Planetary Health Report Card (Medicine):

The Ohio State University College of Medicine

2024-2025 Contributing Team:

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Land acknowledgment: We would like to acknowledge the land that The Ohio State University occupies is the ancestral and contemporary territory of the Shawnee, Potawatomi, Delaware, Miami, Peoria, Seneca, Wyandotte, Ojibwe and many other Indigenous peoples.

Specifically, the university resides on land ceded in the 1795 Treaty of Greeneville and the forced removal of tribes through the Indian Removal Act of 1830. As a land grant institution, we want to honor the resiliency of these tribal nations and recognize the historical contexts that has and continues to affect the Indigenous peoples of this land.

Summary of Findings

Overall Grade	B+

Curriculum	C

- The Ohio State University College of Medicine (OSUCOM) currently has some planetary health-focused curriculum, but is working with students on major curriculum changes, including restarting the fourth-year elective and adding content on Planetary Health and Indigenous Health to review modules throughout the pre-clinical curriculum.review content and Indigenous content
- **Recommendations:** Planetary health can be further integrated into M1-M2 through lectures ande-modules. In M3-M4, it can be included in case-based small group discussions.

Interdisciplinary Research	A

- OSUCOM has several faculty researchers in climate health and the Byrd Polar and Climate Research Center but lacks a centralized department forming interdisciplinary projects or a partnership with the Byrd Center. Our CCTS Community Engagement Program allows community members advocacy.
- **Recommendations**: OSUCOM could work to make climate focused research more accessible to medical students and centralize their work on a more visible, unified website, and look into hosting conferences.

Community Outreach and Advocacy	A

- The Ohio State University Wexner Medical Center (OSUWMC) website offers articles about climate health that are free to patients.
- **Recommendations**: OSUCOM could offer public facing outreach and establish partnerships with community organizations focused on planetary health. OSUCOM should include climate focused information in regular communications to faculty and students and create internal planetary health courses for CME credits.

Support for Student-Led Initiatives	A

- OSUCOM supports student groups dedicated to planetary health, particularly the registered student group Sustainability in Medicine (SiM), which works to expand student engagement in sustainability. Students can join the Green Team, the Interprofessional Council, and other institutional organizations.
- **Recommendations**: OSUCOM should continue to work closely with Sustainability in Medicine. We also recommend that SiM continues to build partnerships with other student organizations to ensure maximum engagement. OSUCOM should create a website to promote ongoing programs, including, but not limited to, one-off volunteer opportunities, planetary health events, wilderness outings, etc.

Campus Sustainability	B-

- OSUWMC aligns with university goals and has a dedicated sustainability program including: full-time Sustainability Program Manager, a Commodity Manager, and an energy engineer. Highlights in the 2022 fiscal year include: 4.7% reduction in energy usage in OSUWMC and OSUCOM buildings, 29% of the electricity supplied to the medical center at main campus and off-site medical center locations was carbon neutral, 37% waste diversion, and expansion of our Green Team.
- **Recommendations**: Sustainability needs to be embedded into the core of operational decision-making in order to accomplish carbon neutrality by 2050, and can’t just be for a few people to accomplish.

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, 4) community outreach centred on environmental health impacts, and 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 (Metric #19 in Curriculum Section):** This is a series of questions students are taught to ask during medical encounters that elicits patients' exposures and environmental risk factors. Historically, this has included consideration of exposures like pesticides, asbestos, and lead, though in the modern era shaped by climate change, it can be expanded to include things like wildfire smoke exposure, air pollution and mould after flooding. Key components include place of residence over the lifecourse, occupational history, food and water sources (e.g. meat from industrial feeding operations, regular fishing in contaminated water, access to clean drinking water), and exposure to air pollution. Please be as specific as possible when providing evidence for this metric.

- **Elective:** The word "elective" refers to an optional course or lecture series that a student can opt to take part in but is not a requirement in the core curriculum. Generally, these elective courses take place in the preclinical curriculum but vary by school.

- **Core Curriculum:** This refers to taught material that is develiered to the entire cohort of students in one year.

- **Clerkship / Outreach:** This is a term used in the USA to refer to placements that medical students go on e.g. Pediatrics, General medicine, Psychiatry. In the UK these are referred to as rotations, outreach or placements. This is a relatively short (approximately 4-8 weeks) period of study and patient-centred clinical experience that takes place as part of the undergraduate programme.

- **Clinical rotation:** This is a term used to refer to placements that students go on (e.g., ophthalmology, surgery, cardiology).

- **Physiotherapy vs Physical Therapy:** For the purposes of this report card these terms are considered interchangeable. However, physiotherapy will be used primarily.

- **Community organisations:** For most institutions, there are existing groups that are not directly affiliated with the university and exist as a product of what the community the institution exists in cares about or needs. These specific community organisations relevant to this report include those that are focused around some aspect of climate and health preservation. These community organisations can include but are not limited to local mutual aid initiatives, underserved-resource distribution groups, clean-up and nature conservation groups, community gardeners, and other environmental-related organisations. If your institution does not have access to local volunteerships with community groups, please report any community organisations your institution or school has collaborated with.

- **Climate justice:** The idea that certain population groups and geographical locations which are disproportionately more impacted by climate change are already economically and socially disadvantaged. This double vulnerability sits alongside pre-existing social justice concerns and should therefore shift policy and practice to mitigate the inequitable effects of the climate crisis.

- **Extractivisim:** The removal of natural resources typically in large quantities. Within anthropology this term is often used in the context of colonialism to refer to

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

- **Global South:** Nations that often have less economic and industrial development and are typically in the southern hemisphere. These nations have been found to be disproportionately impacted by the climate crisis.

- **Low socioeconomic status (SES):** An individual or geographical area that across a variety of socioeconomic factors (e.g., income, education, race/ethnicity) is considered vulnerable. This vulnerability has been correlated to more adverse health outcomes often as a consequence of encountering more barriers in accessing and receiving healthcare.

- **Low and Middle-Income Countries (LMIC):** Countries that have lower degrees of economic affluence.

