



Planetary Health Report Card (Medicine):

*University of Maryland School of
Medicine*



UNIVERSITY *of* MARYLAND
SCHOOL OF MEDICINE

2023-2024 Contributing Team:

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Summary of Findings

Overall	C
<u>Curriculum</u>	C
<ul style="list-style-type: none"> The University of Maryland School of Medicine (UMSOM) continues to provide education on the intersection between climate change and human health, with a marked improvement being the introduction of a new climate change elective. UMSOM has improved on integration of planetary health material in the 1st and 2nd year curriculums as well, but most education on the subject remains outside the core curriculum. Recommendations: Continue to prioritize and build the planetary health education into the preclerkship curriculum by integrating climate change in relevant subjects throughout each course block. 	
<u>Interdisciplinary Research</u>	C-
<ul style="list-style-type: none"> UMSOM lacks significant planetary health research, with minimal institutional research grant support, and no planetary health research department or website. The Office of Sustainability has cultivated ample resources which is an improvement relative to previous report cards. Recommendations: Create a centralized website dedicated to planetary health, where relevant faculty researchers and environmental health publications are collected and easy to find. Prioritize environmental health research in grant funding and partner with other institutions to identify and address research needs. Join the Global Consortium on Climate and Health Education. 	
<u>Community Outreach and Advocacy</u>	C-
<ul style="list-style-type: none"> Integration of 4MyCity and Baltimore Tree Trust into service learning options for preclerkship students and the institution's Office of Sustainability providing community-facing programming for residents of West Baltimore has greatly improved our community outreach. UMSOM does not yet offer materials or education to community members about environmental health exposures or the impacts of climate change. Recommendations: Continue to build a relationship with the Baltimore city community by providing educational materials or events on climate change and its health impacts. 	
<u>Support for Student-Led Initiatives</u>	C
<ul style="list-style-type: none"> UMSOM does not actively promote environmental health research or offer funding specifically for sustainability-focused projects. There is no School of Medicine-led initiative or centralized resource dedicated to promoting planetary health. Recommendations: Host an Environmental Health Research roundtable. Expand funding and opportunities for students to create and implement sustainability efforts in the campus community. Create a centralized website for students interested in pursuing planetary health-focused projects and initiatives. Collaborate with the School of Social Work's organization ECO to collaborate with local communities in Baltimore. 	
<u>Campus Sustainability</u>	C
<ul style="list-style-type: none"> The UMB Office of Sustainability facilitates sustainability projects and is committed to energy efficiency and waste reduction on campus. The University of Maryland as an institution continues to use steam and fossil fuels as a source of electricity. Recommendations: Continued funding towards and collaboration with the Office of Sustainability is necessary to improve energy efficiency. Explore opportunities to minimize use of cars for 3rd and 4th year students. Continue furthering fossil fuel divestment with increased renewable energy resources. 	

Statement of Purpose

Planetary health is human health.

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

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

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

Definitions & Other Considerations

Definitions:

- **Planetary Health:** is described by the Planetary Health Alliance as “the health of human civilization and the state of the natural systems on which it depends.” For example, topics such as climate change, declining biodiversity, shortages of arable land and freshwater, and pollution would all fall under the realm of planetary health. Both planetary health and traditional ‘environmental health’ examine the relationship between human health and the external environment, including extreme temperatures, chemicals, vector-borne diseases, etc. Planetary health explicitly concerns itself with the potential health harms associated with human-caused perturbations of natural systems. Therefore, the human health focus of planetary health makes the field well-adapted for the context of medical school education. Throughout this report card, we use the term planetary health to refer to this broad swath of topics, but resources do not need to explicitly include the term “planetary health” to satisfy the metric.
- **Sustainable Healthcare:** As defined by the Academy of Royal Colleges, sustainable healthcare involves ensuring the ability to provide good quality care for future generations by balancing the economic, environmental, and social constraints and demands within health care settings. A sustainable healthcare system maintains population health, reduces disease burden and minimizes use of healthcare services.
- **Education for Sustainable Healthcare (ESH):** is defined as the process of equipping current and future health professionals with the knowledge, attitudes, skills and capacity to provide environmentally sustainable services through health professional education, thus working to decrease the enormous environmental impact of the healthcare industry. Planetary Health Education is an integral part of this education rather than an end in itself. This is because knowledge on Planetary Health is required to be able to fully understand the necessity of sustainable healthcare as well as being part of the broader knowledge needed to fully protect and promote health. In summary, ESH is covered by the three Priority Learning Outcomes of the Centre of Sustainable Healthcare below, and Planetary Health Education is embraced in the first learning objective and is a fundamental requirement to achieve learning outcomes 2 and 3:
 1. Describe how the environment and human health interact at different levels.
 2. Demonstrate the knowledge and skills needed to improve the environmental sustainability of health systems.
 3. Discuss how the duty of a doctor to protect and promote health is shaped by the dependence of human health on the local and global environment.
- **Medical School vs. Institution:** When “medical school” is specified in the report card, this only refers to curriculum and resources offered by the School of Medicine and does not include offerings from other parts of the university (e.g. undergraduate departments (USA), other related departments (e.g. Public Health, Population Health departments). In contrast, when “institution” is specified in the report card, we are referring to the university more

broadly. Any resource reasonably accessible by medical students, no matter where in the institution the resource comes from or if it is specifically targeted for medical students, can meet this metric.

