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# Planetary Health Report Card:

## *University of Minnesota*

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2021-2022 Contributing Team:

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## Summary of Findings

|  |     |
|--|-----|
| Overall  | C   |
| <u>Curriculum</u>  | C   |
| <ul style="list-style-type: none"> <li>Planetary health (PH) connections exist mainly in one lecture. The main climate change lecture covered a variety of planetary health topics, but does not include a live or recorded lecture component.</li> <li><b>Recommendations:</b> PH connections could be more frequent and more in-depth and should appear in test questions. Topics that are not in the curriculum at all (such as the impact of climate change on marginalized communities), should be prioritized. Students should learn how to discuss PH with patients.</li> </ul>   |     |
| <u>Interdisciplinary Research</u>  | C-  |
| <ul style="list-style-type: none"> <li>IonE encourages sustainability research at the U of M and continues to work on including PH in their work. Multiple webpages provide some PH resources, but none of these are comprehensive.</li> <li><b>Recommendations:</b> U of M should work more closely with IonE and explicitly encourage students and faculty to engage in PH research. There should be a webpage that centralizes all resources related to PH. Communities disproportionately impacted by climate change should participate in the process of forming a research agenda.</li> </ul>  |     |
| <u>Community Outreach and Advocacy</u>   | C - |
| <ul style="list-style-type: none"> <li>University of Minnesota Medical School has slightly improved their community outreach relating to planetary health over the course of the last year. In conjunction with the primary affiliated hospital, the medical school hosted a <a href="#">Climate Health Action Program (CHAP)</a>. Medical school communications have occasionally included information about planetary health, and affiliated hospitals have educational material on <a href="#">environmental hazards</a>.</li> <li><b>Recommendations:</b> Communications and lecture series surrounding planetary health should be made more consistent, affiliated hospitals should develop patient resources explicitly about planetary health.</li> </ul> |     |
| <u>Support for Student-Led Initiatives</u>   | B   |
| <ul style="list-style-type: none"> <li>Health Students for a Healthy Climate, an interdisciplinary group that aims to advance sustainability initiatives, is supported by the administration. Multiple PH programs and initiatives taking place in the past year.</li> <li><b>Recommendations:</b> Grants should be offered annually to encourage research in PH. In addition, students should be able to access information about PH activities and potential mentors via a webpage. The institution should also continue to develop co-curricular PH programs and events, to encourage exposure to PH.</li> </ul>  |     |
| <u>Campus Sustainability</u>   | C+  |
| <ul style="list-style-type: none"> <li>The University of Minnesota has an <a href="#">Office of Sustainability</a> that engages in various sustainability projects on campus.</li> <li><b>Recommendations:</b> We recommend the medical school connect with the Office of Sustainability and integrate itself more deeply into sustainability initiatives. We recommend focusing on implementing sustainability guidelines for medical school events and improving strategies that support planetary health, sharing the value of sustainability and climate justice with its community.</li> </ul>  |     |

# Statement of Purpose

*Planetary health is human health.*

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

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

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

# Definitions & Other Considerations

## Definitions:

- **Planetary Health:** is described by the *Planetary Health Alliance* as “a solutions-oriented, transdisciplinary field and social movement focused on analyzing and addressing the impacts of human disruptions to Earth’s natural systems on human health and all life on Earth”. 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.
- **Education for Sustainable Healthcare (ESH):** is defined as the process of equipping current and future health professionals with the knowledge, attitudes, skills and capacity to provide environmentally sustainable services through health professional education, thus working to decrease the enormous environmental impact of the healthcare industry. Planetary Health Education is an integral part of this education rather than an end in itself. This is because knowledge on Planetary Health is required to be able to fully understand the necessity of sustainable healthcare as well as being part of the broader knowledge needed to fully protect and promote health. In summary, ESH is covered by the three Priority Learning Outcomes of the Centre of Sustainable Healthcare below, and Planetary Health Education is embraced in the first learning objective and is a fundamental requirement to achieve learning outcomes 2 and 3:
  1. Describe how the environment and human health interact at different levels.
  2. Demonstrate the knowledge and skills needed to improve the environmental sustainability of health systems.
  3. Discuss how the duty of a doctor to protect and promote health is shaped by the dependence of human health on the local and global environment.
- **Medical School vs. Institution:** When “medical school” is specified in the report card, this only refers to curriculum and resources offered by the School of Medicine and does not include offerings from other parts of the university (for example, undergraduate departments (USA), other related departments eg Public Health, Population Health departments). In contrast, when “institution” is specified in the report card, we are referring to the university more broadly. Any resource reasonably accessible by medical students, no matter where in the institution the resource comes from or if it is specifically targeted for medical students, can meet this metric.
- **Environmental history (Metric 19 in curriculum section):** This is a series of questions

providers are taught to ask during medical encounters that elicits patients' exposures and environmental risk factors. Historically, this has included consideration of exposures like pesticides, asbestos, and lead, though in the modern era shaped by climate change, it can be expanded to include things like wildfire smoke exposure, air pollution and mold after flooding. Key components include place of residence over the lifecourse, occupational history, food and water sources (e.g. meat from industrial feeding operations, regular fishing in contaminated water, access to clean drinking water), and exposure to air pollution.

- **Elective:** The word “elective” refers to an optional course or lecture series that a medical student can opt to take part in but is not a requirement in the core curriculum. Generally, these elective courses take place in the preclinical curriculum but vary by school.
- **Clerkship:** This is a term used in the USA to refer to placements that medical students go on e.g. Pediatrics, General medicine, Psychiatry. In the UK these are referred to as rotations or placements.

