Planetary Health Report Card (Medicine) 2026:

Hackensack Meridian School of Medicine

2025-2026 Contributing Team:

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Summary of Findings

Overall Grade	A

Curriculum	A+

- Hackensack Meridian School of Medicine has a strong, well-integrated planetary health curriculum. Core courses address climate change, environmental determinants of health, and sustainability in clinical practice, including impacts on physical and mental health, food and water security, and vulnerable populations. Students also learn about the disproportionate effects of environmental hazards on marginalized populations and global health inequities. Students also get hands-on experience through longitudinal electives, student-led projects, and community-based initiatives. The curriculum includes training in patient communication, environmental history-taking, and advocacy, with dedicated faculty support and ongoing improvements through the school's strategic plan.
- **Recommendations:** Expand teachings on Indigenous knowledge and value systems into core courses and projects, as well as providing more opportunities for students to practice environmental histories and talking with patients about climate-related health issues, particularly throughout clerkships.

Interdisciplinary Research	A-

- The Hackensack Meridian Health Network has faculty and staff who conduct research in the field of Environmental Health and Medicine, including multiple faculty whose primary research focus is planetary health. Additionally, HMSOM hosted a symposium on planetary health and community climate health resilience in Spring 2025. HMSOM is a member of multiple planetary health research groups, including National Academy of Medicine Initiative for Climate and Health, the Global Consortium on Climate and Health Education, the Planetary Health Alliance, the Medical Society Consortium on Climate and Health, and Medical Students for a Sustainable Future. HMSOM is also planning to create a dedicated department for interdisciplinary planetary health research as part of a five-year plan created by the dean.
- **Recommendations**: HMSOM should continue to host planetary health research symposiums. Additionally, the HMSOM library could create a resource with access to all ongoing environmental health research projects. Students are a valuable resource for research and this would help connect them to faculty who are conducting work within this field for mentorship.

Community Outreach and Advocacy	A+

- Hackensack Meridian School of Medicine demonstrates strong and sustained engagement in community outreach and advocacy related to planetary health. The school maintains multiple long-standing community partnerships that address environmental health risks, integrates planetary health into longitudinal community-facing curricula, and provides ongoing education for students, residents, faculty, and patients. Recent expansions include: new capstone projects, a longitudinal environmental health elective, and increased graduate medical education and faculty programming. Patient-facing educational materials on environmental exposures and climate-related health impacts are widely accessible through centralized platforms and health system resources.
- **Recommendations:** Continue to expand longitudinal student and resident opportunities within community partnerships and further evaluate the reach and impact of patient-facing planetary health education.

Support for Student-Led Initiatives	A

- The Hackensack Meridian School of Medicine supports student groups dedicated to planetary health. The Environmental Health Student Interest Group, a student-led group specifically dedicated to this topic, receives funding from HMSOM and works closely with faculty members. Additionally, HMSOM offers several opportunities for students to engage in sustainability projects through faculty-supported research,

curriculum capstone projects, community projects, and volunteering opportunities.
- **Recommendations**: We recommend the medical school partners with the Student Affairs and Wellbeing Organization as well as student-led community service groups to offer more volunteer opportunities for students interested in sustainable initiatives and environmental health.

Campus Sustainability	**C-**

- The Hackensack Meridian School of Medicine has made good progress to become a more sustainable campus, but there is more progress to be made including fossil fuel divestment and using more renewable energy on site. This is directly related to setting achievable goals for carbon neutrality in the future. In addition, there are no current guidelines for campus event sustainability.
- **Recommendations**: There is still much to improve with campus sustainability. Goals and plans need to be in place regarding improving transportation and sustainable buildings. Another area we can improve on is making lab spaces more sustainable. We also recommend improving/introducing sustainable guidelines for events and procurement; both at the medical school and institutions overseen by the HMH network.

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 health professional 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 health professional training. It is imperative that we hold our institutions accountable for educating health professional 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) 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 health professional 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 (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 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 the 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).

Scoring Matrix

- Elective coursework (1 point): This score applies to material that is actively selected by the students such as a module choice, or additional lecture series. By implication, only a given proportion of the cohort will receive this taught material.
- Brief coverage in the core curriculum (2 points): This score applies where a topic is covered only briefly in a core curriculum session. This implies that the entire cohort receives the same material. At minimum brief inclusion would qualify as inclusion in a single lecture slide in a single year.
- In depth coverage in the core curriculum (3 points): This score applies where a topic is taught in significant detail or where a topic is repeatedly brought up in different years. This might look like several dedicated lecture slides, or inclusion of the same topic in different lectures and teaching formats.

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.

Updated in 2025, a complete literature review by metric is available for the 2024/25 Medicine Report Card Template. This largely translates across disciplines although we are hoping to expand this process across all of our covered disciplines. A link to the 2025 literature review by metric is available here.

Planetary Health Curriculum

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

Curriculum: General

1.1. Did your medical school offer elective courses (student selected modules) to engage students in Education for Sustainable Healthcare or Planetary Health in the last year?	
Yes, the medical school has offered more than one elective whose primary focus is ESH/planetary health in the past year. (3 points)	
Yes, the medical school has offered **one** elective whose primary focus is ESH/planetary health in the past year. (2 points)	
The medical school does **not** have any electives whose primary focus is ESH/planetary health, but there are one or more electives that include a **lecture** on planetary health. (1 point)	
No, the medical school has **not** offered any electives on planetary health or electives that include ESH/planetary health topics in the past year. (0 points)	
Score Assigned:	3
Score explanation: HMSOM has two specific electives that are dedicated to teaching environmental health. One elective is a 2-week elective that is an overview of the broad impacts of planetary health that covers health effects, social determinants, intersectionality, and healthcare's role in mitigation. There is also a longitudinal planetary health elective that expands on this content and includes a student project involved in either research, community development, or education. There are also opportunities for students to design their own community project elective in their 4th year that may be centered in environmental health.	