- **Environmental history (Metric #19 in Curriculum Section):** This is a series of questions providers are taught to ask during medical encounters that elicit patients' exposures and environmental risk factors. Historically, this has included consideration of exposures like pesticides, asbestos, and lead, though in the modern era shaped by climate change, it can be expanded to include things like wildfire smoke exposure, air pollution and mold after flooding. Key components include place of residence over the lifecourse, occupational history, food and water sources (e.g. meat from industrial feeding operations, regular fishing in contaminated water, access to clean drinking water), and exposure to air pollution.
- **Elective:** The word "elective" refers to an optional course or lecture series that a medical student can opt to take part in but is not a requirement in the core curriculum. Generally, these elective courses take place in the preclinical curriculum but vary by school.
- **Clerkship:** This is a term used in the USA to refer to placements that medical students go on e.g. Pediatrics, General medicine, Psychiatry. In the UK these are referred to as rotations or placements.

Other considerations:

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

Added to our resources in 2022, 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

1.1. Did your <u>medical school</u> offer elective courses (student selected modules) to engage students in Education for Sustainable Healthcare or Planetary Health in the last year?	
3	Yes, the medical school has offered more than one elective whose primary focus is ESH/planetary health in the past year.
2	Yes, the medical school has offered one elective whose primary focus is ESH/planetary health in the past year.
1	The medical school does not have any electives whose primary focus is ESH/planetary health, but there are one or more electives that include a lecture on planetary health.
0	No, the medical school has not offered any electives on planetary health or electives that include ESH/planetary health topics in the past year.
<p><i>Score explanation:</i> The University of Maryland, Baltimore introduced an elective titled, “Climate Change, Health, and Society: An Interprofessional Elective” offered to students in the graduate, law, medicine, nursing, and social work schools. The elective focuses on the impact of climate change on the health of Maryland and Baltimore residents, while exploring ways to address these challenges via legal policy changes and community-based initiatives.</p>	

1.2. Does your <u>medical school</u> curriculum address the relationship between extreme heat, health risks, and climate change?	
3	This topic was explored in depth by the core curriculum.
2	This topic was briefly covered in the core curriculum.
1	This topic was covered in elective coursework.
0	This topic was not covered.
<p><i>Score explanation:</i> In the Climate Change, Health, and Society elective, there is a module titled “Heat and Air Pollution” which explores how these factors contribute to increased risk of health conditions such as heat stroke,</p>	

kidney stones, chronic kidney disease, muscle injury, asthma, and heart attacks. Approaches on how to best prevent and mitigate harm is also discussed.

The Occupational and Environmental Medicine Track has a class dedicated to climate change with pre-work and in-class material discussing strategies to have conversions and adapt to health consequences of climate change through case-based problem solving.

Heat as a climate change-related health risk was briefly covered in the Global Health Track but was not explored in depth.

The Humanism Symposium elective explores the global inequalities related to climate change and health risks, and ways medical professionals can advocate for positive change. One meeting of the 14 which are held throughout the semester is titled "Climate Change and Medicine" and is devoted to exploring environmental justice advocacy through the healthcare lens.

1.3. Does your medical school curriculum address the impacts of extreme weather events on individual health and/or on healthcare systems?

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

Source explanation:

In the pulmonary block of the second year curriculum, air pollution and asthma are connected to extreme weather events. The lecture states that increased flooding and weather events can increase levels of domestic mold which will increase the rates of asthma morbidity due to respiratory epithelial injury. Additionally, in the Nephrology section of the second year curriculum, climate change is cited as being a reason for the "kidney stone risk belt" moving north. It cites increasing temperatures as a reason for this shift. These topics were broadly discussed in the "Practicing Medicine in a Climate Crisis" core lecture.

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

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

Score explanation:

In the Brain and Behavior block, there is a single slide that cites climate change and the evolving host reservoir patterns as a major contributor to increased transmission of arboviruses. In a lecture on coronaviruses, the lecturer explained that climate change will continue to increase the zoonotic emergence of new viruses. In a skin and soft tissue infection lecture, climate change is cited as a risk factor for the increasing incidence of hand foot mouth disease. In the Practicing Medicine in a Climate

Crisis lecture, reduced water quality and food insecurity as a result of climate change was connected back to the increasing prevalence of infectious diseases.

1.5. Does your medical school curriculum address the respiratory health effects of climate change and air pollution?

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

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

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

0 This topic was **not** covered.

Score explanation:

The effects of air pollution on asthma prevalence and pathophysiology was discussed at length during a lecture on asthma, and students completed one question on air pollution-mediated asthma physiology on an individual readiness assessment (IRAT) prior to an asthma small group session. The effects of air pollution on cancer prevalence was briefly discussed during a lecture on management of patients with lung cancer.

In the Multisystems block of the medical school education, there is a mention of Baltimore City incinerator that leads to increased pollution and climate change in the city. The lecturer determined that this smoke stack increased the risk of asthma within specific places in Baltimore.

1.6. Does your medical school curriculum address the cardiovascular health effects of climate change, including increased heat?

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

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

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

0 This topic was **not** covered.

Score explanation:

In the Cardiovascular block of the medical school curriculum, there are designated slides demonstrating adverse effects of air pollution and climate change. They had a clinical vignette dedicated to increased cardiovascular events based around wildfire dust, in addition to explicit impacts climate change has on cardiovascular disease.

