculture-related pollutants affect rural communities and how pollutants from industry and transportation contribute to urban air quality issues. Additionally, it emphasizes that air pollution is a statewide concern, as wildfire smoke driven by climate change impacts air quality and health outcomes in rural areas.</p> <p>The “MPACT IV” course explores a case study on air pollution with the goal of understanding the human health effects of indoor and outdoor air pollution, including candles, cooking fuel, location of home, and nearby air pollution sessions.</p>	

1.6. Does your <u>medical school</u> curriculum address the cardiovascular health effects of climate change, including increased heat?	
This topic was explored in depth by the core curriculum.	
This topic was briefly covered in the core curriculum.	

This topic was covered in elective coursework.	
This topic was not covered.	
Score Assigned:	2
<p><i>Score explanation:</i> In the lecture “Clinical Toxicology and Environmental Justice: Disproportionate Impacts and Environmental [In]Justice” in the first year course “Fundamentals of Medicine” of the initial phase of the SERVE curriculum, there is a slide that lists how social determinants influence the impact of environmental exposure on health, including heat-related heart failure. Some exacerbating exposure risks include poor air conditioning, limited mobility, and limited health insurance.</p>	

1.7. Does your <u>medical school</u> curriculum address the mental health and neuropsychological effects of environmental degradation and climate change?	
This topic was explored in depth by the core curriculum.	
This topic was briefly covered in the core curriculum.	
This topic was covered in elective coursework.	
This topic was not covered.	
Score Assigned:	3
<p><i>Score explanation:</i> In the required “MPACT IV” course of the initial SERVE curriculum, the topic of “climate distress and ecoanxiety” was briefly addressed through this case with the goal of understanding how the variety of ways in which environment related emotions are experienced.</p> <p>In the “MPACT II course,” the module “Rural Environmental Disparity, Climate and Health Equity” addresses the impact of climate change on mental health. There are additional resources provided that delve deeper into the mental health deterioration due to climate change and resources to help people cope.</p>	

1.8. Does your <u>medical school</u> curriculum address the relationships between health, individual patient food and water security, ecosystem health, and climate change?	
This topic was explored in depth by the core curriculum.	
This topic was briefly covered in the core curriculum.	
This topic was covered in elective coursework.	
This topic was not covered.	
Score Assigned:	3
<p><i>Score explanation:</i> In both the first and second year required curriculum in the initial phase of the SERVE curriculum, the relationship between these topics was discussed through the “Becoming a Doctor” course - food insecurity, food apartheid, and the environmental impacts of the current food</p>	

system is addressed. For example, a lecture titled “Food is Medicine for Human, Community and Planetary Health” includes the following learning objectives:

1. Describe food insecurity and recognize the relationship between food insecurity and health outcomes.
2. Define a food system and its relationship to human, community and planetary health.

Additionally, a [case-based learning session](#) in “MPACT IV” in the initial phase of the SERVE curriculum, addresses food security relating to screening questions, physical exam, and management and treatment. The thread of individual patient food and water security has been continually woven throughout the didactic curriculum in the “Life Stages” thread as well, with an emphasis on whole foods, accessibility, and nutrients.

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: In the “Fundamentals of Medicine” course required for first year students in the initial phase of the SERVE curriculum, there are two lectures that explore this great impact through two lectures - “Social Determinants of Health” and “Clinical Toxicology and Environmental Health.” These lectures dives into how various social determinants of health, including social and community context, economic stability, and neighborhood relate to disproportionate impacts and environmental injustice. For example, one lecture displays a timeline, starting from racist policies in 1945 in which areas with high percentages of people of color were deemed “hazardous” and redlined by institutions. Moving forward to 2019, we see how areas that were redlined in the past still feel the effects of these policies. Sources of air pollution such as industrial facilities and freeways were historically built in Black neighborhoods in Minnesota, leading to ongoing health disparities. Additional components of these lectures highlight how 93% of communities of color and Indigenous communities are more likely to be near higher levels of air pollution.

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:

2

Score explanation: In the “MPACT IV” course of the initial phase of the second-year SERVE curriculum, there are two different sessions entitled “Patients & Populations” and “International Perspectives on Social Determinants and Community Health” where students have the opportunity to fulfill these learning objectives:

1. Analyze and compare different international perspectives on healthcare systems, social determinants and community health.
2. Illustrate unique approaches to medical education and practice in Denmark.
3. Illustrate how patient and population data is gathered and utilized at regional, national and international levels.

Speakers included topics on refugee health policy, patient care, and community health in Canada, with examples from non-communicable diseases and continuity of care as well as the Danish and Nordic healthcare systems, public health issues, socio-economic inequalities, and the Scandinavian welfare paradox, and also key social determinants, biases and healthy equity targets in forced migration and asylum seekers globally, with examples from Greece.

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:

3

Score explanation: In the “Endocrine and Reproductive” block of the initial phase of the SERVE curriculum, a lecture titled “Endocrine Disrupting Chemicals” discusses several chemicals and their effects on reproductive health. For example “PFAS” or “forever chemicals” are highlighted as highly persistent in the environment, largely due to the presence of over 40,000 industrial and municipal sites known to or suspected to produce toxic fluorinated chemicals known as PFAS. This lecture then goes to explore how PFAS exposure in humans leads to decreased fertility and women, increases the risk of high blood pressure and preeclampsia, and lowers infant birth weight. It also explains the additional risks of testicular, ovarian, and prostate cancer with exposure. The lecture also discusses how parabens interfere with receptors for androgens, estrogens, progesterone, glucocorticoids, and PPARs, leading to associated gestational diabetes mellitus and shortening of the menstrual cycle.

The elective course, INMD 7523 [Occupational and Environmental Medicine](#), also covers the impact of environmental exposures on pregnancy.