Curriculum: Health Effects of Climate Change

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

Score Assigned:	3
Score explanation: HMSOM has a longitudinal competency that involves understanding the link between human health and extreme heat which involves several components such as curricular education, clinical screening, and patient interviewing. The pre-clinical core curriculum offers lectures and hand written assignments regarding this topic in the Homeostasis and Allostasis course as well as the Human Dimension component of the HMSOM curriculum. These lectures address various environmental concerns such as extreme heat and their relationships to physical health, mental health, and geopolitical practices such as food insecurity and changing agricultural practices.	

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: The Human Dimension course offers lectures on environmental health that address the direct impact of climate change on physical and mental health breaking down climate change into various aspects, the impact of those various aspects on the environment, and the result of those environmental impacts on human health and also linking climate change to an increase in diagnoses of well known mental health conditions. These lectures specifically cite increasing rates of weather events and natural disasters to individual health both physically and mentally referencing disasters such as wildfires and flooding and through discussion of pertinent studies related to flooding and mental health. The homeostasis and allostasis course also provides an environmental health study guide linking environmental determinants of health, such as extreme weather events, to relevant health issues covered in the course.	

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

Score explanation: The HMSOM curriculum covers changing patterns of infectious disease as evidenced by changing distributions of vector borne diseases and other communicable diseases. This is explicitly linked to climate change in the lecture on vector borne diseases in the Infection, Immunity, and Cancer course, as well as the 'Environmental Determinants of Health' lecture in the Human Dimension course for which all M1's are enrolled.

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. (3 points)	
This topic was **briefly** covered in the **core** curriculum. (2 points)	
This topic was covered in **elective** coursework. (1 point)	
This topic was **not** covered. (0 points)	
Score Assigned:	3
Score explanation: The 'Environmental Determinants of Health' lecture from the Human Dimension course of the HMSOM curriculum links climate change and air pollution to respiratory health. These lectures discuss the symptoms and conditions that are worsened by these phenomena during the two part Human Dimension sessions on climate change and the environment. The homeostasis and allostasis course also provides an environmental health study guide linking environmental determinants of health, such as climate change and air pollution, to relevant health issues, including respiratory health.	

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. (3 points)	
This topic was **briefly** covered in the **core** curriculum. (2 points)	
This topic was covered in **elective** coursework. (1 point)	
This topic was **not** covered. (0 points)	
Score Assigned:	3
Score explanation: The 'Environmental Determinants of Health' lecture from the Human Dimension section of the HMSOM curriculum explores how air pollution and extreme heat are linked to cardiovascular disease and cardiovascular failure respectively. These lectures discuss the increased risk that extreme heat imbues among those with acute and chronic cardiovascular conditions. The environmental health study guide provided in the Homeostasis and Allostasis course also addresses the link between climate change and increased heat with cardiovascular health.	

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. (3 points)	
This topic was **briefly** covered in the **core** curriculum. (2 points)	
This topic was covered in **elective** coursework. (1 point)	
This topic was **not** covered. (0 points)	
Score Assigned:	3
Score explanation: The 'Environmental Determinants of Health' lecture from the Human Dimension course, an environmental health study guide offered in the Neurosciences and Behavior, and the Bioethics and Psychiatry lecture in the psychiatry clerkship discusses how climate change is linked to increases in diagnoses of well known mental health conditions and mentions the threat climate change poses to youth mental health specifically. Furthermore, one of the learning outcomes for students throughout their medical education is as follows: "Establish plans to address excess burdens of psychiatric disease that arise from climate change influenced by extreme weather events such as heat waves, wildfires, severe hurricanes, and flooding.	

1.8. Does your medical school 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. (3 points)	
This topic was **briefly** covered in the **core** curriculum. (2 points)	
This topic was covered in **elective** coursework. (1 point)	
This topic was **not** covered. (0 points)	
Score Assigned:	3
Score explanation: The 'Environmental Determinants of Health' lecture in the Human Dimension course, 'Food as Medicine' workshop at the Culinary Institute of America during the Nutrition, Metabolism, and Digestion course, and lectures in the Health Systems Sciences longitudinal pre-clerkship course links food and water concerns to patient health such as lead levels in the water supply and ecosystem and climate change concerns such as air pollution impacts on various health diagnoses and each body system.	

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. (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: There are several slides in one of the environmental health lectures from the Human Dimension section of the HMSOM curriculum that talks about the disproportionate impact of climate change on marginalized populations and discusses practices that have perpetuated these differences such as redlining and the impact it has had on communities of color. Furthermore, the lecture discusses the impact of climate change on smaller countries and the economic impact it has on them. Students also navigate and explore these concerns throughout the Human Dimension Voices Program where pairs of students meet with one member of the nearby community about once a month over three years. Students also have the opportunity to pursue a capstone project focused on community work in their M4 year.

