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# **Planetary Health Report Card:** *The Ohio State University College of Medicine*

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Ohio State University College of Medicine



**THE OHIO STATE  
UNIVERSITY**  

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**COLLEGE OF MEDICINE**

2021-2022 Contributing Team:

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## Summary of Findings

Overall	C (54%)
<u>Curriculum</u>	F (11%)
<ul style="list-style-type: none"> <li>The Ohio State University College of Medicine (OSUCOM) curriculum includes minimal planetary health but is currently undergoing major climate curriculum changes including new electives and updated lectures.</li> <li><b>Recommendations:</b> Planetary health can be taught in lectures, e-modules, group discussions, service projects, and elective courses in M1-2 and rotation orientation lectures and 4th year electives for M3-4s.</li> </ul>	
<u>Interdisciplinary Research</u>	A (88%)
<ul style="list-style-type: none"> <li>OSUCOM has faculty researchers in climate health but lacks a centralized department. Two websites have climate health research information but are not directed towards medical students. OSUCOM hosted the <i>Climate Change and Health</i> conference in 2021 and are members of MS4SF and GCCHE.</li> <li><b>Recommendations:</b> OSUCOM could make climate focused researchers more accessible to medical students and centralize their work on a more visible, unified website. OSUCOM should continue to support the <i>Climate Change and Health: Implications for Clinical Practice</i> conference as an annual effort.</li> </ul>	
<u>Community Outreach and Advocacy</u>	C+ (57%)
<ul style="list-style-type: none"> <li>OSUCOM could improve planetary health outreach. OSUCOM helped host the publically available <i>Climate Change and Health: Implications for Clinical Practice</i> conference. The hospital website offers articles about climate health that are free for patients, but no climate change information is included in updates, or emphasized in community partnerships. OSUCOM does not offer CME credit planetary health courses.</li> <li><b>Recommendations:</b> OSUCOM could establish partnerships with community organizations, include climate change relevant information in regular communications, and create internal Planetary health courses for CME credits. OSUWMC could also have more information for patients regarding climate change.</li> </ul>	
<u>Support for Student-Led Initiatives</u>	A (87%)
<ul style="list-style-type: none"> <li>OSUCOM supports the registered student group Sustainability in Medicine (SiM), which offers extensive programming for students. SiM is an affiliate of Medical Students for a Sustainable Future. OSUCOM does not offer research opportunities or mentorship in planetary health, but will fund independent research projects. Students can join the Green Team, Interprofessional Council, and President &amp; Provosts Council.</li> <li><b>Recommendations:</b> OSUCOM should continue to work closely with SiM and create a climate focused website. SiM should continue to build partnerships with other student organizations. OSUCOM should institute a program for research in sustainability with projects and mentorship.</li> </ul>	
<u>Campus Sustainability</u>	C+ (58%)
<ul style="list-style-type: none"> <li>OSUWMC follows university goals and has a dedicated sustainability program (on <a href="#">this website</a>), including: 1 Sustainability Program Manager, a Commodity Manager in supply chain, and an energy engineer.</li> <li><b>Recommendations:</b> Although great progress has been made, much work is left to accomplish 2050 carbon neutrality. Sustainability needs to be embedded into core operational decision-making to accomplish this.</li> </ul>	

# Statement of Purpose

*Planetary health is human health.*

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

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

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

# Definitions & Other Considerations

## Definitions:

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

resource comes from or if it is specifically targeted for medical students, can meet this metric.

- **Environmental history (Metric 19 in curriculum section):** This is a series of questions providers are taught to ask during medical encounters that 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 example).

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

# Planetary Health Curriculum

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

## Curriculum: General

<b>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?</b>	
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: No current elective option exists. Current electives for 4th years include Page to Bedside (literary), Professionalism and Humanism, Surgeon Scientist, Interprofessional Collaboration, DELTA (underserved populations), Anatomy, Critical Care, Leaders through Advocacy, Emergency Preparedness, Family Planning, Global Health, Healthcare Communications and Social Media, Leadership, Medical Ethics, Medical Toxicology, Teaching in Medicine, Technology Licensing, Ultrasound, Integrative medicine, Developmental Disability, Research, Epidemiology, Officer development, Pharmacogenomics, LGBTQ+ Health, Literature Review, and Healthcare Venture Capital.</i></p> <p><i>Citation: Step 1 and Step 2 Town Hall, October 4, 2021, meeting with faculty directors, course catalog, meeting with Dr. Meena Khan and Dr. Chirag Patel, for 4th year electives and meeting with Dr. Chris Pierson, director of M1-M2 electives.</i></p>	