#### **Other considerations:**

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

**Added to our resources this year, the Planetary Health Report Card Literature Review by Metric collates the evidence behind each of the metrics in the Planetary Health Report Card. It serves as a collection of references for further learning and a resource for those advocating for increased planetary health engagement at their institutions.**

# Planetary Health Curriculum

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

## *Curriculum: General*

| 1. Did your medical school offer elective courses (student selected modules) to engage students in Education for Sustainable Healthcare or Planetary Health in the last year?   |  |
|---|--|
| 3   | Yes, the medical school has offered more than one elective whose primary focus is ESH/planetary health in the past year.   |
| 2   | Yes, the medical school has offered one elective whose primary focus is ESH/planetary health in the past year.   |
| 1   | <b>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.</b> |
| 0   | No, the medical school has not offered any electives on planetary health or electives that include ESH/planetary health topics in the past year.                                   |
| <p><i>Score explanation:</i> The medical school offers one elective course relating human health and the environment: <a href="#">INMD 7523 Occupational &amp; Environmental Medicine</a>. This is a 4 credit course offered to MS3's and MS4's that focuses on training students to identify and manage diseases related to occupational and environmental exposures. While this course does discuss environmental health, it does not primarily focus on sustainable healthcare or planetary health. <a href="#">MED 7010 Public Health and Noncommunicable Diseases and Travel Medicine</a> also discusses environmental health (although not as its primary focus).</p> |  |

## *Curriculum: Health Effects of Climate Change*

| 2. Does your medical school curriculum address the relationship between extreme heat, health risks, and climate change? |   |
|---|---|
| 3   | This topic was explored in depth by the core curriculum.      |
| 2   | <b>This topic was briefly covered in the core curriculum.</b> |
| 1   | This topic was covered in elective coursework.                |

|   |                             |
|---|-----------------------------|
| 0   | This topic was not covered. |
| <p><i>Score explanation:</i> The relationship between extreme temperature health risks and climate change was briefly covered in a PowerPoint presentation in an online module for Essentials of Clinical Medicine 3A (INMD 6805).<br/>In addition, climate change-related heatstroke and agricultural worker health were discussed in a case in Foundations of Clinical Thinking 1 (FCT1).</p> |                             |

| <b>3. Does your medical school curriculum address the impacts of extreme weather events on individual health and/or on healthcare systems?</b>  |   |
|---|---|
| 3   | This topic was explored in depth by the core curriculum.      |
| 2   | <b>This topic was briefly covered in the core curriculum.</b> |
| 1   | This topic was covered in elective coursework.                |
| 0   | This topic was not covered.                                   |
| <p><i>Score explanation:</i> The impacts of extreme weather events on health was briefly covered in a PowerPoint presentation in an online module for Essentials of Clinical Medicine 3A (INMD 6805).</p> |   |

| <b>4. Does your medical school curriculum address the impact of climate change on the changing patterns of infectious diseases?</b>  |   |
|--|---|
| 3  | This topic was explored in depth by the core curriculum.      |
| 2  | <b>This topic was briefly covered in the core curriculum.</b> |
| 1  | This topic was covered in elective coursework.                |
| 0  | This topic was not covered.                                   |
| <p><i>Score explanation:</i> The impact of climate change on infectious diseases was briefly covered in a PowerPoint presentation in an online module for Essentials of Clinical Medicine 3A (INMD 6805).<br/>In addition, the relation between climate change and disease emergence was briefly mentioned in an Intro to Bacteriology lecture in MS1's microbiology course.</p> |   |

| <b>5. Does your medical school curriculum address the respiratory health effects of climate change and air pollution?</b> |   |
|---|---|
| 3   | This topic was explored in depth by the core curriculum.      |
| 2   | <b>This topic was briefly covered in the core curriculum.</b> |

|   |  |
|---|--|
| 1   | This topic was covered in elective coursework. |
| 0   | This topic was not covered.                    |
| <p><i>Score explanation:</i> The impact of climate change and air pollution on respiratory health was briefly covered in a PowerPoint presentation in an online module for Essentials of Clinical Medicine 3A (INMD 6805).</p> <p>In addition, the effect of pollution on atopy was briefly mentioned in the Hypersensitivity and Autoimmunity lecture in Microbiology.</p> <p>Finally, in the Intro to Respiratory Physiology lecture in the Physiology course, the effect of pollution and environmental inequities on lung function was discussed.</p> |  |

| <b>6. Does your medical school curriculum address the cardiovascular health effects of climate change, including increased heat?</b>   |   |
|--|---|
| 3  | This topic was explored in depth by the core curriculum.      |
| <b>2</b>   | <b>This topic was briefly covered in the core curriculum.</b> |
| 1  | This topic was covered in elective coursework.                |
| 0  | This topic was not covered.                                   |
| <p><i>Score explanation:</i> The impact of climate change, air pollution, and increased heat on cardiovascular health was briefly covered in a PowerPoint presentation in an online module for Essentials of Clinical Medicine 3A (INMD 6805).</p> |   |

| <b>7. Does your medical school curriculum address the mental health and neuropsychological effects of environmental degradation and climate change?</b>  |   |
|--|---|
| 3  | This topic was explored in depth by the core curriculum.      |
| <b>2</b>   | <b>This topic was briefly covered in the core curriculum.</b> |
| 1  | This topic was covered in elective coursework.                |
| 0  | This topic was not covered.                                   |
| <p><i>Score explanation:</i> The mental health effects of climate change were briefly covered in a PowerPoint presentation in an online module for Essentials of Clinical Medicine 3A (INMD 6805).</p> |   |

| <b>8. Does your medical school curriculum address the relationships between health, individual patient food and water security, ecosystem health, and climate change?</b> |  |
|---|--|
| 3   | This topic was explored in depth by the core curriculum. |