Lastly, one of the established learning competencies for students in their planetary health education includes:

Competency 3: Analyze the historical and structural causes of climate change, air pollution and ecological degradation, and describe the ways in which it creates/exacerbates health inequity

1. Explain ways that climate change intersects with structural racism and health equity in the United States (e.g. redlining, heat islands, disproportionately impacted populations, intersecting health challenges, access to adaptive and protective measures)
2. Define environmental justice and recognize its importance to climate health solutions
3. Describe impacts of climate change on global health inequities (natural disasters/extreme weather, forced migration, political conflict, food security, water scarcity, and sea level rise), including inequitable resource allocation for adaptive responses

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

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: Within the environmental health lectures of the Human Dimension section of the HMSOM curriculum there are several slides that address migration responses and infectious disease risks. Furthermore, there are other sections that discuss the impacts of food scarcity, water scarcity and sea-level rise. HMSoM also explores global climate change through the Global Health Initiative, which includes webinars with international leaders in climate health.

One of the learning objectives for students for planetary health is as follows: Describe impacts of climate change on global health inequities (natural disasters/extreme weather, forced migration, political conflict, food security, water scarcity, and sea level rise), including inequitable resource allocation for adaptive responses.

1.11. Does your medical school curriculum address the reproductive health effects of industry-related environmental toxins (e.g. air pollution, pesticides, microplastics)?	
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: One of the environmental health lectures of the Human Dimension section of the HMSOM curriculum talks about the impact of lead exposure on male and female reproductive health. This topic is also briefly discussed in a lecture that HMSOM has on reproductive health disparities and social determinants of health. Additionally, the environmental health study guide provided in HMSoM's The Developing Human course links environmental toxins to reproductive health.	

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. (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: This topic was covered very well in select sessions in the Human Dimension curriculum. In last year's environmental health lecture, lead contamination across Northern NJ was shown to students and air quality was discussed in more detail, specifically in regards to the events of the Canadian wildfire smoke that swept the northeastern United States in 2023. HMSOM's community partnerships also focus on locally relevant human-caused environmental threats, including, for example, collaboration with the Paterson Health Alliance for lead remediation/abatement, and partnership with Greater Bergen Community Action and Hackensack Meridian staff on lung cancer prevention grants that include radon mitigation in affected homes. The Environmental Health Working Group also focuses on environmental threats to the surrounding community by bringing together students and HMSOM faculty to assess current gaps and identify longitudinal opportunities to strengthen environmental health and sustainability education, informed by local community priorities.	

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. (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:	2

Score explanation: At HMSOM, Indigenous knowledge and value systems are acknowledged as part of our discussions on environmental health and planetary health solutions in the Human Dimension curriculum. In the HD curriculum, we emphasize the importance of balance between the Earth and people, incorporating Indigenous perspectives on sustainability, stewardship, and interconnected well-being. Additionally, students are introduced to key Indigenous symbols, such as the Navajo medicine wheel, which serves as a visual representation of holistic health and harmony, reinforcing the relationship between environmental and human health. There are also other sessions that cover integrative medicine, access to care, and various health topics related to Indigenous knowledge.

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. (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: This topic is covered throughout multiple lectures in the Human Dimension course, which is a part of the longitudinal curriculum at HMSOM. Students are also tasked with developing environmental maps of the counties their group is assigned to in order to study how local water sources, lead, toxic emissions, and other environmental factors affect neighborhoods with lower SES. Students also address these concerns through work with their community partners, where groups of students collaborate with local organizations to address health equity, as well as phase three and capstone projects.

Curriculum: Sustainability

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

This topic was explored **in depth** by the **core** curriculum. (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 point)	
Score Assigned:	3
Score explanation: The environmental and health benefits of a plant-based diet is discussed during the 'Food as Medicine' experience at the Culinary Institute of America during the Nutrition, Metabolism, and Digestion course. This topic was also covered in the Human Dimension session on Nutrition in which the health benefits of a plant-based diet is explained and emphasized by one of the faculty physicians at the School of Medicine.	

1.16. Does your medical school curriculum address the carbon footprint of 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: This topic was covered in the Human Dimension curriculum by a faculty member and the VP of Sustainability for our health network. Furthermore, the Environmental Health Working Group leads discussions on how the SOM can reduce their carbon footprint and are actively mitigating emissions on anesthetics, reducing surgical excess in sterile processing, and other initiatives. Sustainability is one of the five major goals in HMSOM's five year strategic plan.	

1.17. Does your medical school curriculum cover these components of sustainable clinical practice in the core curriculum? (points for each)	**Score**
The health **and** environmental **co-benefits** of **avoiding** over-medicalisation, over-investigation and/or over-treatment (2 points)	2
The environmental impact of **pharmaceuticals** and over-prescribing as a cause of climate health harm. Alternatively teaching on **deprescribing** where possible and its environmental and health co-benefits would 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	1

environmentally harmful anaesthetic gas options with reduced greenhouse gas emissions. (1 point)	
The impact of **inhalers** on the healthcare carbon footprint and the environmental benefit of dry powdered inhalers over metered dose inhalers. (1 point)	1
Waste production within healthcare **clinics** and strategies for reducing waste in clinical activities (e.g. single use items in the inpatient or outpatient setting) (1 point)	1

Score explanation: HMSOM covers all of these topics in our core curriculum via the Human Dimension course, required for all students. This includes discussions on avoiding over-medicalization, addressing surgical waste. There is an emphasis on reducing the carbon footprint of the medical system in collaboration with the health care system.

Furthermore, other lectures in the human dimension curriculum describe the benefits of alternative management of medical conditions other than pharmaceuticals and the co-benefits to both health and environment. Lectures in Science, Skills, and Reasoning courses discuss the use of inhalers and the carbon footprint attributed to their use, and the surgery clerkship discusses the impact of anesthetic gases on the healthcare carbon footprint.