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

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

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

This topic was covered in elective coursework.	
This topic was not covered.	
Score Assigned:	3
<p><i>Score explanation:</i> As highlighted in previous explanations, lectures in the required first year curriculum of the initial phase of the SERVE curriculum, including “Clinical Toxicology and Environmental Health” and “Social Determinants of Health” explore statewide air pollution trends, specifically human-caused threats, in both the Duluth area and the Twin Cities Metro. Across the state, 51% of communities are above risk guidelines for higher levels of air pollution. This statistic translates to more than 2 million residents of Minnesota living in these areas. The lecture also highlights high levels of fine particles and ozone causing or contributing to premature deaths, respiratory and cardiovascular hospitalizations, and emergency department visits, especially for vulnerable populations - including elderly, very young, and those with respiratory conditions. There is also exploration of emissions from industrial facilities and electric utilities, motor vehicle exhaust, gasoline vapors, and chemical solvents as major sources of oxides of nitrogen and volatile organic compounds.</p>	

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

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

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

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

This topic was **not** covered.

Score Assigned:	3
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Score explanation: Throughout the Indigenous Health block of the “MPACT II” curriculum, Indigenous sustainable practices are briefly emphasized. There is a required session on “Climate Change, Displacement, and Health in Indigenous Communities,” where resources for more information are provided and Indigenous community members talk about the issues. Specifically, [water quality](#) and how it relates to wild rice cultivation is discussed. There is also a required session on “Food and Indigenous Peoples’ Health,” which includes a reading that briefly touched on the effect of climate change and industrial pollution on traditional food sources, in addition to a guest speaker discussing a Native American led nonprofit that is involved in regenerative gardening and sharing knowledge about traditional food and medicine.

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

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

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

This topic was covered in elective coursework.	
This topic was not covered.	
Score Assigned:	3
<p><i>Score explanation:</i> As part of the initial phase of the SERVE curriculum, the outsized impact of environmental toxins on marginalized communities was explored through multiple lectures that have been discussed in previous explanations, including “Clinical Toxicology and Environmental Health” and “Social Determinants of Health.” These sessions examined how social determinants of health—such as race and socioeconomic status—shape an individual’s exposure to environmental hazards and their resulting health effects. A particular focus was placed on the impact of extreme heat due to climate change, highlighting how systemic inequities increase vulnerability. The lectures delved deeper into the connection between structural racism and environmental health disparities, demonstrating how historically embedded policies have led to disproportionate exposure to pollution and climate-related hazards, perpetuating health inequities across communities.</p>	

Curriculum: Sustainability

1.15. Does your <u>medical school</u> curriculum address the environmental and health co-benefits of a plant-based diet?	
This topic was explored in depth by the core curriculum.	
This topic was briefly covered in the core curriculum.	
This topic was covered in elective coursework.	
This topic was not covered.	
Score Assigned:	3
<p><i>Score explanation:</i> The newly implemented curriculum has a “Life Stages” thread that frequently addresses the value of a plant based diet through several lectures. For example, there is a 2-part session addressing both health and environment impacts. A session including information on the “Planetary Health Plate” served as a guide for dietary patterns. In the pre-session required lecture titled “Macronutrients and Clinical Correlations”, the detrimental environmental impacts of the industrial production of meat as well as its impacts on the body when consumed were highlighted. There is also a recurring slide throughout the initial phase of the SERVE curriculum in the “Life Stages” related lectures that emphasizes the World Health Organization’s nutrition recommendations intended to prevent and reduce non-communicable diseases: The diet should contain “diverse nutrient-dense foods from basic food groups including vegetables, fruits, whole grains and cereals, dairy foods and animal and plant-based protein foods, while limiting foods and beverages high in saturated and trans fats, added sugars and salt.”</p>	

1.16. Does your <u>medical school</u> curriculum address the carbon footprint of healthcare systems?
This topic was explored in depth by the core curriculum.

This topic was briefly covered in the core curriculum.	
This topic was covered in elective coursework.	
This topic was not covered.	
Score Assigned:	3
<p><i>Score explanation:</i> As part of the initial phase of the SERVE curriculum, the required second-year course MPACT IV includes a lecture titled Introduction to Planetary Health, which examines the environmental impact of healthcare. This session discusses pharmaceutical spillover and its consequences, such as antibiotic resistance, disruptions to the reproductive fitness of fish and wildlife, and broader environmental contamination. The lecture also highlights sustainability in the operating room, emphasizing how anesthetic gases contribute to global warming and detailing specific interventions at the University of Minnesota. For example, desflurane and nitrous oxide are discouraged due to their high global warming potential. Additional strategies include maintaining the operating room temperature between 64-72°F, keeping doors and windows closed to optimize energy efficiency, and reducing unnecessary power consumption by turning off computers and Wi-Fi networks during off hours. The session also addresses the environmental impact of medical waste, noting how reliance on single-use devices, limited availability of reusable equipment, and excessive sterile packaging contribute to the carbon footprint of healthcare systems.</p>	

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

spillover and its consequences, global warming potential of anesthetic gases, the environmental impact of surgical healthcare as it relates to waste production in the operating room, and waste production in the healthcare setting as a whole including single use devices and sterile packaging. Strategies include using reusable equipment, switching off computers during off hours, and keeping operating room doors and hospital windows closed.

Several lectures and discussions focus on non-pharmaceutical management to improve comorbidities, including a lecture titled “Diabetes and Lifestyle.” Practices suggested included mindfulness based stress reduction and meditation and yoga/tai chi for depression, stress, and diabetes.

Curriculum: Clinical Applications

1.18. In training for patient encounters, does your medical school’s curriculum introduce strategies to have conversations with patients about the health effects of climate change?

Yes, there are strategies introduced for having conversations with patients about climate change in the **core** curriculum. (2 points)

Yes, there are strategies introduced for having conversations with patients about climate change in **elective** coursework. (1 points)

No, there are **not** strategies introduced for having conversations with patients about climate change. (0 points)

Score Assigned: 2

Score explanation: In a lecture titled “Endocrine Disruptors” in a required second year course of the initial SERVE curriculum, a slide discusses steps patients can take to limit the exposure of these endocrine disruptors caused by climate change. These interventions include avoiding canned food, fast food/beverages, processed food, avoiding microwaving food or beverages in plastics, not cleaning plastics in the dishwasher, using alternatives, such as glass or stainless steel, when possible avoiding plastics with recycling codes 3 (phthalates) and 7 (bisphenols) via the recycling code on the bottom of products, and using cast iron and/or stainless steel pans instead of nonstick cooking materials.