- **Anthropogenic:** Created through human activity

- **Marginalized communities:** Groups excluded from mainstream economic, educational, social, and/or cultural experiences due to race, gender identity, sexual orientation, age, physical ability, language, and/or immigration status (Sevelius et al., 2020).

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

Planetary Health Curriculum

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

Curriculum: General

1.1. Did your medical school offer elective courses (student selected modules) to engage students in Education for Sustainable Healthcare or Planetary Health in the last year?	
Yes, the medical school has offered **more than one** elective whose primary focus is ESH/planetary health in the past year. (3 points)	
Yes, the medical school has offered **one** elective whose primary focus is ESH/planetary health in the past year. (2 points)	
The medical school does **not** have any electives whose primary focus is ESH/planetary health, but there are one or more electives that include a **lecture** on planetary health. (1 points)	
No, the medical school has **not** offered any electives on planetary health or electives that include ESH/planetary health topics in the past year. (0 points)	
Score Assigned:	0
Score explanation: There were no elective courses offered in the past year. Resource: Lead Serve Inspire Curriculum	

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:	2

Score explanation: Within the Lead.Serve.Inspire (LSI) curriculum, there is one lecture dedicated to the effects of climate change on the health of populations. This is a lecture in the format of a recorded e-module in the Foundations 2 block that addresses climate health. During the last block of second year, Host Defense, there is one Longitudinal Group session, a group discussion course for M1s and M2s, dedicated to discussing climate change and health. Students are assigned to learn about and present one of four climate-based topics, one of which is extreme weather, including heat. Resource: Foundations 2 e-module, Host Defense Longitudinal Group Session

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:	0
Score explanation: During the Host Defense preclinical block, in the Longitudinal Group session that covers climate change and health, one of four topics that students present on discusses the impact of extreme weather, including heat, on health. The fourth year Global Health Advanced Competency elective course includes one lecture on reproductive justice with a few slides regarding environmental justice. Resource: Host Defense Longitudinal Group Session, M4 Global Health Advanced Competency	

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:	2
Score explanation: In the Foundations 2 e-module as part of the core curriculum, there is one slide on the exacerbation of infectious diseases due to climate change. During the Host Defense block, in the Longitudinal Group session that covers climate change and health, the case simulation discusses the climate-related migration of the Ixodes tick, leading to changes in the patterns of Lyme disease, an infectious disease. The Host Defense block lectures discuss the geographical	

distribution of viral and bacterial infectious diseases and changes in the causes and epidemiology of infectious diseases. While there is no mention of "climate change" by name, the causative factor is stated to be increasing temperatures on these changing patterns of infectious diseases. Several lectures that discuss the geographical distribution of disease but exclude a mention of climate change include: "Tick-Borne Diseases", "Syphilis & Leptospirosis", "Mycoplasma, Ureaplasma, & Chlamydia", "Francisella, Brucella, Bartonella, & Coxiella", "Viral Hemorrhagic Fevers", "Hepatitis Viruses", "CNS Viruses", "Influenza", "Introduction to Medical Microbiology & Clinical Infectious Diseases", and "Sjogren's Syndrome and Mixed Connective Tissue Disease" Resource: Foundations 2 e-module, Host Defense Longitudinal Group Session, Host Defense Lectures

1.5. Does your <u>medical school</u> curriculum address the respiratory health effects of climate change and air pollution?	
This topic was explored **in depth** by the **core** curriculum.	
This topic was **briefly** covered in the **core** curriculum.	
This topic was covered in **elective** coursework.	
This topic was **not** covered.	
Score Assigned:	2
Score explanation: The OSUCOM curriculum discusses the effect of lifestyle on respiratory health but not on the social determinants of health as related to climate change and air pollution. During Host Defense, in the Longitudinal Group session that covers climate change and health, one of four topics students research and present on involves climate change and air pollution, including the relationship of pollen and mold allergens to worsening asthma and allergic rhinitis. During the pre-clinical Cardiopulmonary block, there are a few lectures with brief mentions about air pollutants and how they can contribute to interstitial lung disease, although there is no discussion of trends or causative factors of the air pollution. Resource: Host Defense Longitudinal Group Session, Cardiopulmonary Block Lectures	

1.6. Does your <u>medical school</u> curriculum address the cardiovascular health effects of climate change, including increased heat
This topic was explored **in depth** by the **core** curriculum.
This topic was **briefly** covered in the **core** curriculum.
This topic was covered in **elective** coursework.
This topic was **not** covered.

Score Assigned:	2
Score explanation: The core curriculum lectures do not address the cardiovascular health effects of climate change,but it does briefly mention increased heat. The lectures only discuss the effects of smoking and alcohol on cardiovascular health. There is one lecture in the Foundations 2 e-module on the impact of climate change on women's health that has one slide that includes cardiovascular health, among other organ systems, as negatively impacted by excess heat but does not connect that excess heat to climate change. The second year longitudinal group class during the Host Defense block, which is a part of the core curriculum, discusses this topic in one of the five cases. Resource: Foundations 2 Climate Health module, Host Defense Longitudinal Group Session	

1.7. Does your medical school curriculum address the mental health and neuropsychological effects of environmental degradation and climate change?	
This topic was explored **in depth** by the **core** curriculum.	
This topic was **briefly** covered in the **core** curriculum.	
This topic was covered in **elective** coursework.	
This topic was **not** covered.	
Score Assigned:	2
Score explanation: During Host Defense, in the Longitudinal Group session that covers climate change and health, one of five cases discusses climate change's impact on mental health. Resource: Host Defense Longitudinal Group Session	

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.	
This topic was **briefly** covered in the **core** curriculum.	
This topic was covered in **elective** coursework.	
This topic was **not** covered.	
Score Assigned:	2
Score explanation: The OSUCOM curriculum discusses the effect of lifestyle on respiratory health but not on the social determinants of health as related to climate change and air pollution. During Host Defense, in the Longitudinal Group session that covers climate change and health, one of five cases discusses how climate change exacerbates air pollution, pollen, and mold allergens,	

and thus worsens asthma and allergic rhinitis.