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 point)	
No, there are **not** strategies introduced for having conversations with patients about climate change. (0 points)	
Score Assigned:	2

Score explanation: The required Clinical Skills course now includes training on how to talk with patients about climate health considerations. Also, the Family Medicine Clerkship offers an online module on climate health that allows students to learn about how to communicate with patients on the health effects of climate change. This includes discussing air quality, heat waves, and other potential consequences that may affect health as caused by climate change. The pediatrics clerkship also offers similar strategies for discussing climate change with families. Students are also trained and given tools on how to discuss the health effects of climate change with their Voice Program partner through the Human Dimension curriculum.

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: Students learn how to take an environmental history early in the clinical skills curriculum at the beginning of their pre-clerkship curriculum. Example questions are provided, followed by a partnered history-taking exercise for patients with extensive environmental health exposures impacting their health. These strategies are continuously reinforced throughout the clinical skills curriculum as students encounter standardized patients with environmental histories.	

Curriculum: Administrative Support for Planetary Health

1.20. Is your <u>medical school</u> currently in the process of implementing or improving Education for Sustainable Healthcare (ESH)/planetary health education?	
Yes, the medical school is currently in the process of making **major** improvements to ESH/planetary health education. (4 points)	
Yes, the medical school is currently in the process of making **minor** improvements to ESH/planetary health education. (2 points)	
No, there are **no** improvements to planetary health education in progress. (0 points)	
Score Assigned:	4
Score explanation: An Environmental Health Working Group (EHWG) has been established. The group consists of students, medical school leadership and faculty, and members of the Hackensack Meridian Health Network's leadership. The group has conducted a comprehensive assessment of the existing curriculum and identified longitudinal opportunities for sustainability education within the medical school and network. Several health electives have been established as well as longitudinal competencies every student is expected to learn by their graduation from the School of Medicine. This not only involves curricular learning, but learning in clinical education as well as justice and advocacy. This work is supplemented by HMSOM's five year strategic plan, which has goals aligned with continuing to improve and sustain the school's education for sustainable healthcare and planetary health education.	

1.21. How well are the aforementioned planetary health/Education for Sustainable Healthcare topics integrated longitudinally into the <u>core</u> curriculum?
Planetary health/ESH topics are **well integrated** into the core medical school curriculum. (6 points)
Some planetary health/ESH topics are appropriately integrated into the core medical student curriculum. (4 points)
Planetary health/ESH is not integrated and is primarily addressed in **(a) standalone lecture(s).** (2 points)
There is **minimal/no** education for sustainable healthcare. (0 points)

Score Assigned:	6
Score explanation: HMSOM covers planetary health in the core curriculum Science, Skills, and Reasoning courses by discussing environmental determinants of health in driving the pathogenesis of cancers, pulmonary conditions, and allergy, as examples. These themes are reinforced throughout the longitudinal clinical skills aspect of the curriculum. HMSOM also hosts standalone lectures on environmental health throughout the Human Dimension course, which is dedicated to teaching students about the Social Determinants of Health. The Health Systems Science course indirectly addresses planetary health by using the environment as an exposure in many examples. Additionally, students participate in weekly Patient Presentation Problem-Based Learning sessions that touch on how planetary health themes can impact patients.	

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: There are direct faculty who, as part of the Human Dimension curriculum, are responsible for overseeing curricular integration of planetary health and sustainable healthcare. The individual responsible for the integration of environmental health curriculum is Lawrence Rosen MD, contact information lawrence.rosen@hmhn.org.	

1.23. Does your health professional curriculum include teaching on civic engagement/advocacy to address the environmental and structural determinants of health?	
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: This topic is explored in depth in the core curriculum through the longitudinal Human Dimension course, where students engage directly with community members and are guided to connect environmental/structural drivers of health with actionable advocacy strategies. The Human Dimension course includes lectures on environmental exposures and community-specific risks, and students are encouraged to translate these discussions into advocacy-oriented action planning with community members. In addition, HMSOM's ongoing community partnerships provide applied opportunities for students to engage with community	

initiatives and understand advocacy pathways beyond the clinical setting. The required senior Capstone project includes training on advocacy and messaging skills.

Section Total (74 out of 75)	**98.7%**

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Interdisciplinary Research

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

2.1. Are there researchers engaged in planetary health research and healthcare sustainability research at your institution?	
Yes, there are faculty members at the **institution** who have a **primary** research focus in planetary health **or** sustainable healthcare/vetcare. (3 points)	
Yes, there are individual faculty members at the **institution** who are conducting research **related** to planetary health or healthcare sustainability, OR are part of a national/international sustainability working group, but it is not their primary research focus. (2 points)	
There are sustainability researchers at the **institution**, but not specifically associated with healthcare/vetcare. (1 point)	
No, there are **no** planetary health and/or sustainability researchers at the **institution** at this time. (0 points)	
Score Assigned:	3
Score explanation: The Hackensack Meridian School of Medicine has direct faculty who are engaged with research related to planetary health, health effects of climate change, and sustainability. Dr. Lawrence Rosen's primary research area is in planetary health, including planetary health as it relates to medical education research and community engagement. He is also a part of the Global Consortium on Climate and Health Education (GCCHE). Dr. Lisa Carter-Bawa is the founding director of the Cancer Prevention Precision Control Institute (CPPCI), and conducts research related to environmental health and cancer. This is a community engaged research center.	

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 point)	
There is **no** dedicated department or institute. (0 points)	
Score Assigned:	2
Score explanation: Hackensack Meridian currently has an Occupational and Environmental Health department both on campus and at each major hospital in their health network. While HMSOM does not currently have a dedicated department or institute for interdisciplinary planetary health research, it is part of the HMSOM five-year strategic plan, established by the school's dean, to open one within the next 3 years.	