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

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

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

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

Score Assigned: 2

Score explanation: Lectures in the required first year curriculum of the initial phase of the SERVE curriculum, including “Clinical Toxicology and Environmental Health” and “Social Determinants of Health” encourage students as future physicians to learn about a patient’s environmental

exposures and factors and how they might impact a patient's comorbidities and wellbeing. The lectures also highlight specific exposures in various areas of Minnesota to provide further guidance on areas of discussion amongst different patient populations.

Curriculum: Administrative Support for Planetary Health

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

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

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

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

Score Assigned: 4

Score explanation: As the initial phase of the SERVE curriculum has been executed, the "Public Health" thread leads and "MPACT" course directors teamed up to create a Planetary Health curriculum required for second years. This has been a major change compared to previous curriculum instruction and is in response to one of the goals of implementing the SERVE curriculum, which was to explore the impact of climate change on human health. Additionally, the "Pharmacology" and "Life Stages" threads have been an integral part of increasing materials related to planetary health and its intersection with patient wellbeing.

1.21. How well are the aforementioned planetary health/Education for Sustainable Healthcare topics integrated longitudinally into the core 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: 4

Score explanation: Planetary health and environmental sustainability topics are integrated into the core medical student curriculum, with ongoing efforts to expand their presence. The introduction of a required Planetary Health curriculum for second-year students marks an initial step toward incorporating these topics, developed through collaboration between "Public Health" thread leads and "MPACT" course directors. This shift reflects the SERVE curriculum's commitment to addressing the health impacts of climate change. Additionally, the "Pharmacology and Life Stages" threads have increased focus on planetary health and its intersection with patient care. As further iterations of the SERVE curriculum are implemented, these changes will be evaluated, and

additional longitudinal improvements will be made accordingly. However, as the third- and fourth-year SERVE curriculum has yet to be revealed, the long-term sustainability of these curricular changes will be more thoroughly assessed upon the first class's completion of the full program. Future iterations will provide opportunities to evaluate effectiveness and ensure planetary health remains a key component of medical education.

1.22. Does your medical school 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: Two professors lead the Public Health thread in the new SERVE curriculum, playing a crucial role in integrating planetary health and sustainable healthcare into student learning at the University of Minnesota. Their instruction has been instrumental in shaping lectures and projects that emphasize the intersection of climate change and health. As the curriculum continues to evolve, we hope these leaders will further expand public health learning objectives to ensure climate change and health are examined from diverse perspectives.

Section Total (63 out of 72)

87.5%

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

Interdisciplinary Research

Section Overview: *This section evaluates the quality and quantity of interdisciplinary planetary health research at the 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:

3

Score explanation: Two researchers from the school of medicine have a primary research focus in planetary health or healthcare sustainability. Below are brief explanations of Dr Christine Wendt's and Dr Vishnu Laalitha Surapaneni's work.

Dr. Christine Wendt – “Dr. Wendt’s interest in air pollution and chronic lung disease dates to her participation as a delegate for the University of Minnesota and Chinese Academy of Science to address the health effects of air pollution in China. This resulted in two publications on the effects of air pollution exposure on lung disease and biomarkers of lung disease. Following this she became a Site PI for the VA Cooperative Study #595 Service and Health Among Deployed Veterans (SHADE). SHADE is an epidemiology study to determine the effects of deployment-related air pollution exposure, including burn pits, on lung function and symptoms.”

Dr. Vishnu Laalitha Surapaneni – “Dr. Surapaneni's areas of interest are impacts of climate change on health equity, sustainable healthcare delivery, and the role of physician advocacy in developing science-based policy. She is a member of the Lancet Countdown on health and climate change United States Brief workgroup through the University's Center for Global Health and Social Responsibility and an associate at the Institute on the Environment.”

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: [The Institute on the Environment](#) (IonE) at the University of Minnesota is a multidisciplinary research center aimed at supporting collaborative research and initiatives related to sustainability and planetary health. A recent, notable project the IonE has been involved in includes:

Institute on the Environment-based FoodS³ model is revolutionizing agricultural supply chain sustainability: “FoodS³ models the distribution of crop outputs from their counties of production to their final destinations of consumption. The model enables organizations to trace the carbon footprint of their food supply chains, providing insights to help them make data-driven decisions towards greater sustainability...The FoodS³ team is eager to continue working with partners to increase transparency of the agricultural supply chain. They aim to help partners set more accurate carbon goals and provide insights that drive tangible changes in sustainability practices.”

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

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

Yes, there is a process in which community members impacted by climate and environmental injustice **advise** the climate + environmental research agenda. (2 points)

No, but there are **current efforts** to establish a process for community members to advise or make decisions on the research agenda. (1 points)

There is **no** process, and **no** efforts to create such a process. (0 points)

Score Assigned:

2

Score explanation: The [Community-University Health Care Center \(CUHCC\)](#) is Minnesota's first community center, located in South Minneapolis, that serves people of all ages and income levels. Through their partnership with [SoLaHmo](#), a Community-Based Participatory Action Research (CBPAR) program, they conduct research that is relevant, respectful, and responsive to the interest of the communities served. For example, they conducted a study ([MN Family Environmental Exposure Tracking](#)) to identify mercury, cadmium, and lead contamination and sources for contamination in pregnant Somali, Latina, Hmong/Asian, and White women. Their results led to the development and delivery of educational messages for this population during pregnancy. SoLaHmo is made up of Somali, Latin American, Hmong, Karen, Vietnamese, Nepali, Oromo, Ethiopian, Native American, Black/African American and LGBTQ/Two Spirit community members. In addition, The Institute on the Environment and Urban Research and Outreach Engagement Center, are also doing work in this area at an institutional level.

2.4. Does your institution 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:

3

Score explanation: The University of Minnesota has a website for the [Office of Sustainability](#). This site compiles research, programs, and ways to get involved in Planetary Health action at the University. It also houses the University's Climate Action Plan.

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

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

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

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

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

No, the institution has not hosted a conference on topics related to planetary health in the past three years. (0 points)	
Score Assigned:	4
<i>Score explanation:</i> The Institute on the Environment partnered with the UMN Students For Climate Justice to host the annual Sustainability Symposium on April 12th, 2024. The theme centered on Equity in Urban Design and connected students across multiple U of MN campuses to explore this topic... All topics were multidisciplinary and examined sectors through a lens of justice. Students went above and beyond to provide comprehensive analysis and solutions for some of the most pressing challenges, including waste management, supply chains, clean energy, and green spaces.” There is another Sustainability symposium planned for April 11th, 2025.	