## Curriculum: Health Effects of Climate Change

**2. Does your medical school curriculum address the relationship between extreme heat, health**

<b>risks, and climate change?</b>	
3	This topic was explored in depth by the core curriculum.
2	This topic was briefly covered in the core curriculum.
1	This topic was covered in elective coursework.
0	This topic was not covered.
<p><i>Score explanation: Within the Lead.Serve.Inspire (LSI) curriculum, there are no lectures dedicated to the relationship between extreme heat, health risks, and climate change. When referring to the student handbook, there is a chart with physician competencies that are addressed within the curriculum. This chart does not specifically identify climate change and its effects on health as an educational objective.</i></p>	

<b>3. Does your medical school curriculum address the impacts of extreme weather events on individual health and/or on healthcare systems?</b>	
3	This topic was explored in depth by the core curriculum.
2	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: OSUCOM's curriculum does not include any lectures on extreme weather events and its effects on health or the healthcare system. There are no supplemental materials or other formats in which this content is taught. Students may pursue involvement with this topic through student-run organizations, such as Sustainability in Medicine, and non-curricular groups. One lecture that could, but currently does not, include climate change when mentioning seasonal distribution was "Coronaviruses and Noroviruses" lecture in the Host Defense Block for M2s.</i></p>	

<b>4. Does your medical school curriculum address the impact of climate change on the changing patterns of infectious diseases?</b>	
3	This topic was explored in depth by the core curriculum.
2	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: While the OSUCOM curriculum discusses the geographical distribution of viral and bacterial infectious diseases and changes in the causes and epidemiology of infectious diseases in the Host Defense block for M2 students, there is no discussion of climate change, specifically, on these changing patterns of infectious diseases. This was confirmed via email by the leader of this block, Dr. José Bazan. Several lectures that discuss the geographical distribution but exclude a mention of climate change include:</i></p> <p><i>“Tick-Borne Diseases”</i>  <i>“Syphilis &amp; Leptospirosis”</i>  <i>“Mycoplasma, Ureaplasma, &amp; Chlamydia”</i>  <i>“Francisella, Brucella, Bartonella, &amp; Coxiella”</i>  <i>“Viral Hemorrhagic Fevers”</i>  <i>“Hepatitis Viruses”</i>  <i>“CNS Viruses”</i>  <i>“Influenza”</i>  <i>“Introduction to Medical Microbiology &amp; Clinical Infectious Diseases”</i>  <i>“Sjogren’s Syndrome and Mixed Connective Tissue Disease”</i></p>	

<b>5. Does your medical school curriculum address the respiratory health effects of climate change and air pollution?</b>	
3	This topic was explored in depth by the core curriculum.
2	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: The OSUCOM curriculum discusses the effect of lifestyle on respiratory health effects but not on the social determinants of health as related to climate change and air pollution.</i></p>	

<b>6. Does your medical school curriculum address the cardiovascular health effects of climate change, including increased heat?</b>	
3	This topic was explored in depth by the core curriculum.
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 curriculum does not address the cardiovascular health effects of climate change, including increased heat. The curriculum only discusses the effects of smoking and alcohol.*

**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.

*Score explanation: The curriculum does not address the mental health and neuropsychological effects of environmental degradation and climate change. This was confirmed over email by Dr. Adam Quick, the neurology and psychiatry block leader.*

**8. Does your medical school 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.

*Score explanation: The curriculum does not address the relationships between health, individual patient food and water security, ecosystem health, and climate change. The curriculum briefly addressed the effects of social determinants of health and food security in the Foundations 1 block for MIs in relation to the nutrition and eating disorders in the “Nutrition and Obesity” lecture but did not connect either to climate change. The curriculum also included a patient panel that discussed social determinants of health but no mention of climate change was made during this panel. No inclusion of this material in the neurology/psychiatry block was confirmed over email by Dr. Adam Quick, the neurology and psychiatry block leader.*