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 point)	
There is **no** process, and **no** efforts to create such a process. (0 points)	
Score Assigned:	3
Score explanation: The Hackensack Meridian School of Medicine has a community partner advisory board, which allows community members to collaborate on research and educational priorities. Additionally, Dr. Lawrence Rosen has met directly with community members in Clifton, Paterson, Garfield, and other surrounding cities to discuss climate justice.	

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:	2
Score explanation: The Hackensack Meridian School of Medicine Library has a webpage titled "Environmental Health and You" which serves to connect students to information and resources on environmental sustainability and justice, and includes areas for county and New Jersey-specific resources. It attempts to connect students to relevant campus resources, however it is not adequately comprehensive nor contains any information that may be used by students to join active efforts in environmental health research.	

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
Score explanation: HMSOM hosted a symposium on planetary health and community climate health resilience in Spring 2025. Additionally, as a part of HMSOM'S ongoing Global Health Seminar series, a professor was invited to give a talk titled "Climate Changes Health" in Winter 2025.	

2.6. Is your institution a member of a national or international planetary health or ESH/ESV organisation?	
Yes, the institution is a member of a national or international planetary health **or** ESH/ESV organisation. (1 point)	
No, the institution is **not** a member of such an organisation. (0 points)	
Score Assigned:	1
Score explanation: The Hackensack Meridian School of Medicine is a member of the National Academy of Medicine Initiative for Climate and Health, the Global Consortium on Climate and	

Health Education, the Planetary Health Alliance, the Medical Society Consortium on Climate and Health, and Medical Students for a Sustainable Future.

Section Total (15 out of 17)	**88.2%**

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Community Outreach and Advocacy

Section Overview: ***This section evaluates a school's 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 participates 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: Hackensack Meridian School of Medicine maintains sustained partnerships with multiple community organizations to advance planetary and environmental health, including Paterson Health Alliance, Greens Do Good, and Greater Bergen Community Action. These collaborations support work in lead exposure prevention, food sustainability, workforce development, and environmental risk mitigation, such as radon reduction. Building on these established relationships, the school has introduced new capstone projects that allow students to engage longitudinally with these partners, strengthening both student learning and the long-term impact of community-based environmental health efforts.	

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** has not offered such community-facing courses or events. (0 points)	
Score Assigned:	3
Score explanation: The medical school offers a longitudinal, community-facing curriculum through the Human Dimension course, in which students are paired with community members and meet regularly throughout the first three years of training. Dedicated planetary and environmental health sessions occur at least annually, and many student–community pairs revisit these topics multiple times per year. During these meetings, community members learn about local and global environmental health risks, receive written resources, and are supported in developing SMART goals focused on risk reduction, self-advocacy, and long-term well-being. The program also includes at least one annual community-partner webinar on climate resilience, ensuring these conversations are ongoing and relationship-based rather than one-time events.	

3.3. Does your institution have regular coverage of issues related to planetary health and/or sustainable healthcare in university update communications?	
Yes, all students **regularly** receive communication updates dedicated to planetary health and/or sustainable healthcare. (2 points)	
Yes, planetary health and/or sustainable healthcare topics are regularly included in communication updates to **some courses**. (1 point)	
Students **do not** receive communications about planetary health or sustainable healthcare. (0 points)	
Score Assigned:	2
Score explanation: Students receive Weekly Digest communications from Hackensack Meridian Health and Hackensack Meridian School of Medicine that highlight institutional priorities and educational initiatives. While planetary health content was previously included only intermittently, these communications now reflect a more consistent and intentional integration of sustainability and environmental health. Digests regularly feature topics such as the health impacts of climate-related disease, aligning with broader system-wide strategic priorities and reinforcing planetary health as a routine part of the institutional culture.	

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 providers. (1 point)

There are **no** such accessible courses for post-graduate providers. (0 points)	
Score Assigned:	2
Score explanation: Graduate medical education (GME) at Hackensack Meridian Health includes structured planetary health instruction through the Human Dimension program, which features a 90-minute case-based session titled “Environmental Determinants of Health” focused on vulnerable populations, environmental injustice, healthcare’s environmental footprint, and the physician’s role in screening and advocacy. Cases address heat exposure, air quality, extreme weather, vector-borne disease, and climate-related mental health. In addition, residency programs at Jersey Shore University Medical Center and Hackensack University Medical Center incorporate climate-focused teaching through conferences and grand rounds. Additionally, over the past year, more than ten Human Dimension GME talks and multiple faculty sessions, including Pediatric Grand Rounds at HUMC, have centered on planetary health, showing that this content is reinforced across programs rather than limited to a single lecture.	

3.5. Does your institution or its affiliated teaching hospitals have accessible educational materials for patients about environmental health exposures?	
Yes, the **institution** 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 maintains a publicly accessible website titled Environmental Health and You, curated and regularly updated by the HMSOM library, which provides county-specific information on environmental exposures across New Jersey and allows users to identify local risks and resources. The site offers foundational education on environmental health and justice, with materials on emergency preparedness, risks faced by those working in extreme temperatures, and why children are particularly vulnerable to hazards such as lead, noise, and air pollution. In parallel, Hackensack Meridian Health distributes patient-facing educational materials across clinical settings, ensuring patients and families have reliable, practical information to understand and reduce environmental health risks.	