In a cardiac physiology lecture, heat was mentioned as a modulator of cardiac homeostasis in the powerpoint notes, but not included in the lecture slides.

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

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

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

1	This topic was covered in elective coursework.
0	This topic was not covered.
<p><i>Score explanation:</i> <i>In the Brain and Behavior block, air pollution is cited as a modifiable risk factor for Alzheimer’s Disease. In a lecture titled “Practicing Medicine in a Climate Crisis”, there is an informational graphic from the CDC which cites severe weather as a contributor to negative health impacts. This was discussed in the premise of how natural disasters contribute to the loss of housing and access to basic resources as well as increased levels of violence, which results in significant mental health burden among vulnerable populations. There was also a separate portion of group time devoted to discussing climate change and mental health in a lecture called “Climate and Mental Health.” We discussed certain non-DSM classifications of mental distress due to climate change such as “nature deficit disorder” and “eco-anxiety.” We also heard from a personal account of “environmental grief” from a University of Maryland physician. Material from this group discussion was on our block test.</i></p>	

1.8. Does your <u>medical school</u> curriculum address the relationships between health, individual patient food and water security, ecosystem health, and climate change?	
3	This topic was explored in depth by the core curriculum.
2	This topic was briefly covered in the core curriculum.
1	This topic was covered in elective coursework.
0	This topic was not covered.
<p><i>Score explanation:</i> <i>The Global Health track spoke on dwindling resources and downstream tensions from climate change in the lecture “Climate Change.” This lecture focused on decreased food and water security, citing increasing tensions with Pakistan and surrounding neighbors due to water scarcity. The Occupational and Environmental Medicine elective also covered this topic in its Climate Change session, in which the impacts of food and water security and ecosystem degradation by climate change on migration and population dynamics were highlighted. In the “Extreme weather and ecological degradation” class for the Climate Change, Health, and Society elective, the heightened effects from climate change on resource-limited countries and the unequal contribution of higher-income nations are explored.</i></p>	

1.9. Does your <u>medical school</u> curriculum address the outsized impact of climate change on marginalized populations such as those with low SES, women, communities of color, Indigenous communities, children, homeless populations, and older adults?	
3	This topic was explored in depth by the core curriculum.
2	This topic was briefly covered in the core curriculum.
1	This topic was covered in elective coursework.
0	This topic was not covered.
<p><i>Score explanation:</i></p>	

In the “Practicing Medicine in a Climate Crisis” lecture, the direct relationship between toxic air pollution levels and asthma hospitalization rates within Baltimore city was discussed. These statistics were shown to be inversely proportional to median household incomes, connecting the fact that those belonging to low SES are disproportionately affected by climate change. The lower income levels were also shown to be related to higher minority population densities, indirectly connecting these categories back to the relationship between climate change and health risks.

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

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

Score explanation:

The Global Health track continually intertwines climate change and global health through many of its lectures and presentations. Specifically, the lecture titled “Climate Change” focused on the disproportionate effect of climate events on countries and citizens of lower socioeconomic class, emphasizing examples such as Pakistan’s 2023 floods. The importance of women and indigenous people’s voices in the climate change sphere were discussed, including the push to increase the number of women advocates at the COP27 meeting and work of Barbados Prime Minister Mia Mottley on the loss and damage climate fund.

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

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

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

Score explanation: This topic has been covered in multiple sessions of the Occupational and Environmental Medicine elective including the session on endocrine disruptors. Specifically mentioned were the reproductive toxins lead, cadmium, bisphenol A, industrial solvents such as toluene, and pesticides such as dibromochloropropane. A case-study was done on how a patient’s PCOS diagnosis was potentially affected by the surrounding environmental conditions, including a metals processing plant.

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

3	This topic was explored in depth by the core curriculum.
2	This topic was briefly covered in the core curriculum.
1	This topic was covered in elective coursework.
0	This topic was not covered.
<p><i>Score explanation:</i> <i>In a lecture titled “Health of Baltimore,” ground and air toxins from Baltimore’s Sparrow Point industrial plants were cited as a potential cause for Baltimore’s increased cancer risk. Specific examples of lung cancer patients were provided to demonstrate the increased rates of cancer in those who worked at these plants. These concepts were further discussed in the lecture titled “Practicing Medicine in a Climate Crisis” where the overlap between toxic air pollution, asthma hospitalization rates, and median household income in Baltimore City were compared via side-by-side graphs. In the Multisystems block, Baltimore’s smokestack was cited as producing environmental pollutants into Baltimore’s air.</i></p>	

1.13. To what extent does your <u>medical school</u> emphasize the importance of Indigenous knowledge and value systems as essential components of planetary health solutions?	
3	Indigenous knowledge and value systems are integrated throughout the medical school’s planetary health education
2	Indigenous knowledge and value systems as essential components of planetary health solutions are included briefly in the core curriculum.
1	Indigenous knowledge and value systems as essential components of planetary health solutions are included in elective coursework.
0	This topic was not covered.
<p><i>Score explanation:</i> <i>In the Global Health track’s “Climate Change” lecture, the importance of women and indigenous people’s voices in the climate change sphere were discussed, including the push to increase the number of indigenous women advocates at the COP27 meeting, citing the need for more indigenous voices on the COP panel. Discussion included Indigenous women’s protests at the COP26 meeting, emphasizing the need for female advocacy due to the increased violence towards women in tribes and countries where climate change has created tension.</i></p>	

1.14. Does your <u>medical school</u> curriculum address the outsized impact of anthropogenic environmental toxins on marginalized populations such as those with low SES, women, communities of color, children, homeless populations, Indigenous populations, and older adults?	
3	This topic was explored in depth by the core curriculum.
2	This topic was briefly covered in the core curriculum.
1	This topic was covered in elective coursework.
0	This topic was not covered.