|   |   |
|---|---|
| <b>2</b>  | <b>This topic was briefly covered in the core curriculum.</b> |
| 1   | This topic was covered in elective coursework.                |
| 0   | This topic was not covered.                                   |
| <i>Score explanation:</i> Access to green space and air/water quality was mentioned in ECM 2 Clinical Skills Powerpoint presentation that focused on structural competencies and social determinants of health. |   |

|  |  |
|--|--|
| <b>9. Does your medical school curriculum address the outsized impact of climate change on marginalized populations such as those with low SES, women, communities of color, Indigenous communities, children, homeless populations, and older adults?</b> |  |
| 3  | This topic was explored in depth by the core curriculum. |
| 2  | This topic was briefly covered in the core curriculum.   |
| 1  | This topic was covered in elective coursework.           |
| <b>0</b>   | <b>This topic was not covered.</b>                       |
| <i>Score explanation:</i> The disproportionate impact of climate change on vulnerable populations is not a topic covered in preclinical coursework or clinical electives.  |  |

|  |   |
|--|---|
| <b>10. Does your medical school curriculum address the unequal regional health impacts of climate change globally?</b>   |   |
| 3  | This topic was explored in depth by the core curriculum.      |
| <b>2</b>   | <b>This topic was briefly covered in the core curriculum.</b> |
| 1  | This topic was covered in elective coursework.                |
| 0  | This topic was not covered.                                   |
| <i>Score explanation:</i> The unequal health impacts of climate change globally were briefly covered in a PowerPoint presentation in an online module for Essentials of Clinical Medicine 3A (INMD 6805). A slide on forced migration discussed how people in certain areas have had to relocate, putting stress on the healthcare systems where resettlement occurs. In addition, the 1Health Better Together orientation (an interdisciplinary health professional education program at UMN) discussed climate change-related displacement and immigrant health. |   |

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

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

|          |  |
|----------|--|
| 3        | This topic was explored in depth by the core curriculum. |
| 2        | This topic was briefly covered in the core curriculum.   |
| <b>1</b> | <b>This topic was covered in elective coursework.</b>    |
| 0        | This topic was not covered.                              |

*Score explanation:* INMD 7523 Occupational & Environmental Medicine is an elective course that covers the effect of environmental exposures on pregnancy.

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

|          |   |
|----------|---|
| 3        | This topic was explored in depth by the core curriculum.      |
| <b>2</b> | <b>This topic was briefly covered in the core curriculum.</b> |
| 1        | This topic was covered in elective coursework.                |
| 0        | This topic was not covered.                                   |

*Score explanation:* Environmental threats to the University of Minnesota's surrounding community were briefly covered in a PowerPoint presentation in an online module for Essentials of Clinical Medicine 3A (INMD 6805). The effect of air pollution on Minnesotans, as well as the increasing prevalence of Lyme disease in Minnesota, were both briefly discussed.

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

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

*Score explanation:* The importance of Indigenous knowledge and value systems as essential components of planetary health solutions is not a topic covered in either preclinical coursework or clinical electives.

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

|          |  |
|----------|--|
| 3        | This topic was explored in depth by the core curriculum. |
| 2        | This topic was briefly covered in the core curriculum.   |
| 1        | This topic was covered in elective coursework.           |
| <b>0</b> | <b>This topic was not covered.</b>                       |

*Score explanation:* The disproportionate impact of environmental toxins on vulnerable populations is not a topic covered in preclinical coursework or clinical electives.

*Curriculum: Sustainability*

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

|          |   |
|----------|---|
| 3        | This topic was explored in depth by the core curriculum.      |
| <b>2</b> | <b>This topic was briefly covered in the core curriculum.</b> |
| 1        | This topic was covered in elective coursework.                |
| 0        | This topic was not covered.                                   |

*Score explanation:* The impact of meat production on global environmental change was briefly discussed in Science of Medical Practice (INMD 6802) in year 1. Accompanying this, plant-based food sources and patterns of eating were also discussed in a couple of Powerpoint slides in this course.

**16. Does your medical school curriculum address the carbon footprint of healthcare systems?**

|          |   |
|----------|---|
| 3        | This topic was explored in depth by the core curriculum       |
| <b>2</b> | <b>This topic was briefly covered in the core curriculum.</b> |
| 1        | This topic was covered in elective coursework.                |
| 0        | This topic was not covered.                                   |

*Score explanation:* The carbon footprint of healthcare systems was briefly covered in a PowerPoint presentation in an online module for Essentials of Clinical Medicine 3A (INMD 6805).

**17. Does your medical school curriculum cover these components of sustainable clinical practice in the core curriculum? (1 point each)**

|          |   |
|----------|---|
| <b>1</b> | <b>Waste production within the healthcare system and strategies for reducing waste in clinical activities, such as in the operating room</b>  |
| 1        | The impact of inhalers on the healthcare carbon footprint and the environmental benefit of dry powdered inhalers over metered dose inhalers.  |
| 1        | The impact of anaesthetic gases on the healthcare carbon footprint and ways to reduce anaesthesia environmental impacts, such as total intravenous anaesthesia or choosing less environmentally anaesthetic gas options with reduced greenhouse gas emissions   |
| 1        | The environmental impact of pharmaceuticals and over-prescribing as a cause of climate health harm. Alternatively teaching on deprescribing where possible and its environmental and health co-benefits would fulfill this metric.  |
| 1        | The health and environmental co-benefits of non-pharmaceutical management of conditions where appropriate such as exercise or yoga classes for type 2 diabetes; social group activities such as gardening for mental health conditions; active transport such as bicycle schemes for obesity. This is commonly known as social prescribing in the UK. |
| 1        | The health and environmental co-benefits of avoiding over-medicalisation, over-investigation and/or over-treatment  |

*Score explanation:*

**Waste production:** This topic is briefly covered via a graphic in a PowerPoint presentation in an online module for Essentials of Clinical Medicine 3A (INMD 6805).