Resource: Host Defense Longitudinal Group Session

1.9. Does your <u>medical school</u> curriculum address the outsized impact of climate change on marginalised populations such as those with low SES, women, communities of colour, Indigenous communities, children, homeless populations, and older adults?	
This topic was explored **in depth** by the **core** curriculum.	
This topic was **briefly** covered in the **core** curriculum.	
This topic was covered in **elective** coursework.	
This topic was **not** covered.	
Score Assigned:	2
Score explanation: In the Foundations 2 e-module as part of the core curriculum, there is one slide on the disproportionate effects of climate change on Black people, people of color, and developing nations. The curriculum also addresses the racial disparities in OB/GYN, for example, in the endocrinology and reproduction block. However, the material does not connect disparities to climate change. During Host Defense, in the Longitudinal Group session that covers climate change and health, bonus resources for the five cases includes a podcast on health disparities and a physician guide to climate change, health, and equity. The 30 min e-module in the Understanding Patients with Specialized Medical Needs (UPSMN) Ring discusses the social and economic factors connected to poor health outcomes, implicit bias, and sub-optimal care in relation to climate change. The 30 min e-module in the UPWP ring discusses impact of particulate matter on black and minority communities and children and impact of disease in the underserved Appalachian populations, and includes a case scenario on environmental justice. Outsized impact of climate change on Indigenous communities not covered. Resource: Foundations 2 e-module, Endocrine/Reproduction block lectures, Host Defense Longitudinal Group Session, Host Defense Lectures, UPSMN Ground School lectures	

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.
This topic was **briefly** covered in the **core** curriculum.
This topic was covered in **elective** coursework.
This topic was **not** covered.

Score Assigned:	2
Score explanation: In the brief Foundations 2 e-module as part of the core curriculum, one slide discusses the disproportionate effect of climate-fueled extreme weather nations on the least developed nations. Otherwise, The core curriculum does not address the unequal regional health impacts of climate change globally. Resource: Foundations 2 e-module	

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

1.11. Does your <u>medical school</u> curriculum address the reproductive health effects of industry-related environmental toxins (e.g. air pollution, pesticides)?	
This topic was explored **in depth** by the **core** curriculum.	
This topic was **briefly** covered in the **core** curriculum.	
This topic was covered in **elective** coursework.	
This topic was **not** covered.	
Score Assigned:	2
Score explanation: In the endocrinology and reproduction block, the "Nutrition in Pregnancy and Lactation" lecture briefly discussed the importance of pregnant women to avoid big game fish and tuna to avoid dangerous levels of mercury, as it is teratogenic. No other mention of environmental toxins in reproductive health were made. Resource: Endocrine/Reproduction block lectures	

1.12. Does your <u>medical school</u> curriculum address important human-caused environmental threats that are relevant to the university's surrounding community?	
This topic was explored **in depth** by the **core** curriculum.	
This topic was **briefly** covered in the **core** curriculum.	
This topic was covered in **elective** coursework.	
This topic was **not** covered.	
Score Assigned:	2
Score explanation: In the M2 Longitudinal Group required climate change student presentations on a wide range of topics (Topic 1: Asthma & Air Quality, Topic 2: Extreme Weather, Topic 3: Climate migration and Healthcare access, Topic 4: Water Quality and Contamination). Students have the opportunity to discuss the specific corporations in the Midwest area contributing to the crisis. The 30 minute e-module in the UPWP ring discusses the major locoregional sources of	

greenhouse gas emissions, environmental and health effects of natural gas production, and the current regulation of fossil fuels and radioactive waste in Ohio and impact of disease on the underserved Appalachian populations. Resources: Host Defense Longitudinal Group session, UPWP Ground School Lecture

1.13. To what extent does your <u>medical school</u> emphasise the importance of Indigenous knowledge and value systems as essential components of planetary health solutions?	
This topic was explored **in depth** by the **core** curriculum.	
This topic was **briefly** covered in the **core** curriculum.	
This topic was covered in **elective** coursework.	
This topic was **not** covered.	
Score Assigned:	0
Score explanation: The curriculum does not cover Indigenous populations. Resource: Lead Serve Inspire Curriculum	

1.14. Does your <u>medical school</u> curriculum address the outsized impact of anthropogenic environmental toxins on marginalised populations such as those with low SES, women, communities of colour, children, homeless populations, Indigenous populations, and older adults?	
This topic was explored **in depth** by the **core** curriculum.	
This topic was **briefly** covered in the **core** curriculum.	
This topic was covered in **elective** coursework.	
This topic was **not** covered.	
Score Assigned:	0
Score explanation: The core curriculum does not 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. Resource: Lead Serve Inspire Curriculum	

Curriculum: Sustainability

1.15. Does your medical school curriculum address the environmental and health co-benefits of a plant-based diet?	
This topic was explored **in depth** by the **core** curriculum.	
This topic was **briefly** covered in the **core** curriculum.	
This topic was covered in **elective** coursework.	
This topic was **not** covered.	
Score Assigned:	0
Score explanation: The core curriculum does not address the environmental and health co-benefits of a plant-based diet. However, in the gastroenterology and renal block, the B12 deficiency caused by a vegan diet was discussed but no direct relation to climate change was mentioned. Resource: Lead Serve Inspire Curriculum	

1.16. Does your medical school curriculum address the carbon footprint of healthcare systems?	
This topic was explored **in depth** by the **core** curriculum.	
This topic was **briefly** covered in the **core** curriculum.	
This topic was covered in **elective** coursework.	
This topic was **not** covered.	
Score Assigned:	2
Score explanation: The e-module in the UPSMN ring discusses the environmental footprint of healthcare delivery and how clinicians can reduce the operational footprint in a hospital or clinic setting. Resource: UPSMN Ground School lectures	

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)	0
The environmental impact of **pharmaceuticals** and over-prescribing as a cause of climate health harm. Alternatively teaching on **deprescribing** where possible and its environmental and health co-benefits would fulfil this metric. (2 points) .	0