Score explanation:

The Global Health track's lecture titled "Climate Change" focused on the disproportionate effect of climate events on countries and citizens of lower socioeconomic class, emphasizing the disproportionate effect on developing countries being exposed to toxins produced from higher status countries.

Curriculum: Sustainability

1.15. 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.
2	This topic was briefly covered in the core curriculum.
1	This topic was covered in elective coursework.
0	This topic was not covered.

Score explanation:

The core curriculum mentions Mediterranean diets and increasing dietary share of plant-based foods as health-positive behaviors but does not connect plant-based eating with broader positive impacts on environmental sustainability. Given the lack of elaboration on the environmental co-benefits of plant-based diets, 0 points was awarded for this section.

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

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

Score explanation:

This content was not covered in the core curriculum. In the Humanism symposium, the carbon footprint of the health sector was briefly covered in pre-work for the large group discussion on climate change and health. The SPARC2 tool is covered in the Global Health Track, which is used to reduce the carbon footprint of surgical providers. In the Occupational and Environmental Medicine track "Climate Change" class, articles and videos relating to the impact of the healthcare sector on the climate crisis and strategies for reducing healthcare waste were assigned as pre-work then discussed during class time.

1.17. Does your medical school curriculum cover these components of sustainable clinical practice in the core curriculum? (points for each)

2	The health and environmental co-benefits of avoiding over-medicalisation, over-investigation and/or over-treatment
2	The environmental impact of pharmaceuticals and over-prescribing as a cause of climate health harm. Alternatively teaching on deprescribing where possible and its environmental and health co-benefits would fulfill this metric.
1	The health and environmental co-benefits of non-pharmaceutical management of conditions where appropriate such as exercise or yoga classes for type 2 diabetes; social group activities such as gardening for mental health conditions; active transport such as bicycle schemes. This is commonly known as social prescribing in the UK.
1	Environmental impact of surgical healthcare on planetary health and the climate crisis, and how can it be mitigated
1	The impact of anesthetic gasses on the healthcare carbon footprint and ways to reduce anesthesia environmental impacts, such as total intravenous anesthesia or choosing less environmentally harmful anesthetic gas options with reduced greenhouse gas emissions.
1	The impact of inhalers on the healthcare carbon footprint and the environmental benefit of dry powdered inhalers over metered dose inhalers.
1	Waste production within healthcare clinics and strategies for reducing waste in clinical activities (e.g. single use items in the inpatient or outpatient setting).
	<p><i>Score explanation:</i> <i>In the Blood and Host Defense block, overprescription of antibiotics is cited as a significant challenge to providers in the management of disease. The idea of a finite amount of antibiotics available for a growing amount of microbes connects health and the environment. This was talked about in lecture and in small group learning, especially based on production and changing biomes of bacteria.</i></p>

Curriculum: Clinical Applications

1.18. In training for patient encounters, does your <u>medical school's</u> curriculum introduce strategies to have conversations with patients about the health effects of climate change?	
2	Yes, there are strategies introduced for having conversations with patients about climate change in the core curriculum.
1	Yes, there are strategies introduced for having conversations with patients about climate change in elective coursework.
0	No, there are not strategies introduced for having conversations with patients about climate change
	<p><i>Score explanation:</i> <i>In the lecture titled "Practicing Medicine in a Climate Crisis", there are two patient scenarios presented to explore protocols and recommendations for those affected by environmental conditions related to climate change. The first case explores a construction worker experiencing symptoms of a heat stroke, and ways to confirm and manage this diagnosis as well as strategies for counseling patients on ways to prevent future exacerbations. The second case explored a high-school student with</i></p>

asthma and how to approach her desire to participate in outdoor sports and the code-red air alerts for that week.

Moreover, a clinical rotation is currently being developed on how to apply these strategies in practice by the faculty and students in the Climate Change, Health, and Society and Occupational and Environmental Health tracks.

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

2	Yes, the core curriculum includes strategies for taking an environmental history.
1	Only elective coursework includes strategies for taking an environmental history.
0	No, the curriculum does not include strategies for taking an environmental history.

Score explanation:

Students are taught strategies for gathering occupational and exposure histories in an occupational health lecture during Practice of Medicine II. While components of environmental history are mentioned, they are largely in the context of occupational or recreational exposures and are not taught outside of this context. Strategies for taking an environmental history are covered in depth in the Occupational and Environmental Medicine elective. This elective offers 100 hours of education and includes environmental medicine topics such as environmental toxin exposure and heat-related conditions.

Curriculum: Administrative Support for Planetary Health

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

4	Yes, the medical school is currently in the process of making major improvements to ESH/planetary health education.
2	Yes, the medical school is currently in the process of making minor improvements to ESH/planetary health education.
0	No, there are no improvements to planetary health education in progress.