2.6. Is your <u>institution</u> 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
<i>Score explanation:</i> The medical school is a member of the Global Consortium on Climate and Health Education .	

Section Total (16 out of 17)	94.12%
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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:

3

Score explanation: The University of Minnesota Office of Sustainability is partnered with US Green Building Counsel Minnesota (USGBC Minnesota), which is composed of a diverse group of stakeholders committed to making healthy, resilient, sustainable buildings and communities. According to the Office of Sustainability, they are primarily focused on upgrading LEED certification in buildings to ensure climate resilience. In the 2024 fiscal year, the University of Minnesota Extension Regional Sustainable Development Partnerships (RSDP) supported 119 place-based sustainability projects across Minnesota and engaged 224 community partners. The projects were focused on agriculture & food systems, clean energy, natural resources, and resilient communities as highlighted in detail in their [2024 report](#). Furthermore, The U of M's Institute on the Environment (IonE) funds projects and partners with community organizations through [Mini Grant DEIJ grant programs](#), and the School of Nursing's [Center for Planetary Health and Environmental Justice](#) offers advocacy opportunities for staff, students, and patients. These initiatives constitute meaningful partnerships with community organizations, and the Office of Sustainability continues to work on developing community partnerships.

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:	2
<p><i>Score explanation:</i> The University of Minnesota Office of Sustainability offers two main events that are developed primarily for students, but open to the community. Every month, there are Sustainability Coffee Chats that are designed to engage the University community in discussion around sustainability and climate action to increase awareness and encourage collaboration across campus departments and groups. In addition, the Office of Sustainability hosts Climate Literacy Teach-Ins with the goal of engaging participants in hands-on activities and discussions with topic experts from across the U to deepen their understanding of climate change and learn what meaningful action looks like. They achieve this goal by hosting sessions, workshops, films, and tours. All events are advertised as free and open to all students, staff, and faculty, however it is unclear as to whether community members are welcome as well. Despite these events not having clear community-facing events, there are a number of projects that directly inquire for community member's inputs. For example, the University of Minnesota encourages the public to share feedback regarding their Stormwater Pollution Prevention Program (SWPPP) via a public comment form.</p> <p>In addition, the University of Minnesota offers a small selection of community-facing courses regarding planetary health such as SUST 4096 where students take part in an internship which can be completed at a variety of organizations, including a nonprofit. Several Global Health Courses are also offered to undergraduate students which provide a study abroad experience that allow students to understand the intersection of culture, health, and the environment through a combination of in class and community learning.</p>	

3.3. Does your <u>institution</u> have regular coverage of issues related to planetary health and/or sustainable healthcare in university update communications?	
Yes, all students regularly receive communication updates dedicated to planetary health and/or sustainable healthcare. (2 points)	
Yes, planetary health and/or sustainable healthcare topics are regularly included in communication updates to some courses . (1 point)	
Students do not receive communications about planetary health or sustainable healthcare. (0 points)	
Score Assigned:	1
<p><i>Score explanation:</i> Medical students occasionally receive system-wide communications regarding planetary health and sustainability within the healthcare system. The Center for Global Health and Social Responsibility (CGHSR), Office of Sustainability, and other student-led organizations provide updates via newsletter emails regarding sustainability and ways for students to become involved. However, the University of Minnesota mandates that students must sign up willingly to</p>	

receive newsletter emails, so all communications regarding planetary health and/or sustainable healthcare are limited to individuals who sign up to receive these notifications.

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: 1

Score explanation: In February 2025, MHealth Fairview hosted a system-wide grand rounds talk titled “[Environmental Injustice: The Clinical and Ethical Implications of Our Unhealthy Environments](#)” which discussed the connection between clinical decisions, health, and environmental injustice. Within the Medical School, there exists the [Climate Health Action Program](#) which has a goal of providing education to medical students, residents, and providers on geographically specific climate-health impacts.

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: 2

Score explanation: The medical school occasionally publishes short articles focused on education around environmental health. For example, [this article](#) discusses the impact of climate change on mental health. In addition, all affiliated hospitals provide some information about individual risks and/or diseases. In November 2022, Fairview published an online [article](#) about the environmental exposures associated with lung cancer. Hennepin Healthcare’s [website](#) includes a history of their community and discusses the environmental harms of racist housing policies in Minneapolis. The VA’s website includes information on environmental [exposures](#), and briefly mentions the impact of environmental exposures and pollution on [COPD](#), [asthma](#), [pulmonary fibrosis](#), [sinusitis](#), and [conjunctivitis](#). The VA also provides information on the [PACT Act](#), which expands VA healthcare

coverage for veterans with toxic exposures including air pollutants and occupational hazards. Allina health's website includes information on [air quality alerts](#).

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:

1

Score explanation: A [study](#) published in December of 2023 by a research team at the University of Minnesota Medical School showed that animated short videos are effective for disseminating environmental health information; however, these videos are not yet publicly available. The Veterans Affairs' website, [Energy, Environment, and Fleet Program](#), provides information on climate change, with sections describing actions the VA is taking as well as general information regarding energy and water use, vehicle ratings, and environmental justice which touches on the differential health impacts of climate change. The VA's article from 2017, [Adapting to Climate Change in Minnesota](#) additionally details several health impacts of climate change, such as drought and wildfires impact on air quality and respiratory health. In 2022, an Allina physician participated in a [news story](#) on WCCO about the impact of climate change on allergies. No other affiliated health system provides information on the impact of climate change on health.

Section Total (10 out of 14)

71.43%

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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:

2

Score explanation: Within UMN Medical School, the [Climate Change Grant](#), offering up to \$40,000, is available for student-led initiatives with the goal of reducing medical system material waste, focusing on target areas such as compostable materials, packaging waste, single-use devices, etc.