The health **and** environmental **co-benefits** of **non-pharmaceutical management** of conditions where appropriate such as exercise or yoga classes for type 2 diabetes; social group activities such as gardening for mental health conditions; active transport such as bicycle schemes. This is commonly known as social prescribing in the UK. (1 point)	0
Environmental impact of **surgical** healthcare on planetary health and the climate crisis, and how can it be mitigated. (1 point)	0
The impact of **anaesthetic** gases on the healthcare carbon footprint and ways to reduce anaestheisa's environmental impacts, such as total intravenous anaesthesia or choosing less environmentally harmful anaesthetic gas options with reduced greenhouse gas emissions. (1 point)	0
The impact of **inhalers** on the healthcare carbon footprint and the environmental benefit of dry powdered inhalers over metered dose inhalers. (1 point)	0
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)	0

Score explanation: None this content is covered in the core or elective curriculum.

Pharmacy lectures and "Cost of Care" lecture during the UPWP ring do not include planetary impact of over-prescribing, over-investigating, or over-treating.

Resource: Lead Serve Inspire Curriculum

Curriculum: Clinical Applications

1.18. In training for patient encounters, does your <u>medical school's</u> curriculum introduce strategies to have conversations with patients about the health effects of climate change?	
Yes, there are strategies introduced for having conversations with patients about climate change in the **core** curriculum. (2 points)	
Yes, there are strategies introduced for having conversations with patients about climate change in **elective** coursework. (1 points)	
No, there are **not** strategies introduced for having conversations with patients about climate change. (0 points)	
Score Assigned:	2

Score explanation: During Host Defense, in the Longitudinal Group session that covers climate change and health, there is a standardized patient encounter with a patient who presents with symptoms of late disseminated Lyme disease due to climate-related migration of the Ixodes tick. The assessment includes a discussion of how climate change has contributed to the spread of Lyme disease beyond the northeast US. Additional strategies on how to have conversations with patients about the health effects of climate change are not included and if provided, would be preceptor-dependent.

Resource: Host Defense Longitudinal Group Session

1.19. In training for patient encounters, does your <u>medical school's</u> curriculum introduce strategies for taking an environmental history or exposure history?	
Yes, the **core** curriculum includes strategies for taking an environmental history. (2 points)	
Only **elective** coursework includes strategies for taking an environmental history. (1 point)	
No, the curriculum does **not** include strategies for taking an environmental history. (0 points)	
Score Assigned:	2
Score explanation: Throughout Longitudinal Group, a small group discussion during M1-2 years, students are taught to ask patients about occupational history to elicit exposures and environmental factors. The other aspect of environmental history students are taught to record is environmental allergies, and social factors (living arrangements, smoking, diet, etc.) that could be affected by the environment. During Host Defense, in the Longitudinal Group session that covers climate change and health, there is a standardized patient encounter with a patient who presents with symptoms of late disseminated Lyme disease due to climate-related migration of the Ixodes tick. The details that students are expected to elicit on social history to aid in diagnosis and discussion with the patient include occupation, area of residence, exercise, diet, and travel history. Resource: Host Defense Longitudinal Group Session	

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: The Ohio State University College of Medicine Administration is currently working with students to implement student driven curriculum change. Change includes adding climate health language and individual facts to existing lectures for longitudinal incorporation. This is a longitudinal project that will be implemented over the next few years and iteratively afterwards. Resource: Sustainability in Medicine	

1.21. How well are the aforementioned planetary health/Education for Sustainable Healthcare topics integrated longitudinally into the core curriculum?	
Planetary health/ESH topics are **well integrated** into the core medical school curriculum. (6 points)	
Some planetary health/ESH topics are appropriately integrated into the core medical student curriculum. (4 points)	
Planetary health/ESH is not integrated and is primarily addressed in **(a) standalone lecture(s).** (2 points)	
There is **minimal/no** education for sustainable healthcare. (0 points)	
Score Assigned:	2
Score explanation: The planetary health/education for sustainable healthcare topics are mostly discussed in standalone lectures in the Foundations 1 e-module, Longitudinal Group climate change and health session, and each lecture during Ground School before each ring in M3 year. We will mostly add additional content as standalone lectures to increase autonomy and quality of the content delivery. Resource: LSI Curriculum	

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: A Health Science and Rehabilitation professor and PhD serves in the position of Director of Health Professions Sustainability Education to oversee and take responsibility for the incorporation of planetary health and sustainable healthcare as a theme throughout the curriculum. In general, the Ohio State University College of Medicine administration is interested in improving the inclusion of planetary health and sustainable health care in the curriculum. The Wexner Medical Center employs a Sustainability Project Manager of the hospital system however their role is not to oversee medical school curriculum development. The greater OSU	

administration has a Presidents and Provosts Council for Sustainability, but the medical school does not directly employ the members.

Section Total (35 out of 72)	**49%**

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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 Director of Health Professions Sustainability Education at OSUCOM studies how aspects of the physical environment, including ambient pollution, impact physical activity behaviors and disease risk in Central Ohio populations. An Associate Professor of Anesthesiology studies the impact of perioperative resources on the carbon footprint of hospitals. An associate professor in the Division of Pulmonary, Critical Care, and Sleep Medicine studies the effects of air pollution and ozone on pulmonary inflammation. A professor in the Department of Physiology and Cell Biology, the Associate Dean for research operations and compliance, studies the effects of pollution on cardiopulmonary health. A professor in the Department of Psychiatry and Behavioral Health studies the impact of environmental chemical exposures on cognitive development of children. A Professor of Physiology and Cell Biology studies the role of lung epithelium in immune responses and host defense against bacterial and inhaled air pollution. The College of Public Health also has researchers studying planetary health; however, these faculty have appointments in the College of Public Health. In addition, numerous researchers at Ohio State University study planetary health in relation to human health and healthcare, but none have appointments in the College of Medicine. https://www.gowdyenvironmentallunglab.com/ https://wexnermedical.osu.edu/mediaroom/expertslisting/loren-wold https://mcdb.osu.edu/people/zhao.2878 https://medicine.osu.edu/find-faculty/clinical/psychiatry-and-behavioral-health/amy-margolis	