Score explanation:

As of April 2022, the Preclerkship Committee appointed a Climate Change and Health Education Lead to begin curriculum revision. This curriculum lead, along with student leaders, have worked to incorporate some planetary health/ESH topics into the core pre-clerkship curriculum. Additionally, a fourth-year elective which focuses on clinical work related to climate change such as working in an asthma clinic is being developed for 2024. A new preclinical elective titled "Climate Change, Health, and Society" was established in January 2024. As of last year, a new core curriculum lecture for second year medical students titled "Practicing Medicine in a Climate Crisis" has been put in place.

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

6	Planetary health/ESH topics are well integrated into the core medical school curriculum.
4	Some planetary health/ESH topics are appropriately integrated into the core medical student curriculum.
2	Planetary health/ESH is not integrated and is primarily addressed in (a) standalone lecture(s) .
0	There is minimal/no education for sustainable healthcare.

Score explanation:

Some planetary health/ESH topics have been incorporated into the pre-existing pre-clerkship curriculum. Examples include a slide in the Nephrology core curriculum discussing the expanding kidney stone belt as a result of climate change-related changes in temperature and a slide in Brain and Behavior that cites climate change and the evolving host reservoir patterns as a major contributor to increased transmission of arboviruses. These changes are sparse and not included in every module and thus was awarded 4 points.

The fourth year elective on climate change is of course elective, and not a part of the core competencies of the fourth year curriculum. This will provide students a good basis of learning and exposure, but will be elective enrollment.

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?

1	Yes, the medical school has a specific faculty/staff member responsible for overseeing curricular integration of planetary health and sustainable healthcare
0	No, the medical school does not have a specific faculty/staff member responsible for overseeing curricular integration of planetary health and sustainable healthcare.

Score explanation:

As of April 2022, the UMSOM has an appointed Climate & Health Educational Lead. This professor will work in collaboration with student leaders to integrate planetary health into existing coursework.

Section Total (39 out of 72)	54.2%
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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.*

2.1. Are there researchers engaged in planetary health research and healthcare sustainability research at your <u>medical school</u> ?	
3	Yes, there are faculty members at the medical school who have a primary research focus in planetary health or healthcare sustainability.
2	Yes, there are individual faculty members at the medical school who are conducting research related to planetary health or healthcare sustainability, but it is not their primary research focus.
1	There are planetary health and/or healthcare sustainability researchers at the institution , but none associated with the medical school.
0	No, there are no planetary health and/or healthcare sustainability researchers at the institution or medical school at this time.
<p><i>Score explanation:</i> <i>The University of Maryland has faculty members whose primary research focus is planetary health or healthcare sustainability, primarily in the Department of Epidemiology and Public Health. Examples include researchers like Dr. Zhekang Ying, Dr. Snehal Patel, and Dr. Judy LaKind. There are also several researchers with appointments in the Schools of Law and Nursing who study the effects of climate change on human health.</i></p>	

2.2. Is there a dedicated department or institute for interdisciplinary planetary health research at your <u>institution</u> ?	
3	There is at least one dedicated department or institute for interdisciplinary planetary health research.
2	There is not currently a department or institute for interdisciplinary planetary health research, but there are plans to open one in the next 3 years.
1	There is an Occupational and Environmental Health department , but no interdisciplinary department or institute for planetary health research.
0	There is no dedicated department or institute.
<p><i>Score explanation:</i> <i>There is a Division of Occupational and Environmental Medicine at UMSOM, but</i></p>	

the vast majority of research focuses on the field of Occupational Medicine. There are no specific mentions of climate change or planetary health on the Divisions website, and most of their current work is focused on employee health and disaster preparedness.

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 medical school?

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

Score explanation:

There is no process, and no efforts to create such a process. Current community outreach initiatives at UMSOM predominantly target community health through the lens of economic and racial injustice, not through the lens of environmental injustice.

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

3	There is an easy-to-use, adequately comprehensive website that centralizes various campus resources related to health and the environment including all of the following: upcoming events, leaders in planetary health at your institution, and relevant funding opportunities.
2	There is a website that attempts to centralize various campus resources related to health and the environment, but it is hard-to-use, not updated, or not adequately comprehensive.
1	The institution has an Office of Sustainability website that includes some resources related to health and the environment.
0	There is no website.

Score explanation:

The [Office of Sustainability](#) website centralizes resources and information on sustainability at the University of Maryland, Baltimore and includes information about events, research, planetary health leadership, and funding opportunities across the UMB network of schools and campuses.

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

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

2.6. Is your <u>medical school</u> a member of a national or international planetary health or ESH organization?	
1	Yes, the medical school is a member of a national or international planetary health or ESH organization
0	No, the medical school is not a member of such an organization
<p><i>Score explanation:</i> <i>The medical school is not a member of such an organization.</i></p>	

Section Total (7 out of 17)	41.2%
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Community Outreach and Advocacy

Section Overview: *This section evaluates medical school engagement in community outreach and advocacy efforts associated with planetary health. Researching and teaching planetary health is necessary but not sufficient. It is critical that institutions also directly engage with communities most affected by environmental health harms. Although climate change is a problem largely created by those with power and resources, its impacts fall disproportionately on under-resourced populations and communities of 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.*