**Anesthesia:** The above-mentioned graphic states “Waste anaesthetic gases” but does not go into any more detail or give examples of ways to reduce this.

The other topics are not covered in the core curriculum. We did reach out to the anesthesiology course director to confirm that these topics were not addressed but did not hear back.

*Curriculum: Clinical Applications*

**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?**

|   |  |
|---|--|
| 2 | Yes, there are strategies introduced for having conversations with patients about climate change in the core curriculum. |
| 1 | Yes, there are strategies introduced for having conversations with patients about climate change in elective coursework. |

|  |  |
|--|--|
| <b>0</b>   | <b>No, there are not strategies introduced for having conversations with patients about climate change</b> |
| <p><i>Score explanation:</i> In the past, MS1s received a lecture as part of ECM which discussed the ethical imperative to discuss climate change and environmental issues with patients in a clinical setting. This did not occur this past year.</p> |  |

|   |  |
|---|--|
| <b>19. In training for patient encounters, does your medical school’s curriculum introduce strategies for taking an environmental history or exposure history?</b>  |  |
| 2   | Yes, the core curriculum includes strategies for taking an environmental history.        |
| <b>1</b>  | <b>Only elective coursework includes strategies for taking an environmental history.</b> |
| 0   | No, the curriculum does not include strategies for taking an environmental history.      |
| <p><i>Score explanation:</i> Taking an environmental history is a focus of the elective INMD 7523 Occupational &amp; Environmental Medicine. 1-2 Foundations of Clinical Thinking cases briefly emphasize the importance of taking an environmental history, but it is not substantial or the focus of the cases.</p> |  |

*Curriculum: Administrative Support for Planetary Health*

|  |  |
|--|--|
| <b>20. Is your medical school currently in the process of implementing or improving Education for Sustainable Healthcare (ESH)/planetary health education?</b>   |  |
| 4  | Yes, the medical school is currently in the process of making major improvements to ESH/planetary health education.        |
| <b>2</b>   | <b>Yes, the medical school is currently in the process of making minor improvements to ESH/planetary health education.</b> |
| 0  | No, there are no improvements to planetary health education in progress.   |
| <p><i>Score explanation:</i> As a part of new curriculum development, there are faculty members working on developing a public health thread. One of the learning goals of this thread is the impact of climate change on human health. Students have the opportunity to give feedback on the goals of this thread as they develop into specific learning objectives and are eventually implemented into the new curriculum.</p> |  |

|   |  |
|---|--|
| <b>21. How well are the aforementioned planetary health/Education for Sustainable Healthcare topics integrated longitudinally into the core curriculum?</b> |  |
| 6   | Planetary health/ESH topics are well integrated into the core medical school curriculum. |

|   |   |
|---|---|
| 4   | Some planetary health/ESH topics are appropriately integrated into the core medical student curriculum. |
| 2   | <b>Planetary health/ESH is not integrated and is primarily addressed in (a) standalone lecture(s).</b>  |
| 0   | There is minimal/no education for sustainable healthcare.   |
| <p><i>Score explanation:</i> Most of the planetary health/ESH topics are presented in one PowerPoint presentation in an online module for Essentials of Clinical Medicine 3A (INMD 6805). Climate change is mentioned a few times in other lectures, but only briefly, and it should be more well-integrated into the entire medical school curriculum.</p> |   |

|   |  |
|---|--|
| <b>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?</b>   |  |
| 1   | <b>Yes, the medical school has a specific faculty/staff member responsible for overseeing curricular integration of planetary health and sustainable healthcare</b>    |
| 0   | No, the medical school does not have a specific faculty/staff member responsible for overseeing curricular integration of planetary health and sustainable healthcare. |
| <p><i>Score explanation:</i> The University of MN is transitioning into a new curriculum for 2022-2023, and there is a Public Health Thread Director who will be focusing on how to integrate public health topics into the curriculum. One of their learning goals is recognizing the impact of climate change on human health, and another is to appreciate the importance of environmental health on individual and public health. While the thread director will be focusing on other public health topics as well, these are two topics that they will focus on incorporating into the curriculum. It is important to note, though, that this is a temporary position.</p> |  |

|                                    |           |
|------------------------------------|-----------|
| <b>Section Total (x out of 69)</b> | <b>31</b> |
|------------------------------------|-----------|

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

## Interdisciplinary Research

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

| <b>1. Are there researchers engaged in planetary health research and healthcare sustainability research at your medical school?</b>   |   |
|---|---|
| 3   | Yes, there are faculty members at the School of Medicine who have a primary research focus in planetary health <b>or</b> healthcare sustainability.   |
| 2   | Yes, there are individual faculty members at the School of Medicine who are conducting research related to planetary health or healthcare sustainability, but it is not their primary research focus. |
| 1   | <b>There are planetary health and/or healthcare sustainability researchers at the institution, but none associated with the medical school.</b>   |
| 0   | No, there are no planetary health and/or healthcare sustainability researchers at the institution or medical school at this time.   |
| <p><i>Score explanation:</i> In the past, a professor in the Department of Surgery conducted research regarding waste in operating rooms, and a professor in the Department of Family Medicine and Community Health has also conducted research regarding planetary health. However, there is no active planetary health research going on within the medical school at this time.</p> <p>There are faculty within the School of Public Health and the Institute for the Environment who conduct environmental research that have a bearing on planetary health.</p> <p>The Vice Dean for Research within the medical school shared that the Dean is committed to carrying forward an agenda of planetary health research within the medical school, but they are thinking through how best to accomplish this.</p> |   |