2.2. Is there a dedicated department or institute for interdisciplinary planetary health research at your institution?	
There is **at least one** dedicated department or institute for interdisciplinary planetary health research. (3 points)	
There is **not currently** a department or institute for interdisciplinary planetary health research, but there are **plans** to open one in the next 3 years. (2 points)	
There is an **Occupational and Environmental Health department**, but no interdisciplinary department or institute for planetary health research. (1 points)	
There is **no** dedicated department or institute. (0 points)	
Score Assigned:	3
Score explanation: The Ohio State University has the Sustainability Institute, which collaborates with academic and operations units across the university to advance sustainability and resilience scholarship and activities. The Sustainability Institute has a group focused on Healthy Air, Land, and Water, of which one of the aims is looking at impacts of topics like groundwater purity, air particulates, and land pollution on human health. Additionally, Ohio State University has the Changing Climate Outreach Team, which seeks to connect multiple departments to share local climate change information and resources. While it is interdisciplinary and sometimes shares local research, the initiative is not currently building research teams. Additionally, it has not been visibly active in recent 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 points)	
There is **no** process, and **no** efforts to create such a process. (0 points)	
Score Assigned:	2
Score explanation: Clinical and Translational Science Institute Community Engagement is aimed to improve the health of the communities in Ohio by engaging partnerships and conducting stakeholder-engaged research.	

2.4. Does your institution have a planetary health website that centralises ongoing and past research related to health and the environment?	
There is an **easy-to-use, adequately comprehensive** website that **centralises** various campus resources related to health and the environment including all of the following: upcoming events, leaders in planetary health at your institution, and relevant funding opportunities. (3 points)	
There is a website that **attempts to centralise** various campus resources related to health and the environment, but it is hard-to-use, not updated, or not adequately comprehensive. (2 points)	
The **institution** has an **Office of Sustainability website** that includes **some** resources related to health and the environment. (1 point)	
There is **no** website. (0 points)	
Score Assigned:	3
Score explanation: The OSU Sustainability Institute has a place on their website where they centralize all researchers related to sustainability topics, and research by topics. In addition, they provide resources for exploratory research groups and organizations on campus that students can choose to reach out to and get involved in. They also showcase research that they sponsor and include information on how to get involved with funding support. The website is frequently updated with news on sustainability research and news across the campus.	

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: The Clinical and Translational Science Institute highlighted Climate Change and Health within their 2025 Annual Meeting held on 2/11/25. The Byrd Polar and Climate Research Center held the 5th Annual Byrd Center Symposium on Climate Change Research at Ohio State on October 20, 2023 with multiple sessions and presentations, - one from the Wexner Medical Center and multiple as a part of the College of Medicine M4 Climate Health Advanced Competency.	

2.6. Is your institution a member of a national or international planetary health or ESH/ESV organisation?	
Yes, the institution is a member of a national or international planetary health **or** ESH/ESV organisation. (1 points)	
No, the institution is **not** a member of such an organisation. (0 points)	
Score Assigned:	1
Score explanation: OSUCOM Global One Health Initiative is part of the Planetary Health Alliance. OSUCOM recently joined the Global Consortium on Climate and Health Education. Additionally, the medical center is a member of Practice Greenhealth, joined the Health Care Climate Challenge, and is working towards membership in the Health Care Climate Council. The Sustainability in Medicine student organization is also affiliated with Medical Students for Sustainable Future.	

Section Total (16 out of 17)	**94%**

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Community Outreach and Advocacy

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

3.1. Does your institution partner with community organisations to promote planetary and health?	
Yes, the **institution** meaningfully partners with **multiple** community organisations to promote planetary and environmental health. (3 points)	
Yes, the **institution** meaningfully partners with **one** community organisation to promote planetary and environmental health. (2 points)	
The institution does not partner with community organisations, but **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: The Sustainability Institute at Ohio State partners multiple NGOs and community organizations to connect with student volunteers to address environmental, food security, recycling and energy issues. One example is Mansfield Microfarm, a sustainable and productive urban farming system.
The Sustainability Institute at the Ohio State University has many community partnerships.

OSUCOM's Community Health Education (CHE) mandatory service project for M1-2 students does not include any partners that have a mission involving environmental health, according to the catalog of community partners. There are CHE partners who have a focus on providing community members with fresh, healthy produce related to diet but not planet. The COM Student Council has a continuing partnership with the Mid-Ohio Food Collective to promote food security, but not planetary health specifically.

The Sustainability in Medicine student organization has participated in various community events related to planetary health. Additionally, the Green Team, made up of employees at the Ohio State Wexner Medical Center, participates in events related to planetary health, receiving Arbor Day's Tree Campus Healthcare recognition yearly from 2019 to 2024, giving away more than 3,000 native tree saplings, pollinator plants and shrubs to its employees.

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 Environmental Professionals Network is a service of the School of Environment and Natural Resources that connects and grows environmental professionals in-person and online. The EPN hosts a monthly speaker series on topics related to environment, climate change, and community resilience. Some of these lectures related to planetary health and are directed to the general public. Examples from this past year include "Inaugural Ohio Soil Health Week: Celebrating healthy soils for environmental and human health", "Moo-ving Methane: Converting Ohio's dairy farm manure into an energy source", and "Eat This Earth Day! Ohio's Native Plants for Food" The student organization, Time4Change partners with other student organizations, university departments and offices, and Columbus community partners to host a yearly week-long event of educational seminars and recreational events. This week focuses on increasing community engagement and environmental awareness at Ohio State. The work also directly addresses outside communities. Lastly, the Ohio State College of Medicine Interprofessional council hosted their annual summit, "Growing a Greener Tomorrow" on February 18th, 2024. However, the primary audience was academic and not advertised publicly.	