In the broader UMN community, the [Sustainable Development Goal Initiative Student Group Activity Grant](#) is available for all students to apply for, offering up to \$500 to fund activities and events for student organizations or campus life programs, centered on the Sustainable Development Goals ([17 Goals](#) and [The 2030 Agenda for Sustainable Development](#)). The Center for Global Health and Social Responsibility offers [Global Engagement Grants](#), ranging from \$1,500 to \$15,000, to support pilot efforts in advancing sustainable and equitable health globally. These grants are available to UMN faculty, staff, and graduate students.

Of note, the Institute of Environment (IonE) has historically offered [Mini Grants](#), up to \$3,000, to support projects addressing environmental and sustainability issues for students across the whole UMN system. The program was paused in Fall 2024 to focus on enhancing organizational capacity, and it will reopen in April 2025 for the Spring 2025 mini grant cycle.

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
<p><i>Score explanation:</i> In the broader UMN community, the Institute on the Environment (IonE) participates in the graduate school Interdisciplinary Doctoral Fellows program. The Interdisciplinary Doctoral Fellowship provides an opportunity for mid-career Ph.D. students involved in interdisciplinary research to study at an interdisciplinary research center or institute during their fellowship year. Specifically within IonE, the fellows receive \$2,000 in funding to conduct research focused on addressing global challenges related to the environment.</p> <p>There are other opportunities for students to perform research related to planetary health, but these require student initiative. For example, The University of Minnesota Global Programs and Strategy Alliance (GPS Alliance) provides awards, as a part of its Sustainable Development Goal Initiative research grant competition. However, this opportunity is designed for faculty, staff, and researchers. Thus, students would need to seek out a principal investigator and project to join.</p> <p>In 2021, Advancing Climate Solutions. Now. emerged as a new initiative, in honor of University of Minnesota leader Tom Swain, to engage students to become part of the solution to climate change through policy-focused student internships and research initiatives. Their website states that student grants are currently on pause, though groups can directly email proposals to the Center for Science, Technology, and Environmental Policy.</p> <p>As previously noted, the Institute of Environment (IonE) has historically offered Mini Grants, up to \$3,000, to support projects addressing environmental and sustainability issues for students across the whole UMN system. The program was paused in Fall 2024 to focus on enhancing organizational capacity, and it will reopen in April 2025 for the Spring 2025 mini grant cycle.</p>	

4.3. Does the <u>institution</u> 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:	2

Score explanation: The broader UMN institution contains a website for its [Office of Sustainability](#), newly established in 2022. The website contains webpages detailing UMN's Climate Action Plan, a [Sustainability Dashboard](#) with data on the school's waste and emissions progress, various sustainability projects, recent [publications](#), and contact information for the [Sustainability Committee](#) and [Office of Sustainability](#) team members. Additionally, there is a link to a [research unit search hub](#), that allows you to filter by the various Sustainable Development Goals to find research organizations within the school.

There are a variety of other department and center-specific webpages relating to planetary health. The website for the Center for Global Health and Social Responsibility features a page named "[Climate Change and Health](#)," which provides contact details for "Climate Champions"—faculty members from different health professional schools engaged in planetary health efforts, including a representative from the medical school.

Additionally, the Office of Academic Clinical Affairs webpage titled "[Planetary Health and Sustainability](#)" contains relevant links pertaining to both planetary and human health. The [University of Minnesota Sustainable Development Goals Initiative](#) website provides general education, information on groundbreaking research and recent publications, and engagement with communities to address societal needs, with a strategic focus on advancing the Sustainable Development Goals (SDGs) through its long-term commitment outlined in MPact 2025.

There is no landing webpage specifically within the medical school website that is dedicated to planetary health. The medical school website contains a handful of webpages discussing climate change and its effect on health, such as the article "[Talking climate change and mental health with U of M.](#)" However, the most recent of these webpages were published in 2023 and early 2024, and thus lack up-to-date information on current initiatives and mentors. They are also somewhat difficult to locate on the medical school website.

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

Yes, there is a student organisation **with faculty support** at my medical school dedicated to planetary health or sustainability in healthcare. (2 points)

Yes, there is a student organisation at my medical school dedicated to planetary health or sustainability in healthcare but it **lacks faculty support**. (1 point)

No, there is **not** a student organisation at my institution dedicated to planetary health or sustainability in healthcare. (0 points)

Score Assigned:

1

Score explanation: The University of Minnesota Medical School's chapter of [Medical Students for a Sustainable Future](#), established in 2022, comprises medical students advocating for the integration of climate justice into the curriculum and community engagement efforts to enhance understanding of climate change's health impacts.

The UMN Chapter of [White Coats for Black Lives](#) is also heavily involved in social justice and advocacy, and they host a teach-in on climate justice. This year, their syllabus states that the

teach-in focused on cases of youth experiencing homelessness and housing justice. The UMN Chapter does not have a faculty advisor.

Additionally, [Students for Climate Justice at UMN](#) founded in 2019 is a student organization of the broader UMN institution that educates and mobilizes students to engage in environmental justice across the Twin Cities while advocating for systemic changes on campus to create a more just system. Of note, this is not an organization specific to the medical school and it is unclear whether they have a faculty advisor.

Of note, [Health Students for a Healthy Climate](#) (HSHC) was a multidisciplinary student organization at UMN dedicated to promoting sustainability initiatives within health professional schools. They were last active in fall 2023, and are not an active campus life program for the 2024-2025 academic year. Their previous events in 2023 included a panel event titled “We’re Not Happy About Climate Change” discussing the [100% Campaign](#), participation in [Ride for Their Lives](#), and a video release party about “How to Have Climate Conversations in a Clinical Setting.”

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:

1

Score explanation: Launched in 2021, the Twin Cities Sustainability Committee is tasked with implementing UMN’s goal to “build a fully sustainable future,” involving operations, teaching, research, and outreach. Per their [webpage](#), the committee member list includes two undergraduate students, three graduate students, and three PhD candidates, working alongside faculty, professors, and various staff members.

There is a designated [Climate Champion](#) faculty member in many of the health science professions programs who students are encouraged to contact. However, there is not a designated student representative. There are four Medical School Education Committee Representatives serving on the Medical School Student Council; however, their role is focused on the medical school curriculum as a whole, rather than specific to sustainability interests.