| <b>2. Is there a dedicated department or institute for interdisciplinary planetary health research at your institution?</b> |  |
|---|--|
| 3   | <b>There is at least one dedicated department or institute for interdisciplinary planetary health research.</b>  |
| 2   | There is not currently a department or institute for interdisciplinary planetary health research, but there are plans to open one in the next 3 years. |

|   |   |
|---|---|
| 1   | There is an Occupational and Environmental Health department, but no interdisciplinary department or institute for planetary health research. |
| 0   | There is no dedicated department or institute.  |
| <p><i>Score explanation:</i> <a href="#">The Institute on the Environment</a> (IonE) at the University of Minnesota is a multidisciplinary research center aimed at advancing sustainability initiatives within Minnesota. Several of the funded initiatives, such as <i>Health and Environment in Africa</i> and <i>Food System Design for Health</i>, focus explicitly on enhancing human health through environmentalism. In addition, there is an ongoing effort to thread health discussions and considerations into all of the work done at IonE.</p> |   |

|  |   |
|--|---|
| <b>3. Is there a process by which communities disproportionately impacted by climate change and environmental injustice give input or make decisions about the research agenda at your medical school?</b> |   |
| 3  | Yes, there is a process in which community members impacted by climate and environmental injustice have decision-making power in the climate + environmental research agenda. |
| 2  | Yes, there is a process in which community members impacted by climate and environmental injustice advise the climate + environmental research agenda.                        |
| 1  | No, but there are current efforts to establish a process for community members to advise or make decisions on the research agenda.  |
| <b>0</b>   | <b>There is no process, and no efforts to create such a process.</b>  |
| <p><i>Score explanation:</i> There is no process.</p>  |   |

|  |   |
|--|---|
| <b>4. Does your institution have a planetary health website that centralizes ongoing and past research related to health and the environment?</b>  |   |
| 3  | There is an easy-to-use, adequately comprehensive website that centralizes various campus resources related to health and the environment including all of the following: upcoming events, leaders in planetary health at your institution, and relevant funding opportunities. |
| <b>2</b>   | <b>There is a website that attempts to centralize various campus resources related to health and the environment, but it is hard-to-use, not updated, or not adequately comprehensive.</b>  |
| 1  | The institution has an Office of Sustainability website that includes some resources related to health and the environment.   |
| 0  | There is no website.  |
| <p><i>Score explanation:</i> The <a href="#">School of Nursing</a> and the <a href="#">Earl E. Bakken Center for Spirituality and Healing</a> both have webpages dedicated to planetary health. The pages include valuable information on planetary health and resources for people to learn more, but they are not fully comprehensive. There is no central</p> |   |



webpage that makes information regarding planetary health leaders, upcoming events, and funding opportunities all easily accessible.

In addition, the Center for Global Health and Social Responsibility has a web page titled “[Climate Change and Health](#)”. This webpage references a set of slides developed by UMN Climate Champions that cover various topics relating climate change and environmental exposures to health. The slides are meant to be incorporated into existing health curricula lectures where relevant. While a very valuable resource, this page does not amount to a planetary health website or constitute a compilation of “various campus resources related to health and the environment”.

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

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

*Score explanation:* Code Blue For Patient Earth is a biannual, day-long conference that is primarily organized and funded by Health Professionals for a Healthy Climate, a community professional organization. The UMN has only hosted the conference once, so they are not sufficiently involved to be defined as a host, but they have sponsored the event in the past.

A group of DNP students at UMN are planning the Code Blue conference for April 2022, but this falls outside the date range that this report card is evaluating.

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

|   |   |
|---|---|
| 1 | Yes, the medical school is a member of a national or international planetary health or ESH organization |
| 0 | <b>No, the medical school is not a member of such an organization</b>                                   |

*Score explanation:* The medical school is not currently a member of a national or international planetary health organization; however, a faculty member within the medical school has connected with the Global Consortium on Climate and Health Education, and there are efforts being made to get the medical school to become a member.

|                             |   |
|-----------------------------|---|
| Section Total (x out of 17) | 7 |
|-----------------------------|---|

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

# Community Outreach and Advocacy

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

| <b>1. Does your medical school partner with community organizations to promote planetary and environmental health?</b>   |  |
|--|--|
| 3  | Yes, the medical school meaningfully partners with multiple community organizations to promote planetary and environmental health. |
| 2  | Yes, the medical school meaningfully partners with one community organization to promote planetary and environmental health.       |
| 1  | <b>The institution partners with community organizations, but the medical school is not part of that partnership.</b>              |
| 0  | No, there is no such meaningful community partnership.   |
| <p><i>Score explanation:</i> IonE partners with community organizations to promote environmental health in Minnesota through the <a href="#">Resilient Communities Project</a>, but the Medical School is not a direct part of this project.</p> |  |

| <b>2. Does your medical school offer community-facing courses or events regarding planetary health?</b>  |   |
|--|---|
| 3  | The medical school offers community-facing courses or events at least once every year.  |
| 2  | <b>The medical school offers courses or events open to the community at least once per year, but they are not primarily created for a community audience.</b> |
| 1  | The institution has offered community-facing courses or events, but the medical school was not involved in planning those courses or events.                  |
| 0  | The medical school has not offered such community-facing courses or events.   |
| <p><i>Score explanation:</i> The <a href="#">Climate Health Action Program</a> (CHAP) put on a 2021 Health and Climate Justice Lecture Series, which consisted of 4 lectures. This was primarily created for medical students,</p> |   |

residents, and providers, but the lectures were open to the wider community as well. This was a first-time and one-time series.