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:	1
Score explanation: Staff and students receive regular communications via OSU Healthbeat and Healthbeat Hub emails from the Wexner Medical Center President and they do not consistently contain content related to sustainability. Students are able to sign up for the Green Team, a sustainability focused group of practicing health professionals, at OSU Wexner Medical Center and	

sends biweekly emails with planetary health information. However, students are required to "opt-in" to get Green Team emails.

3.4. Does the institution or main affiliated hospital trust engage in professional education activities targeting individuals post graduation with the aim of ensuring their knowledge and skills in planetary health and sustainable healthcare remain up to date during their professional career?	
Yes, the **institution** or **main affiliated hospital trust** offers multiple in-person or online courses relating to planetary health and/or sustainable healthcare for post-graduate providers, including at least one with a primary focus of planetary health. (2 points)	
Yes, the **institution** or **main affiliated hospital trust** offers one course relating to planetary health and/or sustainable healthcare for post-graduate provider. (1 point)	
There are **no** such accessible courses for post-graduate providers. (0 points)	
Score Assigned:	2
Score explanation: The Green Team at the Ohio State University Wexner Medical Center in collaboration with the Byrd Climate and Polar Research Center hosted an educational webinar titled "Air Pollution and Human Health Effects" on January 16, 2024 (no CME available). Additionally the department of Psychiatry hosted grand rounds on March 13, 2024 related to planetary health titled "The Role of Environmental Chemicals and Social Stressors in the Etiology of Learning Difficulties." Nationwide Children's Hospital, the affiliated pediatric hospital, offers an educational podcast series for providers, "Pediacast", which has a podcast titled "Climate Change, the Environment, and Children's Health." Pediacast CME offers multiple forms of educational credit.	

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 hospitals have accessible educational materials for patients. (0 points)	
Score Assigned:	2
Score explanation: OSU Wexner Medical Center website includes a link to a Patient Education Library, which includes the topic of environmental health and has individual education materials for a variety of environmental illnesses. Nationwide Children's Hospital also includes Patient Education Materials that incorporate information on environmental health risks, such as heat illness, heat rash, air quality alerts, and tick safety.	

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: OSU Wexner Medical Center website includes one informative patient centered blog that explicitly mentions climate change. This article directly discusses the impact of climate change on parasite migration and infectious disease patterns. Another article specifically mentions managing more severe allergies due to climate change. Several other articles discuss topics related to climate change but do not explicitly make the connection between the environmental events and climate change (one discussing extreme weather and disaster preparedness, others discuss air pollution). Nationwide Children's Hospital also features information about climate change on their website during one episode of "Pediacast." The James Cancer Center includes a blog post on how climate change could influence cancer risk. For the several other affiliated community hospitals, searching "climate change", "environmental justice", or "planetary health" in the search function yielded no patient information.	

Section Total (13 out of 14)	**93%**

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Support for Student-Led Planetary Health Initiatives

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

4.1. Does your institution offer support for students interested in enacting a sustainability initiative/QI project?	
Yes, the **institution** *either* offers grants for students to enact sustainability initiatives/QI projects *or* sustainability QI projects are part of the core curriculum. (2 points)	
The **institution** encourages sustainability QI projects (to fulfil clerkship or longitudinal requirements) and offers resources to help students succeed in these projects, **but** there is no student funding available and there is no requirement to participate. (1 point)	
No, the institution **does not** offer opportunities or support for sustainability initiatives or QI projects (0 points)	
Score Assigned:	2
Score explanation: Sustainability in Medicine student group was able to secure a grant in 2019 to replace browsers on Medical center to Ecosia, which plants trees for browser searches. The OSU Zero Waste team also works with the Sustainability in Medicine student group to provide at-home compost buckets for no charge, and set up a drop off location for compost. Additionally, students are able to apply for and pursue the Medical Student Research program, which could provide funding for a student to conduct a QI project with focus on sustainability. The Columbus-Athens Schweitzer Fellows Program provides a graduate or health profession student with funding and support to complete community service projects during one summer for a total of 200 service hours that students may choose to focus on sustainability initiatives, which a student has chosen to work on air quality this past year. Additionally, M4 students must complete a QI project and may choose to focus on sustainability.	

4.2. Does your institution offer opportunities for students to do research related to planetary health and/or sustainable healthcare/vetcare?
The **institution** has a **specific** research program or fellowship for students interested in doing planetary health/sustainable healthcare/vetcare research. (2 points)
There are research opportunities for students to perform research related to planetary health/sustainable healthcare, but these **require student initiative** to seek these out and carry them out in their spare time. (1 point)
There are **no opportunities** for students to engage in planetary health/sustainable healthcare research. (0 points)

Score Assigned:	2

Score explanation: The Ohio State University has multiple fellowships and programs for students to conduct planetary health or sustainability research. Some examples offered to students include: Ohio State Sustainability Fund, Student Sustainability Grant, and OSEP Academic Collaboration Awards.

OSUCOM has numerous research opportunities within The Ohio State University system that students can seek out to pursue (for example, the Medical Student Research Scholarship is a funding program for all OSUCOM students to apply to for 3 months of research between the first and second year). However, there is no department specific to or related to “Planetary Health" or“Sustainable Healthcare.” With numerous colleges at this institution, students would be able to carry out planetary health/sustainable healthcare research and qualify for medical student research funding, but medical students would need to find their research lab and mentor on their own.

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: The medical student organization, Sustainability in Medicine, has a webpage for medical students to learn more about the organization, contact information for student leaders, and contact information for faculty leaders.

The Ohio State University Wexner Medical Center website describes interdisciplinary research Wexner Medical Center is conducting, such as a recent project to analyze the environmental impact of anesthesia gases during surgery. This website also posts about advances made in campus initiatives by the Sustainability in Medicine student organization (and provides the general sustanability@osu.edu email).