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 **institution** 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:	2
Score explanation: Hackensack Meridian Health now provides formal, accessible educational materials on the health impacts of climate change through system-wide resources and the Environmental Health and You platform, giving patients clear, actionable guidance on climate-related risks and protective strategies. This information is reinforced through articles, digital communications, and community programming across the health system, alongside community talks that allow patients and families to engage directly with clinicians on topics such as extreme heat, air quality, and environmental risk reduction.	

Section Total (14 out of 14)	**100%**

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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.

Hackensack Meridian School of Medicine is expanding community engagement through new longitudinal pathways in planetary and environmental health. Beginning in Phase 3, students may pursue capstone projects with broad flexibility, allowing them to design sustained, community-centered work that integrates environmental health into clinical training, research, and advocacy.

New Phase 3 opportunities include pairing students with community partners such as the Ocean Research Institute and the City of Garfield, NJ to address locally relevant environmental challenges. These offerings create durable, student-driven avenues for advocacy and real-world impact.

Support for Student-Led Planetary Health Initiatives

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

4.1. Does your institution offer support for students interested in enacting a sustainability initiative/QI project?	
Yes, the **institution** *either* offers grants for students to enact sustainability initiatives/QI projects *or* sustainability QI projects are part of the core curriculum. (2 points)	
The **institution** encourages sustainability QI projects (to fulfil clerkship or longitudinal requirements) and offers resources to help students succeed in these projects, **but** there is no student funding available and there is no requirement to participate. (1 point)	
No, the institution does not offer opportunities or support for sustainability initiatives or QI projects. (0 points)	
Score Assigned:	2
Score explanation: HMSOM offers support for students interested in enacting sustainability QI projects through the Environmental Health student special interest group, curriculum capstone projects, and community projects. In their 3rd year, students are required as part of the curriculum to pursue a capstone project that addresses a SDOH, including environmental health. Students can, in their 4th year, pursue a community project for credit, which would similarly address an SDOH. Funding for these projects is available on a case-by-case basis, as communicated with the Human Dimension course leads.	

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 them out and carry them out in their spare time. (1 point)	
There are **no opportunities** for students to engage in planetary health/sustainable healthcare research. (0 points)	
Score Assigned:	2
Score explanation: This year, HMSOM has institutionalized student research related to planetary and sustainable healthcare in several ways. As of this year, a faculty member is serving as a point	

of contact for students interested in engaging in environmental health research. With the help of our school's library, there is now a portfolio and tracked research projects specific to environmental health available to students. Additionally, in Phase 3 of the student curriculum, students have the opportunity to participate in a longitudinal community engaged environmental research project.

4.3. Does the institution have a webpage where students can find specific information related to planetary health and/or sustainable healthcare/vetcare activities and mentors within the institution? For example, projects achieved, current initiatives underway at the medical school and/or contact of information of potential mentors.	
The institution has a webpage with specific information related to planetary health or sustainable healthcare/vetcare that includes up-to-date information on relevant initiatives and contact information of potential mentors. (2 points)	
There is an institution webpage that features some information on projects and mentors within planetary health and sustainable healthcare within the institution, 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: As of last year there is a specific webpage for locating planetary health and/or sustainable healthcare projects or mentors on HMSOM's library website. This outlines the Environmental Health Working Group and initiatives and groups that our medical school hosts such as Medical Students for a Sustainable Future, our current Planetary Health Report Card, information for the Environmental Health Interest group, relevant literature, as well as the members of the working group. These members are all people who may be potential mentors for students whose contact information need not be listed as their names reflect their HMSOM email address. Furthermore, this website is frequently updated by our librarian Margaret Dreker who ensures the information is up to date and refreshed with current initiatives, projects, and research led by students. The link can be found here: https://library.hmsom.edu/EH_and_You/Home.	

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 institution dedicated to planetary health or sustainability in healthcare. (2 points)	
Yes, there is a student organisation at my institution dedicated to planetary health or sustainability in healthcare but it **lacks faculty support.** (1 point)	
No, there is **not** a student organisation at my institution dedicated to planetary health or sustainability in healthcare. (0 points)	
Score Assigned:	2

Score explanation: The Environmental Health Interest Group is a student group that aims to further medical student knowledge about opportunities and research regarding environmental health in medicine. The group also exists to assist the community and hold events as necessary throughout the year. This group is supported by faculty and receives funding from the medical school.

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 who serves on a department or institutional decision-making council/committee. (1 point)	
No, there is no such student representative. (0 points)	
Score Assigned:	1
Score explanation: Within the Environmental Health Working Group, there are several student-liaisons responsible for representing the environmental health-related interests of the student body and implementing sustainability practices at HMSOM. Recently, these students have advocated for regular environmental learning sessions within each learning block such that students are able to apply occurrences of disease learned with current environmental impacts. They are currently working with the Dean of the school to make these sessions come to fruition.	

4.6. In the past year, has the institution had one or more co-curricular planetary health programs or initiatives in the following categories? (1 point each)	**Score**
Projects where students are able to gain experience in organic agriculture and sustainable food systems, such as gardens, farms, community supported agriculture (CSA), fishery programs, or urban agriculture projects.	1
Panels, speaker series, or similar events related to planetary health that have students as an intended audience.	1
Events in which students learn directly from members of a local environmental justice community about the climate and environmental challenges they face, and how health professionals can partner with their community to address these exposures and impacts.	1
Cultural arts events, installations or performances related to planetary health that have students as an intended audience.	0
Local volunteer opportunities related to building community resilience to anthropogenic environmental impacts.	1
Wilderness or outdoors programs (e.g., that organise hiking, backpacking, kayaking, or other outings for students)	1
Score explanation: Through a recent partnership with the Culinary Institute and Teaching Kitchen, students are able to learn about sustainable food systems and agriculture through the CIA.	