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

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

*Score explanation:* The Dean’s regular emails sent out to the medical student body very occasionally included updates about planetary health. Medical students also receive monthly newsletters from the school, which have occasionally included information on planetary health.

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

|   |   |
|---|---|
| 2 | Yes, the institution or main affiliated hospital trust offers multiple in-person or online courses relating to planetary health and/or sustainable healthcare for post-graduate providers, including at least one with a primary focus of planetary health. |
| 1 | Yes, the institution or main affiliated hospital trust offers one course relating to planetary health and/or sustainable healthcare for post-graduate providers   |
| 0 | <b>There are no such accessible courses for post-graduate providers</b>   |

*Score explanation:* There are no such courses.

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

|   |  |
|---|--|
| 2 | Yes, all affiliated hospitals have accessible educational materials for patients.    |
| 1 | <b>Some affiliated hospitals have accessible educational materials for patients.</b> |
| 0 | No affiliated medical centers have accessible educational materials for patients.    |

*Score explanation:*

The VA, an affiliated hospital site, offers some information on environmental health exposures on their [website](#).  
 The U of M medical center does not have accessible educational materials relating to environmental health.

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

|          |  |
|----------|--|
| 2        | Yes, all affiliated hospitals have accessible educational materials for patients.    |
| <b>1</b> | <b>Some affiliated hospitals have accessible educational materials for patients.</b> |
| 0        | No affiliated hospitals have accessible educational materials for patients.          |

*Score explanation:* Hennepin County Medical Center has a [page](#) dedicated to the history of the community, which includes information on environmental harm in the Twin Cities.  
 Not all affiliated hospitals have accessible materials for patients.

|                                    |          |
|------------------------------------|----------|
| <b>Section Total (x out of 14)</b> | <b>6</b> |
|------------------------------------|----------|

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

# Support for Student-Led Planetary Health Initiatives

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

| <b>1. Does your institution offer support for medical students interested in enacting a sustainability initiative/QI project?</b>   |   |
|---|---|
| <b>2</b>  | <b>Yes, the institution <i>either</i> offers grants for students to enact sustainability initiatives/QI projects <i>or</i> sustainability QI projects are part of the core curriculum.</b>  |
| 1   | The medical school encourages sustainability QI projects (to fulfill clerkship or longitudinal requirements) and offers resources to help students succeed in these projects, but there is no student funding available and there is no requirement to participate. |
| 0   | No, the institution does not offer opportunities or support for sustainability initiatives or QI projects.  |
| <p><i>Score explanation:</i> IonE offers <a href="#">grants</a> to support projects addressing environmental and sustainability issues. While these grants are not geared specifically towards medical students, they are available for students across the whole U of M system. In addition, the Sustainable Development Goal Initiative Student Group Activity <a href="#">Grant</a> is available to students to apply for - it provides funding for student groups engaging in activities related to the United Nations Sustainable Development Goals.</p> |   |

| <b>2. Does your institution offer opportunities for medical students to do research related to planetary health and/or sustainable healthcare?</b>  |  |
|---|--|
| 2   | The institution has a specific research program or fellowship for students interested in doing planetary health/sustainable healthcare research.   |
| 1   | <b>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.</b> |
| 0   | There are no opportunities for students to engage in planetary health/sustainable healthcare research.   |
| <p><i>Score explanation:</i> There are opportunities for students to perform research, but none are specifically geared towards planetary health or sustainable healthcare. Students would have to create the research opportunity for themselves - none are readily available - but they could feasibly get funding approved for a planetary health or sustainable healthcare project.</p> |  |

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

|          |   |
|----------|---|
| 2        | The medical school has a webpage with specific information related to planetary health or sustainable healthcare that includes up-to-date information on relevant initiatives and contact information of potential mentors. |
| 1        | There is a medical school webpage that features some information on projects and mentors within planetary health and sustainable healthcare within the medical school, but it lacks key information.                        |
| <b>0</b> | <b>There is no medical-school specific webpage for locating planetary health and/or sustainable healthcare projects or mentors.</b>   |

*Score explanation:* The Center for Global Health and Social Responsibility has a page on their website titled "[Climate Change and Health](#)". This page lists the contact information for "Climate Champions", who are faculty within various health professional schools active in planetary health. However, there is no webpage specifically within the medical school website.

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

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

*Score explanation:* [Health Students for a Healthy Climate](#) (HSHC) is an interdisciplinary student group aimed at advancing sustainability initiatives within the health professional schools. This involves both spreading awareness about the intersection between the environment and human health as well as the importance of reducing the environmental impact of healthcare institutions. The group receives annual seed money through the Center for Health Interprofessional Programs (CHIP), and is supported by a faculty mentor, Dr. Teddie Potter.

In addition, students within the medical school are planning on establishing a chapter of Medical Students for a Sustainable Future in Spring 2022.

**5. Is there a student liaison representing sustainability interests who serves on a medical school or**

| <b>institutional decision-making council to advocate for curriculum reform and/or sustainability best practices?</b>   |   |
|--|---|
| <b>1</b>   | <b>Yes, there is a student representative that serves on a medical school or institutional decision-making council/committee.</b> |
| 0  | No, there is no such student representative.  |
| <p><i>Score explanation:</i> Students have the opportunity to volunteer to give feedback on the new curriculum that is being developed for the medical school. Students who joined the Public Health Feedback Group are able to give feedback on the learning goals for this part of the curriculum, which includes the impact of climate change on human health. This is a temporary position, as it will only exist while the new curriculum is being developed.</p> |   |