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 Ohio State University College of Medicine Sustainability in Medicine (SiM) student group is an organization at the medical school dedicated to reducing the environmental impact of the Wexner Medical Center and College of Medicine directly through sustainable initiatives and indirectly through education on sustainable personal practices. This group receives funding from the Ohio State University and the Ohio State University College of Medicine student council, and is supported by numerous faculty members as well as dedicated COM faculty member time.	

4.5. Is there a student liaison representing sustainability interests who serves on a department or institutional decision-making council to advocate for curriculum reform and/or sustainability best practices?	
Yes, there is a student representative that serves on a department or institutional decision-making council/committee. (1 points)	
No, there is no such student representative. (0 points)	
Score Assigned:	1
Score explanation: There are multiple students at OSUCOM who are represented on institutional decision-making councils that advocate for sustainability best practices. Within OSUCOM, students can be active members of the green team at the medical center. Additionally, we have elected Student Council members on the Part 1,2, and 3 curriculum committees. However, they are not dedicated to represent sustainability interests. Outside of OSUCOM, students can voice concerns regarding sustainability to the Interprofessional Council's (IPC) dedicated sustainability committee. Lastly, one student from IPC is appointed to serve on the President & Provosts Council on Sustainability (PPCS).	

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.	0
Cultural arts events, installations or performances related to planetary health that have students as an intended audience.	1
Local volunteer opportunities related to building community resilience to anthropogenic environmental impacts.	1
Wilderness or outdoors programs (e.g., that organise hiking, backpacking, kayaking, or other outings for students)	1

Score explanation:
Agriculture - The Ohio State Student Farm is a student organization that teaches OSU students about sustainable farming practices. OSUCOM Sustainability in Medicine (SiM) has an OSUCompost Program that teaches and trains students how to properly compost.

Panels and Speakers:
There was one lecture on the health benefits of urban green spaces. There was also a speaker panel at the CTSI Annual Meeting that addressed a variety of climate change related health trends.

Local Service:
In 2022, the medical center's Green Team hosted a tree planting service event for students and staff to increase tree and biodiversity in Columbus.

Cultural Arts:
Two art exhibits are up for viewing at the campus Wexner Center for the Arts, which is a modern art museum dedicated to providing students free art museum experience. One exhibit focuses on the narrative surrounding Central Ohio Native Indigenous identity and forced migration (open 2/11/23 - 7/09/23). A second exhibit looks at the intersection of humans and environmental healing and advocates for climate justice (open 2/11/23 - 7/09/23).

Wilderness Programs:
OSUCOM has a Wilderness Medicine Interest Group (WMIG) that hosts multiple student outings and workshops related to practicing wilderness medicine. OSUCOM Student Council hosted student canoe trips as an outing for students to attend. Further, part of the M4 and M1 Climate Health Electives involved organized hikes.

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 medical schools, clinics, and hospitals must set the standard for sustainable practices, and show other sectors what is possible when it comes to minimising environmental impact.*

5.1. Does your institution have an Office of Sustainability?	
Yes, there is an Office of Sustainability with multiple full-time staff dedicated to campus sustainability. If the Office of Sustainability serves the entire campus, there is **at least one designated staff member** for sustainability at the hospital. (3 points)	
There is an Office of Sustainability with one or more full-time staff dedicated to campus sustainability, but **no specific staff member** in charge of hospital sustainability. (2 points)	
There are **no salaried sustainability staff,** but there is a sustainability task force or committee. (1 point)	
There are **no** staff members **or** task force responsible for overseeing campus sustainability. (0 points)	
Score Assigned:	3
Score explanation: Ohio State University has a robust Sustainability Institute (SI) that serves the entire campus. The SI has numerous dedicated staff, executive steering committee, as well as world-renowed faculty and researchers all working toward the common goal of establishing OSU as a leader in sustainability efforts both within higher education and in local and global communities. SI integrates efforts from multiple academic disciplines and multiple campus departments (such as Student Life and Administration and Planning) to address the complex issue of sustainability, all while empowering the next generation of students to become leaders in this global challenge. There is a Senior Director of Sustainability and Strategic Services who is responsible for all strategic and operational aspects of Ohio State's energy services and sustainability program, including at the Wexner Medical Center. There is a Sustainability Program Manager at the Wexner Medical Center and the hospital also has a dedicated sustainability program with 1,115 green team members that is dedicated to addressing the healthcare aspects of climate change, including social determinants of health.	

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:	0

Score explanation: The Ohio State University currently has a carbon neutrality goal by 2050. The institution has a climate action plan, in which it is stated that if their recommendations are followed, they could reach carbon neutrality ahead of goal; by 2030.

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: Since 2015 (baseline), the university has has a 13.1% energy efficiency improvement through various efforts, one of which was implementing the new Sustainable Design and Construction policy in Feb 2021, which requires all qualifying university projects to adhere to the newly established sustainability requirements regardless of budget. The university has also partnered with ENGIE North America and Axium Infrastructure to make the university 25% more energy efficient by 2028. As of 2024, 38% of Wexner Medical Center's electricity was from carbon-neutral energy sources. Additionally, the university opened the Energy Advancement and Innovation Center (EAIC) in fall 2023, which is a space where Ohio State faculty members, students, alumni, ENGIE Buckeye Operations researchers, local entrepreneurs and industry experts can work together on the next generation of smart energy systems, renewable energy and green mobility solutions. The EAIC itself was designed to reduce energy consumption. For example, the building utilizes rooftop solar panels for over half its electricity and relies mostly on natural light that comes in through the building's clear walls during the day. The new combined heating and power plant that also opened in 2023 was designed to provide sustainable, energy-efficient electricity, heating, and cooling to existing and new buildings.

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: The Ohio State University launched its new Sustainable Design and Construction Policy in February 2021. All construction projects (new and renovations) now incorporate more sustainability elements based on project type, project scope, jurisdiction and budget and require suppliers to be more transparent around sourcing, material content and the carbon footprint of materials. One exciting example of the impact these standards have already had is the under-construction inpatient hospital that's diverting 86 million pounds of materials – which translates to 98% of the waste materials being recycled.	