Previously, there have been opportunities for medical students to provide feedback on the development of the new SERVE curriculum through the Public Health Learning Objectives Feedback Group. This included assessing the learning goals for the public health thread of the new curriculum, which includes the impact of climate change on human health. However, this opportunity was temporary and this role no longer exists. Currently, there are student Thread Leads for the various SERVE curriculum threads, including the Public Health thread, who provide student feedback to the Thread Directors. This is not an official decision-making council.

4.6. In the past year, has the institution had one or more co-curricular planetary

Score

health programs or initiatives in the following categories? (1 point each)	
Projects where students are able to gain experience in organic agriculture and sustainable food systems, such as gardens, farms, community supported agriculture (CSA), fishery programs, or urban agriculture projects.	1
Panels, speaker series, or similar events related to planetary health that have students as an intended audience.	1
Events in which students learn directly from members of a local environmental justice community about the climate and environmental challenges they face, and how health professionals can partner with their community to address these exposures and impacts.	0
Cultural arts events, installations or performances related to planetary health that have students as an intended audience.	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
<p><i>Score explanation:</i></p> <p>Garden: There is an Interprofessional Student Garden Project, where health professional students can help plant and sustain a garden on campus, located adjacent to the medical school and associated hospital. The collective of students are responsible for planting, maintaining, and sustaining the garden. There are weekly Plants and Chats available for students to be as involved as they want to be with the garden.</p> <p>Panels, speaker series, or similar events: The Office of Sustainability hosts a Sustainability Coffee Chats series, featuring a wide variety of guest speakers discussing sustainability efforts and climate change and its effects, which are free, over Zoom, and open to the public. On November 14th, 2024, the UMN hosted a Climate Literacy Teach-In event, bringing in a variety of content experts, with lectures, workshops, and facility tours. The event was open to all students, staff, and faculty of UMN.</p> <p>Local environmental justice community: During the Climate Literacy Teach-In event on November 14th, 2024, the UMN hosted a local climate justice activist during a Climate Justice Education Workshop, with an emphasis on education and methods. The event was open to all students, staff, and faculty of UMN. It is not evident that the event discussed how health professionals can partner with their community to address these exposures and impacts.</p> <p>Cultural arts events, installations, or performances: Community Arts @ Health Sciences program unveiled the 2024 Fall Art Exhibition in the Health Sciences Education Center on the Twin Cities campus, created by health science faculty, staff, and students. The art has a wide variety of topics, but one particular photography piece highlights the idea of conservation and the threat to our planet's wildlife diversity. The medical school continues to maintain the Center for the Art of Medicine Artistic Antidote Archive, an archive that pools art-related resources from the web that may be useful for students in their futures in medicine. One resource that is listed is the "Resilience in the Age of Climate Change: Google Arts and Culture" which is a virtual installation of visionary artists and architects exploring the meaning and impacts of global warming. However, this webpage is not well known or well advertised to students.</p>	

Local volunteer opportunities: The [Phillips Neighborhood Clinic](#) (a free health care clinic operated by volunteer health professions students from the UMN) shared an opportunity with its current volunteers to assist with a street and neighborhood cleanup event on October 19th, 2024.

Wilderness or outdoors programs: CHIP and BeWell co-hosted a Fall Interprofessional Hike in September 2024, where health science students had the opportunity to hike and connect with other students. The opportunity was extended to students at the Twin Cities, Duluth, and Rochester campuses, at a local hiking location for each campus. Additionally, BeWell has an interprofessional running group series, which is put on each Tuesday morning, with the goal of building an interprofessional community.

The Office of Academic Clinical Affairs hosted several [Ecohealth Quest Retreats](#) for health science students, with a weekend trip to Itasca State Park in October 2024 and a weekend trip to Wolf Ridge Environmental Learning Center in November 2024. The trips involved ecohealth case studies and guided nature experiences. There are upcoming trips planned for March and April 2025.

The medical school has a Wilderness Medicine Interest Group, hosting various events including a social bouldering night at a local bouldering gym, a guest speaker discussing wilderness medicine and patient rescue, an evening camping trip at Afton State Park, a wilderness medicine skills night highlighting hypothermia treatment and emergency evacuation, and an introduction to alpine ski patrol and outdoor emergency care at a local ski area.

Section Total (13 out of 15)

86.67%

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Campus Sustainability

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

5.1. Does your 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: There is an Office of Sustainability at UMN with [multiple staff members](#), but no specific staff member is in charge of medical school sustainability. UMN's major hospital affiliation, M Health Fairview, does outline their [sustainability](#) efforts focused in 7 areas (energy efficiency, environmental preferable purchasing, sustainable facility design, healthy food systems, waste reduction/recycling, water conservation, and employee engagement), but this does not include medical school campus facilities or operations, nor is there a specific staff member in charge of hospital sustainability. The University of Minnesota also hired the first [systemwide chief sustainability officer](#) in May of 2022 to help lead sustainability efforts across all five campuses as part of the MPact effort. Additionally, the University of Minnesota has a multidisciplinary team of [Climate Champions](#), which includes staff from the medical school, which aims to "connect students with faculty and community members working in health care, sustainability, and climate change."