3.1. Does your medical school partner with community organizations to promote planetary and environmental health?	
3	Yes, the medical school meaningfully partners with multiple community organizations to promote planetary and environmental health.
2	Yes, the medical school meaningfully partners with one community organization to promote planetary and environmental health.
1	The institution partners with community organizations, but the medical school is not part of that partnership.
0	No, there is no such meaningful community partnership.
<p><i>Score explanation:</i> <i>As a requirement of the Practice of Medicine preclerkship course, first and second year students are required to amass a total of 25 hours amount of community service hours with approved community organizations. This past year, 4MyCity and the Baltimore Tree Trust were approved as service sites for the preclerkship course service learning requirement. Both of these organizations focus on sustainability - the former on reducing food waste, and the latter on reducing shade inequality.</i></p>	

3.2. Does your medical school offer community-facing courses or events regarding planetary health?	
3	The medical school offers community-facing courses or events at least once every year.
2	The medical school offers courses or events open to the community at least once per year, but they are not primarily created for a community audience.
1	The institution has offered community-facing courses or events, but the medical school was not involved in planning those courses or events.
0	The institution/medical school have not offered such community-facing courses or events.
<p><i>Score explanation:</i> <i>In April 2023, the University of Maryland, Baltimore Office of Sustainability led community-facing Earth Month programming for residents of West Baltimore to promote earth-friendly habits and the conservation of natural resources. Events included a community meal, art classes, and a family movie</i></p>	

night. The Office of Sustainability also led a tree planting event for Baltimore City youth, and during this event taught about the urban heat island effect. In the same month, the Office of Sustainability also held a community farming panel with representation from Backyard Basecamp, Baltimore Greenspace, the World Wildlife Fund, and the CDC Foundation to teach attendees about the intersection of environmental justice and food security in Baltimore City. The following month, the Office of Sustainability held a workshop for a Baltimore high school to teach about the importance of composting, gardening, and pollution reduction. The medical school itself has not hosted any such event, but a handful of students from the medical school have participated in Office of Sustainability events.

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

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

Score explanation:

The Elm, a university-wide weekly newsletter, will sometimes feature a “Sustainability” section. This section is used by the UMB Office of Sustainability to provide updates on campus sustainability initiatives, brief articles highlighting campus sustainability “champions,” and any upcoming sustainability events on campus. These updates do not cover sustainable healthcare, but largely focus on sustainability on campus.

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?

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

Score explanation:

The School of Medicine is in the process of collating all CME-eligible activities that have been hosted within the past year, however this list is incomplete and as such it is not possible to comprehensively assess this metric. However, two CME-eligible Grand Rounds presentations were hosted within the past year that focused primarily on planetary health. On May 4, 2023, a guest lecturer affiliated with the Medical Society Consortium on Climate and Health delivered a Department of Psychiatry Grand Rounds presentation titled “Climate Change and the Psychiatrist.” On March 23, 2023, UMSOM

pediatric intensivist Dr. Snehal Patel delivered a Department of Pediatrics Grand Rounds presentation titled "Climate Change and Children's Health: A Call to Action for all Healthcare Providers". Additionally, the School of Nursing has hosted a two semester certificate in Environmental Health for several years. This course is designed for professional nurses to help them incorporate environmental history-taking into their nursing practice.

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

2	Yes, the medical school or all affiliated hospitals have accessible educational materials for patients.
1	Some affiliated hospitals have accessible educational materials for patients.
0	No affiliated medical centres have accessible educational materials for patients.

Score explanation:

To date there are no known commonly used resources developed by the University of Maryland Medical System to teach patients about environmental health exposures.

3.6. Does your medical school or its affiliated teaching hospitals have accessible educational materials for patients about the health impacts of climate change?

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

Score explanation:

To date there are no known commonly used resources developed by the University of Maryland Medical System to teach patients about the health effects of climate change.

Section Total (6 out of 14)	42.9%
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Support for Student-Led Planetary Health Initiatives

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

4.1. Does your medical school or your institution offer support for medical students interested in enacting a sustainability initiative/QI project?	
2	Yes, the medical school or institution <i>either</i> offers grants for students to enact sustainability initiatives/QI projects <i>or</i> sustainability QI projects are part of the core curriculum.
1	The medical school or institution encourages sustainability QI projects (to fulfill clerkship or longitudinal requirements) and offers resources to help students succeed in these projects, but there is no student funding available and there is no requirement to participate.
0	No, neither the medical school or the institution offer opportunities or support for sustainability initiatives or QI projects.
<p><i>Score explanation:</i> Unlike the affiliated undergraduate campus (University of Maryland, College Park), which offers \$1-2,000 Sustainability Mini Grants for any student, faculty, or staff to apply towards projects benefiting sustainability, UMSOM does not offer a similar direct source of funding. UMSOM's Office of Student Research offers funding to student research projects through the Program for Research Initiated by Students and Mentors (PRISM), though sustainability projects are not targeted for funding. There are no student research funding awards earmarked exclusively to sustainability initiatives/QI projects at the School of Medicine.</p>	

4.2. Does your institution offer opportunities for medical students to do research related to planetary health and/or sustainable healthcare?	
2	The institution has a specific research program or fellowship for students interested in doing planetary health/sustainable healthcare research.
1	There are research opportunities for students to perform research related to planetary health/sustainable healthcare, but these require student initiative to seek these out and carry them out in their spare time.
0	There are no opportunities for students to engage in planetary health/sustainable healthcare research.
<p><i>Score explanation:</i> There are a few researchers interested in environmental health topics within the School of Medicine. It has been easier for students to work with them than in recent years because of the established connections formed by older medical students interested in sustainability-directed projects. However, it is very difficult to use the faculty research directory to locate mentors since search tags such as "sustainable healthcare" are not utilized. Other planetary health researchers exist in the School of</p>	

Law, School of Nursing, and the School of Social Work, but students in the School of Medicine must be both aware of these opportunities and have spare time to pursue them.