5.5. Has the institution implemented strategies to encourage and provide environmentally-friendly transportation options for students and reduce the environmental impact of commuting?	
Yes, the institution has implemented strategies to encourage and provide **environmentally-friendly transportation options** such as safe active transport, public transport, or carpooling and these options are well-utilised by students. Alternatively, the campus location is not amenable to unsustainable forms of transportation by default. (2 points)	
The institution has implemented **some** strategies to provide environmentally-friendly transportation options, but the options are **unsatisfactorily** accessible or advertised. (1 point)	
The institution has **not** implemented strategies to encourage and provide environmentally-friendly transportation options. (0 points)	
Score Assigned:	2
Score explanation: Ohio State University offers free public transportation to students on the COTA buses (city of Columbus bus system) and on the university's bus system, CABS, which operates on campus and to popular housing locations. Ohio State University also has robust biking infrastructure with bike racks, and discounted rentable bikes all over campus, making it a Silver Level Bicycle Friendly University. Electric charging stations are also featured on campus. Ohio State University also offers rideshare discounts for students during dark hours.	

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:	2
Score explanation: The facilities operations and development department has a robust composting and recycling program that many students utilize. Every campus building and room have three trash bins (recycling, compost, and regular trash), and the university also has a compost program where students can rent compost bins and drop off their compost at designated drop-off stations throughout campus.	

5.7. Does the institution apply sustainability criteria when making decisions about the campus food and beverage selections (e.g. local sourcing, reduced meat, decreased plastic packaging)?	
Yes, the institution has a**dequate s**ustainability requirements for food and beverages, including meat-free days or no red-meat, and **is engaged** in efforts to increase food and beverage sustainability. (3 points)	
There are sustainability guidelines for food and beverages, but they are **insufficient or optional**. The institution **is engaged** in efforts to increase food and beverage sustainability. (2 points)	
There are sustainability guidelines for food and beverages, but they are **insufficient or optional.** The institution is **not** engaged in efforts to increase food and beverage sustainability. (1 point)	
There are **no** sustainability guidelines for food and beverages. (0 points)	
Score Assigned:	3
Score explanation: In 2018, a Food Sustainability Panel comprised of faculty, students, staff and external partners developed a guide that outlined a plan to secure at least 40% of food from local and sustainable sources by 2025. Some food options come directly from campus through various projects such as the microfarms project and Student Farm at Ohio State. Furthermore, 16% of all food purchased by the Wexner Medical Center was locally sourced in 2021.	

5.8. Does the institution apply sustainability criteria when making decisions about supply procurement?
Yes, the institution has **adequate** sustainability requirements for supply procurement **and** is **engaged** in efforts to increase sustainability of procurement. (3 points)

There are sustainability guidelines for supply procurement, but they are **insufficient or optional.** The institution is **engaged** in efforts to increase sustainability of procurement. (2 points)	
There are sustainability guidelines for supply procurement, but they are **insufficient or optional.** The institution is **not engaged** in efforts to increase sustainability of procurement. (1 point)	
There are **no** sustainability guidelines for supply procurement. (0 points)	
Score Assigned:	3
Score explanation: The medical center has a sustainable procurement guidelines that "ensure[s] it is purchasing environmentally friendly medical equipment and devices across the organization." In 2021, 75% of spending through the medical center's group purchasing organization had at least one sustainable attribute. Since 2011, the hospital has also "diverted nearly 130 tons of single-use devices from the landfills through a reprocessed medical device program." The Ohio State University as a whole plans to develop "university-wide standards for targeted environmentally preferred products and fully implement preferable products and services by 2025." The Office of Business and Finance increasingly integrates sustainable and environmental policies when purchasing, storing, and selling surplus products.	

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: The university offers support for zero waste events, but there are no requirements. OSUCOM does not have requirements or separate guidelines.	

5.10. Does your institution have programs and initiatives to assist with making lab spaces more environmentally sustainable?	
Yes, the institution has **programs** and **initiatives** to assist with making lab spaces more environmentally sustainable. (2 points)	
There are **guidelines** on how to make lab spaces more environmentally sustainable, but not programs or initiatives. (1 point)	
There are **no** efforts at the institution to make lab spaces more sustainable. (0 points)	
Score Assigned:	2
Score explanation: The university has a Green Buckeye Certification program that outlines how	

offices and labs can become more sustainable and certified as green. Recertification occurs every two years and the website keeps and updated list of offices/labs that are currently green certified.

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: In the 2018 Impact Review Report released in response to the Undergraduate Student Government's (USG) resolution that called for divestment, OSU's Office of Business and Finance responded: "Ohio State should continue our current investment strategy, which allows the university to respond to economic trends in the energy sector and sustainability. For example, the university has already ceased new investments in oil and gas exploration and ramped up investments in sustainable energy projects. The USG proposal should be declined." In Nov 2022, USG passed another resolution demanding divestment but the university did not comply. However, in a news report in 2022 a university spokesperson reported that the university has "made no new investments in illiquid oil and gas exploration and production since 2014", and that the university has begun "winding down" on these investments since 2018. Nonetheless, many students and organizations continue to protest and actively push for sustainable energy and divestment from fossil fuels. For example, in Sept 2021 students gathered to oppose the construction of a fossil-fueled power plant and in Oct 2022, students once again protested for divestment from fossil fuels.	

Section Total (20 out of 32)	**62.5%**

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Grading

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

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

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

Section	Raw Score %	Letter Grade
Planetary Health Curriculum (30%)	(35/72) x 100 = 49%	C
Interdisciplinary Research (17.5%)	(16/17) x 100 = 94%	A
Community Outreach and Advocacy (17.5%)	(13/14) x 100 = 93%	A
Support for Student-led Planetary Health Initiatives (17.5%)	(14/15) x 100= 93%	A
Campus Sustainability (17.5%)	(20/32) x 100 = 62.5%	B-
Institutional Grade	**(Cx0.3 + A-x0.175 + B+x0.175 + Bx0.175 + B=x0.175) = 75%**	**B+**

Report Card Trends

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