| <b>6. In the past year, has the institution had one or more co-curricular planetary health programs or initiatives in the following categories? (1 point each)</b>   |  |
|--|--|
| <b>1</b>   | <b>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.</b>  |
| <b>1</b>   | <b>Panels, speaker series, or similar events related to planetary health that have students as an intended audience.</b>   |
| <b>1</b>   | <b>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.</b> |
| 1  | Cultural arts events, installations or performances related to planetary health that have students as an intended audience.  |
| 1  | Local volunteer opportunities related to building community resilience to anthropogenic environmental impacts.   |
| <b>1</b>   | <b>Wilderness or outdoors programs (e.g., that organize hiking, backpacking, kayaking, or other outings for students)</b>  |
| <p><i>Score explanation:</i><br/> <b>Garden:</b> <a href="#">Cornercopia</a> is a student-run organic farm that gives students the opportunity to get hands-on experience in sustainable agriculture. Anyone, including students and community members, can volunteer at the farm, and there are also courses and research opportunities available. There is also an <a href="#">Interprofessional Student Garden Project</a>, where students can help plant and sustain a garden on campus.<br/> <b>Conferences, speaker series, symposia, or similar events:</b> The Humphrey School of Public Affairs, in partnership with the Institute on the Environment, launched <a href="#">“Advancing Climate Solutions. Now.”</a> in October 2021. This Climate Policy Series was developed to engage UMN students in policy and advocacy related to climate change (although is not specifically focusing on planetary health). In</p> |  |



addition, the Center for Spirituality and Healing has hosted multiple free webinars on the topic of planetary health.

**Learning directly from members of a local environmental justice community:** Through the Climate Health Action Program, the Department of Medicine hosted a [2021 Health and Climate Justice Lecture Series](#), which consisted of four lectures on various environmental justice topics. Multiple local organizations were featured.

**Cultural arts events, installations or performances:** Liberty Community Church, a church in Minneapolis, hosted a 3-day program in September 2021 called “[Healing the Planet. Healing Ourselves](#),” which featured a musical experience. Teddie Potter, the director of planetary health in the U of M School of Nursing, formed a partnership with this church and helped them plan the event. However, this event was not formally sponsored or hosted by the U of M.

**Local volunteer opportunities:** Opportunities for advocacy regarding the Line 3 pipeline and the Phillips Neighborhood Urban Farm were shared with medical students by other medical students, but the institution itself has not coordinated or broadcast any opportunities.

**Wilderness or outdoor programs:** The Outdoors Club is a student organization that provides opportunities for all UMN students to engage in outdoor activities while following Leave No Trace principles and engaging members in discussions of environmental ethics.

|                                    |
|------------------------------------|
| <b>Section Total (x out of 15)</b> |
|------------------------------------|

|           |
|-----------|
| <b>10</b> |
|-----------|

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

# Campus Sustainability

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

| 1. Does your medical school and/or institution have an Office of Sustainability?   |  |
|--|--|
| 3  | <b>Yes, there is an Office of Sustainability with multiple full-time staff dedicated to campus sustainability. If the Office of Sustainability serves the entire campus, there is at least one designated staff member for sustainability at the hospital and/or medical school.</b> |
| 2  | There is an Office of Sustainability with one or more full-time staff dedicated to campus sustainability, but no specific staff member in charge of medical school and/or hospital sustainability.   |
| 1  | There are no salaried sustainability staff, but there is a sustainability task force or committee  |
| 0  | There are no staff members or task force responsible for overseeing campus sustainability  |
| <p><i>Score explanation:</i> There is an Office of Sustainability at UMN with multiple staff members, but no specific staff member in charge of medical school sustainability. UMN's major hospital affiliation, M Health Fairview, does have a <a href="#">sustainability team</a> with efforts focused in 7 areas (energy efficiency, environmental preferable purchasing, sustainable facility design, healthy food systems, waste reduction/recycling, water conservation, and employee engagement).</p> |  |

| 2. How ambitious is your medical school/institution's plan to reduce its own carbon footprint? |  |
|--|--|
| 4  | The institution has a stated goal of carbon neutrality by 2030 or earlier and the medical school / institution has a well-defined and adequate plan in place to achieve this goal. |
| 3  | Yes, there is a stated carbon neutrality goal by at least 2040 and the medical school/institution has a well-defined and adequate plan in place to achieve this goal.              |
| 2  | <b>Yes, there is a stated carbon neutrality goal by at least 2040, but the medical school/institution has not created a plan to reach that goal or the plan is inadequate.</b>     |
| 1  | There is a CO2 emission reduction goal, but it is not one of carbon neutrality.  |
| 0  | There is no stated goal for reduction of CO2 emissions.  |

*Score explanation:* 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. 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.

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 "improve community health through environmental justice including green practices, food programs, transit/carpooling, and land use."

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

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

*Score explanation:* According to the Office of Sustainability, the University electricity is about 41% renewable. The UMN self reported [STARS](#) report indicates some on-site renewable electricity generating sources, but has some unsubmitted data and does not include gas from renewable sources.

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

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

*Score explanation:* According to the Office of Sustainability, the University uses the state of Minnesota's [B3 guidelines](#) for sustainable construction of new buildings, and any new construction on campus is required to comply with these standards. When applied, these guidelines help meet sustainability goals, including water, energy, and waste.

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

|   |  |
|---|--|
| 2 | <b>Yes, the medical school has implemented strategies to encourage and provide environmentally-friendly transportation options such as safe active transport, public transport, or carpooling and these options are well-utilized by students. Alternatively, the campus location is not amenable to unsustainable forms of transportation by default.</b> |
| 1 | The medical school has implemented some strategies to provide environmentally-friendly transportation options, but the options are unsatisfactorily accessible or advertised.  |
| 0 | The medical school has not implemented strategies to encourage and provide environmentally-friendly transportation options.  |

*Score explanation:* The Medical School is located right next to the light rail, which many students take advantage of. Students can purchase a U-Pass, which is a discounted card that allows students to take the light rail and metro-area buses an unlimited number of times throughout an entire semester. The university provides free 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. The U of M Twin Cities is recognized nationally for bicycle transportation. In addition, the U of M campus is not amenable to cars, as there is almost no free parking on campus. However, there are transportation options available for third and fourth-year medical students once they start clinical rotations, as they are often not taking consistent courses on-campus anymore.