Additionally at HMSOM, faculty and guest speakers have presented on topics pertinent to environmental justice and communities impacted by environmental changes such as environmental determinants of health over the past years, environmental factors affecting child development and how to mitigate emissions from healthcare systems. These presentations have been hosted both by the school and the Environmental Health student interest group.

Within the Human Dimension curriculum, students are also actively engaged in projects with some of our Community Health Partners, including: Paterson Health Alliance, Greens Do Good, and the Greater Bergen Community Action. Through these partnerships, students learn directly from the local community about the environmental and planetary challenges that they face, as well as ways to mitigate them.

The Student Affairs and Wellbeing (SAW) Organization at HMSOM hosts several volunteering opportunities for students to address human-caused environmental impacts such as beach clean-ups with a group called Clean Ocean Action. Additionally, the SAW Department as well as the student body have organized several outdoor programs and trips such as a class ski trip, hiking, and beach trips.

To our knowledge, HMSOM has not organized any cultural events centered around planetary health.

Section Total (14 out of 15)	**93%**

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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 institutions, 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:	3
Score explanation: There is an Office of Sustainability within the Hackensack Meridian Health Network campus that is dedicated to the sustainability of the medical school and the building within which it resides. This office is also directly related to hospital sustainability throughout the HMHN with full-time staff improving the sustainability of all the hospitals in the system. There is no dedicated staff to the medical school campus, but to our health network itself, which includes the medical school.	

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 does **not** meet any of the requirements listed above (0 points)	
Score Assigned:	1

Score explanation: The institution has a written and approved plan to achieve carbon neutrality and net-zero emissions by 2050. There is a commitment to reduce emissions by 50% by 2030 and net-zero by 2050. This commitment and detailed action items can be found on the Office of Sustainability's website found here.

5.3. Do buildings/infrastructure used by the institution for teaching (not including the hospital) utilize renewable energy?	
Yes, institution buildings are **100%** powered by renewable energy. (3 points)	
Institution buildings source **>80%** of energy needs from off-site and/or on-site renewable energy. (2 points)	
Institution buildings source **>20%** of energy needs from off-site and/or on-site renewable energy. (1 point)	
Institution buildings source **<20%** of energy needs from off-site and/or on-site renewable energy. (0 points)	
Score Assigned:	1
Score explanation: HMSOM has a campus building that is privately owned and rented. This building is shared in conjunction with Seton Hall and as such has little ability to alter the built environment to use renewable energy. The HMH network procures 30% of its energy needs from off-site renewable energy. The School of Medicine recently signed a new energy procurement deal that includes: ● Partnership Intent: The RTT agreement supports Hackensack Meridian Health's transition to carbon-free energy through a 24x7 hourly matched electricity product with Constellation NewEnergy. ● Hourly Carbon-Free Matching: 30% of the HMH network's hourly electricity usage will be matched with Energy Attribute Certificates (EACs) from carbon-free sources. ● Emission-Free Commitment: The program supports greenhouse gas emissions reduction without modifying the original electricity supply agreement.	

5.4. Are sustainable building practices utilised for new and old buildings on the institution's campus, with design and construction of new buildings and remodelling of old buildings conforming to a published sustainability rating system or building code/guideline?
Yes, sustainable building practices are utilised for new buildings on the institution's campus and the **majority** of old buildings **have been retrofitted** to be more sustainable. (3 points)
Sustainable building practices are utilised for new buildings on the institution's campus, but most old buildings have **not been retrofitted.** (2 points)

Sustainable building practices are **inadequately or incompletely** implemented for new buildings. (1 point)	
Sustainability is **not considered** in the construction of new buildings. (0 points)	
Score Assigned:	2
Score explanation: New additions to the HMSOM campus are utilizing sustainable building practices. This includes the parking garage being added behind campus as well as plans involving further construction of the medical school campus. All new buildings in the HMH network must adhere to LEED Gold standards, as well as any retrofittings or renovations to current buildings.	

5.5. Has the institution implemented strategies to encourage and provide environmentally-friendly transportation options for students and reduce the environmental impact of commuting?	
Yes, the institution has implemented strategies to encourage and provide **environmentally-friendly transportation options** such as safe active transport, public transport, or carpooling and these options are well-utilised by students. Alternatively, the campus location is not amenable to unsustainable forms of transportation by default. (2 points)	
The institution has implemented **some** strategies to provide environmentally-friendly transportation options, but the options are **unsatisfactorily** accessible or advertised. (1 point)	
The institution has **not** implemented strategies to encourage and provide environmentally-friendly transportation options. (0 points)	
Score Assigned:	1
Score explanation: The School of Medicine is accessible by public bus transportation to all students and there are bike racks and bike paths available for students. At all of the institution-associated hospitals there are Electric Vehicle (EV) Charging Stations, however these spaces are not present on the SOM campus. Students are responsible for their own transportation, and there is no incentive to use public transportation. Over the course of their time at the HMSOM, students are required and expected to be able to provide their own transportation to clinical and educational sites throughout the state of NJ. As it is difficult to access these sites without a car, most students drive. Information about environmentally-friendly transportation is also not emphasized in orientation nor anytime following. Promotion of EV use for students on campus could be increased by providing Charging Stations at the school campus.	

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 institution. (0 points)	
Score Assigned:	1
Score explanation: The medical school has a recycling program with bins on campus, but there are a very limited number of recycling bins accessible. There are no compost bins that are accessible or established for students or faculty.	