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

Score explanation:

There is no medical-school specific webpage for locating planetary health and/or sustainable healthcare projects or mentors. Additionally, the University of Maryland Baltimore Office of Sustainability does not have any information on sustainable healthcare activities and/or mentors within the medical school. Conversely, the affiliated undergraduate campus (University of Maryland, College Park) has SustainableUMD, a webpage dedicated to connecting students with sustainable healthcare activities and mentorship - although not within the medical school.

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

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

Score explanation:

There is a chapter of the Medical Students for a Sustainable Future (MS4SF) at the University of Maryland School of Medicine, and it is supported by a faculty mentor who focuses on environmental advocacy and stewardship in medical education and practice. UMSOM's MS4SF chapter plans events such as composting workshops in collaboration with UMB's Office of Sustainability to get students more involved and get connected with broader institutional efforts. MS4SF also annually recruits writers, editors, and evaluators for the PHRC.

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

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

Score explanation:

There is no formal medical student sustainability representative on a medical school or institutional decision-making council, although such council exists. Students may choose to join the Office of Sustainability's Working Groups, but otherwise, students do not have a directly appointed role in influencing curriculum reform/sustainability best practices. Additionally, these groups operate at the institution-wide, University of Maryland, Baltimore-level. Student government representatives have shown informal interest in establishing such positions within the School of Medicine, but to date there has been no formal movement on this front.

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)

1	Projects where students are able to gain experience in organic agriculture and sustainable food systems, such as gardens, farms, community supported agriculture (CSA), fishery programs, or urban agriculture projects.
1	Panels, speaker series, or similar events related to planetary health that have students as an intended audience.
1	Events in which students learn directly from members of a local environmental justice community about the climate and environmental challenges they face, and how health professionals can partner with their community to address these exposures and impacts.
1	Cultural arts events, installations or performances related to planetary health that have students as an intended audience.
1	Local volunteer opportunities related to building community resilience to anthropogenic environmental impacts.
1	Wilderness or outdoors programs (e.g., that organize hiking, backpacking, kayaking, or other outings for students)

Score explanation:

- In collaboration with UMB's Office of Sustainability, UMB's Intercultural Center held a virtual urban farming panel in April 2023. Students who attended had the opportunity to learn from individuals involved in food justice and urban farming initiatives in Baltimore City.*
- The Community Engagement, Environmental Justice, & Health (CEEJH) program in the University of Maryland School of Public Health held a symposium in in September 2023 for community members, researchers, faculty, and students for an in-depth examination of ongoing environmental and climate justice issues affecting the DC-Maryland-Virginia (DMV) region and communities nationally. The event had virtual registration/attendance and was advertised by the UMB Office of Sustainability to the UMB graduate schools, which includes medical students.*

3. *The greater UMB institution held ECO Fest in April 2023 hosted by the UMB School of Social Work's ECO-Social Work in Action (ECO) group. There were booths for a clothing/book/plant swap, petition and activism, compost and food rescue, and more and was open to all graduate students.*
4. *The Wilderness Medicine Interest Group at UMSOM held its annual camping trip in November 2023 that consisted of faculty-led workshops (avalanche, hypothermia, shock, first aid, search and rescue, etc.) where 30+ medical students learned about providing medical care in austere and low-resource environments.*

Section Total (8 out of 15)

53.3%

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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.*

5.1. Does your medical school and/or institution have an Office of Sustainability?	
3	Yes, there is an Office of Sustainability with multiple full-time staff dedicated to campus sustainability. If the Office of Sustainability serves the entire campus, there is at least one designated staff member for sustainability at the hospital and/or medical school.
2	There is an Office of Sustainability with one or more full-time staff dedicated to campus sustainability, but no specific staff member in charge of medical school and/or hospital sustainability.
1	There are no salaried sustainability staff , but there is a sustainability task force or committee
0	There are no staff members or task force responsible for overseeing campus sustainability
<p><i>Score explanation:</i> <i>The University of Maryland, Baltimore has a dedicated Office of Sustainability with three full-time staff members. The University of Maryland Medical Center has a multi-disciplinary Green Team led by a Sustainability Manager.</i></p>	

5.2. How ambitious is your institution/medical school plan to reduce its own carbon footprint?	
5	The institution/medical school has a written and approved plan to achieve carbon neutrality by 2030
3	The institution/medical school has a written and approved plan to achieve carbon neutrality by 2040
1	The institution/medical school has a stated goal of carbon neutrality by 2040 but has not created a plan to reach that goal or the plan is inadequate
0	The institution/medical school does not meet any of the requirements listed above
<p><i>Score explanation:</i> <i>University of Maryland, Baltimore has updated its goal to achieve carbon neutrality by 2045, previously 2050, in accordance with the new Climate Solutions Now Act of 2022. The plan is well-defined and has fueled current projects but does not meet these guidelines in the PHRC.</i></p>	

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

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

Score explanation:

UMB purchases 100% off-site renewable electricity (solar, wind, and other Green-e RECs) and is adding on-site solar to two of its parking garages to generate additional energy. However, the University still uses steam for much of its heating on campus. The University's energy use is served by approximately 58% renewable electricity, and 42% steam.