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

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

*Score explanation:* The 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.

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

|   |   |
|---|---|
| 3 | Yes, the medical school has adequate sustainability requirements for food and beverages, including meat-free days or no red-meat, and is engaged in efforts to increase food and beverage sustainability. |
| 2 | There are sustainability guidelines for food and beverages, but they are insufficient or optional. The medical school is engaged in efforts to increase food and beverage sustainability.                 |
| 1 | <b>There are sustainability guidelines for food and beverages, but they are insufficient or optional. The medical school is not engaged in efforts to increase food and beverage sustainability.</b>      |
| 0 | There are no sustainability guidelines for food and beverages.  |

*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. This is done at the campus level. On the campus level, according to the Office of Sustainability, University food service, M Dining, is provided through Aramark. One M Dining location in a medical school building is the Caribou Cafe in Moos Tower. Previously, Freshii in PWB, was another M Dining location, though this has been closed for the duration of this year, with an unknown future of opening. A new dining location in HSEC was planned to be opened but has not yet gone into service. The University has established food systems as one of their sustainability priorities and they actively work with Aramark to establish sustainability requirements, goals, and initiatives.

**8. Does the medical school or associated institution apply sustainability criteria when making decisions about supply procurement?**

|   |   |
|---|---|
| 3 | Yes, the medical school has adequate sustainability requirements for supply procurement and is engaged in efforts to increase sustainability of procurement.                                      |
| 2 | There are sustainability guidelines for supply procurement, but they are insufficient or optional. The medical school is engaged in efforts to increase sustainability of procurement.            |
| 1 | <b>There are sustainability guidelines for supply procurement, but they are insufficient or optional. The medical school is not engaged in efforts to increase sustainability of procurement.</b> |
| 0 | There are no sustainability guidelines for supply procurement.  |

*Score explanation:* According to the Dean’s office, the Medical School does not have any input on supply procurement or its sustainability criteria. This is done at the campus level. 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). The University’s Office of Sustainability, in conjunction with its educational campaign “It All Adds Up,” assists with 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.

**9. Are there sustainability requirements or guidelines for events hosted at the medical school?**

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

*Score explanation:* 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.

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

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

*Score explanation:* Yes, the University has initiatives that the medical school can access. The Office of Sustainability has been working with the Medical School department of Biochemistry, Molecular Biology, and Biophysics (BMBB) on lab sustainability initiatives. According to the Office of Sustainability, their ongoing partnership with the BMBB, specifically The Beilinsky lab, has been productive. They have moved forward with energy-related sustainability efforts with a goal of creating a [Green Labs](#) certification program this upcoming year, and this project currently has a small group of stakeholders including individuals from EHS, Energy management, UMN Recycling, and graduate students. However, the medical school has not been heavily involved nor has it formalized the initiative yet. Additionally, the University's recycling department works directly with labs on improving recycling and organics collection.

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

|  |   |
|--|---|
| 4  | The institution is entirely divested from fossil fuels and has made a commitment to reinvest divested funds into renewable energy companies or renewable energy campus initiatives. |
| 3  | No, the institution is entirely divested from fossil fuels.   |
| 2  | <b>The institution has partially divested from fossil fuel companies or has made a commitment to fully divest, but currently still has fossil fuel investments.</b>                 |
| 1  | The institution has not divested from fossil-fuel companies, but faculty and/or students are conducting organized advocacy for divestment.  |
| 0  | Yes, the institution has investments with fossil-fuel companies and there have been no efforts to change that.  |
| <p><i>Score explanation:</i> According to local news sources, including the Star Tribune and <a href="#">MN Daily</a>, the University of Minnesota in September of 2021 announced its plans to fully divest from fossil companies in the next five to seven years.</p> |   |

|                                    |           |
|------------------------------------|-----------|
| <b>Section Total (x out of 31)</b> | <b>17</b> |
|------------------------------------|-----------|

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

# Grading

## Section Overview

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

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

*\*Within each grade bracket, a score in the top 5% (5 to 9%), receives a "+", and a score in the bottom 5% (0-4%) receives a "--". For example, a percentage score of 78% would be a B+.*

## Planetary Health Grades for the University of Minnesota Medical School

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

| Section   | Raw Score                     | Letter Grade |
|---|-------------------------------|--------------|
| <b>Planetary Health Curriculum (30%)</b>                            | $(31 / 69) \times 100 = 45\%$ | C            |
| <b>Interdisciplinary Research (17.5%)</b>                           | $(7 / 17) \times 100 = 41\%$  | C-           |
| <b>Community Outreach and Advocacy (17.5%)</b>                      | $(6 / 14) \times 100 = 43\%$  | C-           |
| <b>Support for Student-led Planetary Health Initiatives (17.5%)</b> | $(10 / 15) \times 100 = 67\%$ | B            |
| <b>Campus Sustainability (17.5%)</b>                                | $(17 / 31) \times 100 = 55\%$ | C+           |
| <b>Institutional Grade</b>  | <b>50%</b>                    | <b>C</b>     |



# Report Card Trends

## Section Overview

This graph demonstrates trends in overall and section grades for the years in which the University of Minnesota has participated in the Planetary Health Report Card initiative.

### PHRC Trends for the University of Minnesota Medical School - Twin Cities