5.7. Does the <u>institution</u> apply sustainability criteria when making decisions about the campus food and beverage selections (e.g. local sourcing, reduced meat, decreased plastic packaging)?	
Yes, the institution has a**dequate s**ustainability requirements for food and beverages, including meat-free days or no red-meat, and **is engaged** in efforts to increase food and beverage sustainability. (3 points)	
There are sustainability guidelines for food and beverages, but they are **insufficient or optional**. The institution **is engaged** in efforts to increase food and beverage sustainability. (2 points)	
There are sustainability guidelines for food and beverages, but they are **insufficient or optional.** The institution is **not** engaged in efforts to increase food and beverage sustainability. (1 point)	
There are **no** sustainability guidelines for food and beverages. (0 points)	
Score Assigned:	2
Score explanation: There are guidelines in the hospital for sustainable food and beverage and a new contract with Sodexo which oversees the food and beverages provided to students at the School of Medicine campus. There are active efforts to increase the sustainability of food offered to students. The sustainability guidelines can be seen here.	

5.8. Does the <u>institution</u> apply sustainability criteria when making decisions about supply procurement?	
Yes, the institution has **adequate** sustainability requirements for supply procurement **and** is **engaged** in efforts to increase sustainability of procurement. (3 points)	
There are sustainability guidelines for supply procurement, but they are **insufficient or optional.** The institution is **engaged** in efforts to increase sustainability of procurement. (2 points)	
There are sustainability guidelines for supply procurement, but they are **insufficient or optional.** The institution is **not engaged** in efforts to increase sustainability of procurement. (1 point)	
There are **no** sustainability guidelines for supply procurement. (0 points)	
Score Assigned:	3

Score explanation: HMSOM is actively engaged in sustainable supply procurement and is actively involved in efforts to increase sustainability. These efforts are led by the Vice President of Sustainability, Kyle Tafuri. The supply procurement guidelines can be found here:

5.9. Are there sustainability requirements or guidelines for events hosted at the institution?	
Every event hosted at the institution **must** abide by sustainability criteria. (2 points)	
The institution **strongly recommends or incentivizes** sustainability measures, but they are **not required.** (1 point)	
There are **no** sustainability guidelines for institution events. (0 points)	
Score Assigned:	1
Score explanation: There are currently no requirements or guidelines for events hosted by the medical school. There are recommendations in place for sustainable event hosting, including distribution of digital event materials, recycling waste, and including a pre-approved list of vendors but these vendors are not vetted thoroughly for sustainability practices. While these practices are recommended, they are in no way required and often are not utilized.	

5.10. Does your institution have programs and initiatives to assist with making lab spaces more environmentally sustainable?	
Yes, the institution has **programs** and **initiatives** to assist with making lab spaces more environmentally sustainable. (2 points)	
There are **guidelines** on how to make lab spaces more environmentally sustainable, but not programs or initiatives. (1 point)	
There are **no** efforts at the institution to make lab spaces more sustainable. (0 points)	
Score Assigned:	1
Score explanation: At the Hackensack Meridian Center for Discovery and Innovation there are currently lab guidelines on how to make the lab spaces more environmentally sustainable, but no initiatives, programs, or mandatory practices that are in place.	

5.11. Does your institution's endowment portfolio investments include fossil-fuel companies?
The institution is **entirely divested** from fossil fuels **and** has made a **commitment to reinvest divested funds** into renewable energy companies or renewable energy campus initiatives. (4 points)

The institution is **entirely divested** from fossil fuels. (3 points)	
The institution has **partially divested** from fossil fuel companies **or** has made a **commitment to fully divest**, but **currently** still has fossil fuel investments. (2 points)	
The institution has **not divested** from fossil-fuel companies, but faculty and/or students are **conducting organised advocacy** for divestment. (1 point)	
Yes, the institution has investments with fossil-fuel companies and there have been **no efforts** to change that. (0 points)	
Score Assigned:	1
Score explanation: There is active advocacy by members of the HMSOM community including students, faculty, and the VP of Sustainability at Hackensack Meridian Health, but there is not currently any divestment from fossil-fuel companies.	

Section Total (17 out of 32)	**53%**

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Hackensack Meridian School of Medicine (HMSOM) partners with The Culinary Institute of America (CIA) for a "Food as Medicine" initiative, teaching medical students fundamental skills to use food for patient health. This collaboration equips future doctors to educate patients on healthy eating and leverage food's therapeutic potential, integrating culinary arts and food sustainability with medical training.

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 Hackensack Meridian School of Medicine.
The following table presents the individual section grades and overall institutional grade for the Hackensack Meridian School of Medicine on this Planetary Health Report Card.

Section	Raw Score %	Letter Grade
Planetary Health Curriculum (30%)	(74/75) x 100 = 98.7%	A+
Interdisciplinary Research (17.5%)	(15/17) x 100 = 88.2%	A
Community Outreach and Advocacy (17.5%)	(14/14) x 100 = 100%	A+
Support for Student-led Planetary Health Initiatives (17.5%)	(14/15) x 100= 93%	A
Campus Sustainability (17.5%)	(17/32) x 100 = 53%	C
Institutional Grade	**(98.7x0.3 + 88.2x0.175 + 100x0.175 + 93x0.175 + 53x0.175) = 88.1%**	**A**

Report Card Trends

Section Overview
This graph demonstrates trends in overall and section grades for the years in which Hackensack Meridian School of Medicine has participated in the Planetary Health Report Card initiative.