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:	0
<p><i>Score explanation:</i> The University of Minnesota Office of Sustainability states a goal of becoming carbon neutral by 2050 and has specific programs in line with its efforts, such as the Green Labs Program, achieving reducing GHG emission 50% by 2021 (one year ahead of schedule) and hiring a systemwide chief sustainability officer to drive sustainability efforts. Carbon usage across the University is tracked on the Carbon Dashboard. In 2024, the University of Minnesota ranked 5th in the US for overall sustainability impact in the Times Higher (THE) Impact Rankings. THE applies the 17 Sustainable Development Goals (SDGs) adopted by the United Nations which aims for a better/more sustainable world by 2030.</p> <p>The Twin Cities Campus updated their 2011 Climate Action Plan as part of MPact 2025 this previous year. This new Climate Action Plan outlines the university's plan for carbon mitigation, climate adaptation, and implementation support. Within this plan, it is stated the University's goal is to reduce carbon emissions by 60% over the next decade (compared to 2019) and again reiterated the goal of becoming carbon neutral by 2050. The plan identifies the current sustainability practices within the community and sets measurable improvements for 2033 while also outlining clear pathways for implementation. The plan also assesses the risk of impending climate changes and ways in which Minnesota has tools of resilience to manage these changes. The plan utilizes an interdisciplinary committee of students, faculty, and staff.</p> <p>The University has a 10 year plan that outlines actions that need to take place before 2033, such as eliminating emissions from purchased electricity. They aim to eliminate carbon emissions from campus energy plants and other university owned/controlled energy sources by 2045 and to be carbon neutral in commuting and air travel by 2050 (which account for 24% of total campus emissions). The Institution plans to achieve elimination of emissions more aggressively in the coming 10 years rather than linearly until 2050.</p> <p>Additionally, the Department of Medicine within the University of Minnesota Medical School has a Climate Health Action Program which clearly states a vision of achieving a carbon-neutral healthcare system by 2040 accompanied by a list of broad goals. However, it is not clear if there is a solidified plan to reach the goal of 2040 for the university's healthcare system.</p> <p>Of note, the University's major hospital affiliation is with M Health Fairview. With the recommendations from James Hereford and Medical School Dean Jakub Tolar, M Health Fairview established 2021 Work Plans in order to advance efforts of healthy equity, anti-racism, and inclusion. Within this HOPE Commissions document, the Effect Environmental Justice and Health Equity area noted a commitment to "implement provisions for sustainable environments by identifying 4 sustainable purchasing initiatives" and "environmental sustainability strategies will be aligned with national benchmarks".</p>	

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
<p><i>Score explanation:</i> According to the Office of Sustainability, the University's campus electricity is 28% renewable. The EPA has ranked the University of Minnesota as #27 in the nation in regards to annual green power usage (16% GP usage). The UMN self-reported STARS report (January 2023) indicates 4.99% of the University's total energy usage comes from clean and renewable sources. In addition, >50% energy consumption is supplied by purchased gas and steam as reported on the university's energy dashboard. This dashboard is easy to access and demonstrates the university's transparency related to energy consumption.</p>	

5.4. Are sustainable building practices utilised for new and old buildings on the <u>institution's</u> campus, with design and construction of new buildings and remodelling of old buildings conforming to a published sustainability rating system or building code/guideline?	
Yes, sustainable building practices are utilised for new buildings on the institution's campus and the majority of old buildings have been retrofitted to be more sustainable. (3 points)	
Sustainable building practices are utilised for new buildings on the institution's campus, but most old buildings have not been retrofitted . (2 points)	
Sustainable building practices are inadequately or incompletely implemented for new buildings. (1 point)	
Sustainability is not considered in the construction of new buildings. (0 points)	
Score Assigned:	3
<p><i>Score explanation:</i> New construction and major renovations follow interior design standards that incorporate the University's Sustainability Requirements and follow Minnesota's B3 guidelines. Compliance with B3 requires meeting sustainability goals for site, water, energy, indoor environment, materials, and waste. The University tracks the energy consumption of most buildings on campus on a public dashboard and the integration of sustainable practices are tracked on the facilities management strategic progress card. In the University of Minnesota Twin Cities Campus Master Plan, they have Development and Re-Development as a goal under their sustainability framework. They note that "The Campus Plan envisions significant reinvestment in existing buildings in the campus cores. However, when campus needs cannot be accommodated through renovation, critical decisions about growth must consider resilience and mitigation, land use impacts, and the capacities of supporting utilities and infrastructure (energy, water, waste, vegetation, etc.)." The UMN highlights many of the updates they have made, including the addition of solar gardens, green roofs, LEED buildings, stormwater retention, and energy plant renovations on the Sustainability Walking Tour. Nearly 70% of campus buildings have been retrofitted with LED lights in place of the existing fluorescent lights. The university has made a concerted effort to retrofit all buildings that have an established pattern of bird-glass collision through their "Stop the Thud" project.</p>	

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: The Medical School is located right next to the electrically powered light rail, which many students take advantage of. All students who pay the Transportation and Safety fee, which is included in the cost of tuition, have unlimited access to the regional transit system in the Twin Cities area through the [Universal Transit Pass](#). The university provides a free shuttle bus service between its three portions of campus (Mpls West Bank, Mpls East Bank, and St. Paul). University Services has a webpage dedicated to [transit](#), with information and links readily available regarding public transportation, bike routes with travel times, and walk routes with pedestrian safety/security resources. There is also a [shuttle system](#) between campus hospitals and medical centers that is free for use by students and faculty. The carpool service, [Gopher Chauffeur](#), is available to students that operates daily during the school year between 9pm to 1am to provide safe transport. The UMN Twin Cities is recognized nationally for bicycle transportation. In addition, the UMN campus is not amenable to cars, as there is almost no free parking on campus. Campus-wide transit utilization, awards, and annual data can be found in this [report](#).

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

Score explanation: The medical school has both an organics and a conventional recycling program in its buildings. In many of the common areas of the medical school buildings, including the main lobbies, main hallways, elevators, and vending machine coves, there are 3-in-1 waste bins with associated images above each section to help guide students/faculty/visitors as to which bin is most

appropriate. The UMN also offers a [ReUse Program](#) to collect surplus office supplies and equipment that can be resold or redistributed. This service is accessible to medical students and staff. The University tracks its waste recovery by material on a [dashboard](#). This information includes buildings utilized by the medical school. Facilities at the University also offer assistance in hosting “[Zero Waste Events](#)” through [planning](#), signage, or extra bins that are supplied for most outdoor events (areas where compost and recycling bins are not commonly found).

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

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

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

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

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

Score Assigned:

2

Score explanation: According to the Dean’s office, the Medical School does not have any input on campus food and beverage selections or their sustainability. On the campus level, university food services, [M Food Co.](#) is provided through [Chartwells](#). The University has established food systems as one of their sustainability priorities and they work with Chartwells to establish sustainability requirements, goals, and initiatives. These include following the Monterey Bay Aquarium Seafood Watch program guidelines, the Waste Not program to measure the amount of food waste being generated, and Chartwells’ [HowGood](#) Partnership which introduces climate labeling in dining halls. Chartwells has a [plant-forward dining initiative](#), but it does not appear to be in effect within the medical school. However, they do have a commitment to vegan and vegetarian food options as well as the [Feel Good Foods](#) campaign to highlight nutrient rich foods available at the dining halls. A monthly [farmers market](#) is hosted on campus on Wednesdays where students and community members can purchase fresh produce. M Food Co. is committed to [continuously searching](#) for new ways to reduce their carbon footprint and increase sustainability. [Nutritious U Food Pantry](#) is a program that provides fresh food for students who are struggling with having enough food to eat. Any student can visit this pantry up to twice a month.