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

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

Score explanation:

All new buildings at University of Maryland, Baltimore at least meet LEED Silver level of certification. As of February 2024, 52.64% of campus square footage has been converted to LED lightbulbs with a goal of 100% conversion. The majority of older buildings have been and continue to be retrofitted by maintaining and updating HVAC, plumbing, and other building systems.

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

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

Score explanation:
The University of Maryland, Baltimore, offers a free shuttle bus that travels to nearby neighborhoods in Baltimore. However, the shuttle only operates on weekdays and the hourly schedule is not inclusive to transportation needs during the middle of the day (shuttles run in the morning and evening/night). The University has ample bike parking spots as well as a Campus Green Map that allows students to readily see bike rack availability. Third- and Fourth-year medical students are often placed in off-campus clinical sites. There is a shuttle between the Downtown and Midtown University hospitals, but other sites require that students drive.

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

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

Score explanation:
UMB has a self-service waste program, which removes individual deskside bins from offices and includes mixed recycling and paper and cardboard recycling streams. The University also has a Community Compost Drop-off program at two sites on campus, where UMB and Community members can bring food scraps to designated bins. In 2023, the program collected approximately 2,000 lbs of food scraps to be composted. However, the compost program is a pilot, and neither drop-off location is located within the School of Medicine campus specifically.

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

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

Score explanation:

The University of Maryland, Baltimore does not have a dedicated dining hall on campus but has contracts with two local vendors to provide food and catering services to several buildings on campus. The current contract language states that the Contractor's responsibilities include: implement sustainable operations and practices; and purchase goods and services from local vendors whenever possible to provide the freshest ingredients, along with supporting the local economy of West Baltimore, Baltimore City, and the State of Maryland.

In addition to the food service contract, UMB's Office of Sustainability has created and promotes a Green Eats List and Map to highlight local vendors who can provide plant-based options, compostable utensils, bulk condiments and drinks, and minimal packaging using catering trays for serving food.

5.8. Does the medical school or 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	There are sustainability guidelines for supply procurement, but they are insufficient or optional . The medical school is not engaged in efforts to increase sustainability of procurement.
0	There are no sustainability guidelines for supply procurement.

Score explanation:

The University of Maryland, Baltimore Office of Sustainability includes a [list of sustainable supply procurement vendors](#) on a [sustainable procurement webpage](#), but the School of Medicine does not have any outward facing resources to indicate a commitment to sustainable procurement.

5.9. 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 .
0	There are no sustainability guidelines for medical school events.

Score explanation:

The UMB Office of Sustainability provides a sustainable events guide which is circulated to student organization leaders at the beginning of their terms. The guide provides recommendations, and adherence to the guide is not incentivized.

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

2	Yes, the medical school has programs and initiatives to assist with making lab spaces more environmentally sustainable.
1	There are guidelines on how to make lab spaces more environmentally sustainable, but not programs or initiatives.
0	There are no efforts at the medical school to make lab spaces more sustainable.
<p><i>Score explanation: The University of Maryland, Baltimore's Office of Sustainability launched a Green Labs program in 2022 which guides labs through processes to improve the sustainability of their operations, including energy conservation and waste reduction.</i></p> <p><i>The Office of Sustainability also manages a Freezer Rebate program which provides labs with funding incentives to purchase more efficient ULT freezers in support of campus energy goals.</i></p>	

5.11. Does your <u>institution's</u> endowment portfolio investments include fossil-fuel companies?	
4	The institution is entirely divested from fossil fuels and has made a commitment to reinvest divested funds into renewable energy companies or renewable energy campus initiatives.
3	The institution is entirely divested from fossil fuels.
2	The institution has partially divested from fossil fuel companies or has made a commitment to fully divest , but currently still has fossil fuel investments.
1	The institution has not divested from fossil-fuel companies, but faculty and/or students are conducting organized advocacy for divestment.
0	Yes, the institution has investments with fossil-fuel companies and there have been no efforts to change that.
<p><i>Score explanation: The University of Maryland Foundation has maintained its commitment made in 2016 to stop making direct investments in companies on the Carbon Underground 200. In February of 2020, the Foundation also stopped allocating more capital for the use of fossil fuel extraction, but current investments are to continue.</i></p>	

Section Total (16 out of 32)	50.0%
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Grading

Section Overview

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

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

**Within each grade bracket, a score in the top 5% (_5 to _9%), receives a "+", and a score in the bottom 5% (_0- _4%) receives a "--". For example, a percentage score of 78% would be a B+.*

Planetary Health Grades for the University of Maryland School of Medicine

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

Section	Raw Score %	Letter Grade
Planetary Health Curriculum (30%)	$(39/72) \times 100 = 54.2\%$	C
Interdisciplinary Research (17.5%)	$(7/17) \times 100 = 41.2\%$	C-
Community Outreach and Advocacy (17.5%)	$(6/14) \times 100 = 43\%$	C-
Support for Student-led Planetary Health Initiatives (17.5%)	$(8/15) \times 100 = 53.3\%$	C
Campus Sustainability (17.5%)	$(16/32) \times 100 = 50\%$	C
Institutional Grade	49.04%	C

Report Card Trends

Section Overview

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

Planetary Health Report Card Trends for University of Maryland School of Medicine