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
<p><i>Score explanation:</i> On a campus level, according to the Office of Sustainability, the University applies sustainability criteria to some procurement activities depending on the type of product/service being procured (e.g. yes to construction materials, office supplies; no to specialized research materials). In the Board of Regents Purchasing Policy, they state “purchasing activities shall be conducted in a manner that promotes integrity, stewardship, diversity, and sustainability,” but offers no additional guidelines. The University’s Office of Sustainability, in conjunction with its educational campaign “It All Adds Up.” assists with the implementation of environmental, social, and economic goals with respect to supplier diversity and sustainability, though the medical school itself does not appear to be involved in such efforts. STARS has graded the university 1.75/3 on sustainable procurement, noting there are published guidelines on sustainable procurement. Sustainability guidelines are applied when purchasing furniture and furnishings, IT equipment, and food service providers. However, sustainability measures are not taken into account when acquiring chemically intensive products and services, consumable office products, garments and linens, professional service providers, and transportation and fuels.</p>	

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
<p><i>Score explanation:</i> According to the Dean’s office, there are no sustainability guidelines for events hosted at the Medical School. Any food, supplies and/or events are all planned at a department level by many different individuals. However, there is an updated Student Council policy in regards to funding events. These guidelines were provided by the Medical School Finance Office and aim to avoid over-ordering food as well as reduce paper plates/napkins/cutlery requests from vendors. The University Zero Waste Services provides a list of Zero Waste Event Caterers as well as Zero Waste Purchasing Options. The office of sustainability provides sustainable events resources and considerations to make during each step of the event planning process.</p>	

5.10. Does your <u>institution</u> have programs and initiatives to assist with making lab spaces more environmentally sustainable?
Yes, the institution has programs and initiatives to assist with making lab spaces more environmentally sustainable. (2 points)

There are guidelines on how to make lab spaces more environmentally sustainable, but not programs or initiatives. (1 point)	
There are no efforts at the institution to make lab spaces more sustainable. (0 points)	
Score Assigned:	2
<p><i>Score explanation:</i> The Office of Sustainability has been working with the Department of Biochemistry, Molecular Biology, and Biophysics (BMBB) to create a Green Labs Program that currently includes guidelines for energy efficiency and recycling in lab spaces. Labs can also request Green Labs stickers to encourage energy conservation. Labs can opt-in for organics composting to be available in their space. There is an initiative to put stickers that say “Shut the sash” and “Turn off when not in use” to encourage energy conservation. Labs are encouraged to join the freezer challenge to track their efforts in implementing best practices of energy conservation and the results are reported back through an online system. According to the Office of Sustainability, their ongoing partnership with the BMBB, specifically The Bielinsky lab, has been productive, and all waste management, energy conservation practices and infrastructure changes are being piloted with the goal of expanding the program to many more labs in the future. Within the Bielinsky lab, more than 95% of paper towels and kimwipes are going into organic recycling rather than trash and the majority of plastic film and bags are being recycled rather than going to trash. However, the medical school has not been heavily involved nor are there any formalized programs or initiatives currently in place. Additionally, the University’s recycling department works directly with labs on improving recycling and organics collection. All waste is tracked on the University’s waste dashboard.</p>	

5.11. Does your <u>institution’s</u> endowment portfolio investments include fossil-fuel companies?	
The institution is entirely divested from fossil fuels and has made a commitment to reinvest divested funds into renewable energy companies or renewable energy campus initiatives. (4 points)	
The institution is entirely divested from fossil fuels. (3 points)	
The institution has partially divested from fossil fuel companies or has made a commitment to fully divest , but currently still has fossil fuel investments. (2 points)	
The institution has not divested from fossil-fuel companies, but faculty and/or students are conducting organised advocacy for divestment. (1 point)	
Yes, the institution has investments with fossil-fuel companies and there have been no efforts to change that. (0 points)	
Score Assigned:	2
<p><i>Score explanation:</i> According to local news sources, including the Star Tribune and MN Daily, the University of Minnesota in September of 2021 announced its plans to fully divest from fossil companies in the next five to seven years. Although there has not been any explicit confirmation or commitment since the 2021 announcement, as of August 27 2024, the University commented on their endowment investment strategies, “this action does not reverse any previously adopted positions or affect ongoing efforts to integrate environmental, social, and governance (ESG) principles into consolidated endowment fund investment decisions, a focus that is already codified</p>	

in Board policy.” As of December 10, 2024, approximately 1.7% of the [2024 endowment fund \(FY24\)](#) is invested in fossil-fuel related exposures. This is reduced from approximately 2.5% in 2023.

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%

Planetary Health Grades for the University of Minnesota School of Medicine

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

Section	Raw Score %	Letter Grade
Planetary Health Curriculum (30%)	$(63/72) \times 100 = 87.5\%$	A
Interdisciplinary Research (17.5%)	$(16/17) \times 100 = 94.12\%$	A
Community Outreach and Advocacy (17.5%)	$(10/14) \times 100 = 71.43\%$	B
Support for Student-led Planetary Health Initiatives (17.5%)	$(13/15) \times 100 = 86.67\%$	A
Campus Sustainability (17.5%)	$(18/32) \times 100 = 56.25\%$	C+
Institutional Grade	$(87.5 \times 0.3 + 94.12 \times 0.175 + 71.43 \times 0.175 + 86.67 \times 0.175 + 56.25 \times 0.175) = 80.23\%$	A-

Report Card Trends

Section Overview

This graph demonstrates trends in overall and section grades for the years in which University of Minnesota Medical School has participated in the Planetary Health Report Card initiative. Please note that the University of Minnesota participated in the Planetary Health Report Card 2019-2020 cycle, but due to changing criteria the following year, felt that it did not accurately reflect the sustainability trends of the school. For reference, here are the previous reports: [2023-2024](#), [2022-2023](#), [2021-2022](#), [2020-2021](#), and [2019-2020](#)