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

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: The curriculum does not 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. The curriculum does address the racial disparities in OB/GYN, for example, in the endocrinology and reproduction block. However, the material does not connect disparities to climate change. One community organization available for M1-M2 students to partner with for a required service project is <a href="#">Moms2B</a>, an organization focused on maternal wellness in vulnerable populations. However, climate change is not part of the scope of this organization. The curriculum also includes a patient panel that discussed social determinants of health but no mention of climate change was made during this panel.</i></p>	

<b>10. Does your medical school curriculum address the unequal regional health impacts of climate change globally?</b>	
3	This topic was explored in depth by the core curriculum.
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: The curriculum does not address the unequal regional health impacts of climate change globally. There was a new global health selective (1 week elective course for M1-2 students) offered this year that discussed refugee health but did not discuss climate change. Further, this course is an elective and most students will not take it.</i></p>	

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

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

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

*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.*

**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.

*Score explanation: The curriculum does not address important human-caused environmental threats that are relevant to the university’s surrounding community. Elective course “Developing and Empowering Leaders Through Advocacy” does briefly cover this but has not been offered in 2021 or 2022.*

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

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

*Score explanation: The core curriculum does not emphasize the importance of Indigenous knowledge and value systems generally, or as essential components of planetary health solutions. There is an elective course, Developing and Empowering Leaders Through Advocacy, that discusses environmental health disparities briefly but not indigenous knowledge, and the course has not been offered since 2020.*

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

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

*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. The inequitable locating of chemical toxins in economically deprived areas, domestically and internationally was covered in an elective course, Developing and Empowering Leaders Through Advocacy, however, this course was not offered in 2021. A patient panel for M1 students covered social determinants of health but did not discuss the impact of environmental toxins or climate change.*

**Curriculum: Sustainability**

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

3	This topic was explored in depth by the core curriculum.
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 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. A Culinary Medicine Elective course does cover nutritional benefits of plant-based diet but not planetary benefits, and this elective course has not been offered since 2020.*

<b>16. Does your medical school curriculum address the carbon footprint of healthcare systems?</b>	
3	This topic was explored in depth by the core curriculum
2	This topic was briefly covered in the core curriculum.
1	This topic was covered in elective coursework.
0	This topic was not covered.
<p><i>Score explanation: No discussion of climate change exists in the current curriculum outside of direct relations to pathology. This was verified by leaders of several blocks of lectures (Dr. Beth Lee, Dr. Chris Pierson, Dr. Mary Beth Fontana). A lecture on “Cost of Care” in the third year curriculum discussed the cost of over-investigation and healthcare but no mention of the impact on climate change was made.</i></p>	

<b>17. Does your medical school curriculum cover these components of sustainable clinical practice in the <u>core</u> curriculum? (1 point each)</b>	
1	Waste production within the healthcare system and strategies for reducing waste in clinical activities, such as in the operating room
1	The impact of inhalers on the healthcare carbon footprint and the environmental benefit of dry powdered inhalers over metered dose inhalers.
1	The impact of anaesthetic gases on the healthcare carbon footprint and ways to reduce anaesthesia environmental impacts, such as total intravenous anaesthesia or choosing less environmentally anaesthetic gas options with reduced greenhouse gas emissions
1	The environmental impact of pharmaceuticals and over-prescribing as a cause of climate health harm. Alternatively teaching on deprescribing where possible and its environmental and health co-benefits would fulfill this metric.
1	The health and environmental co-benefits of non-pharmaceutical management of conditions where appropriate such as exercise or yoga classes for type 2 diabetes; social group activities such as gardening for mental health conditions; active transport such as bicycle schemes for obesity. This is commonly known as social prescribing in the UK.
1	The health and environmental co-benefits of avoiding over-medicalisation, over-investigation and/or over-treatment
<p><i>Score explanation: None of the components are covered in the core curriculum. No formal education exists on the waste of the healthcare system, environmental impact of anaesthesia, or dry powder inhalers exists. Pharmacy lectures and the “Cost of Care” lecture during family medicine rotations do</i></p>	

*not include planetary impact of over-prescribing, over-investigating, or over-treating . Anesthesia gases, pharmaceuticals, and over-investigation were not included in the neurology/psychiatry block, and this was confirmed over email by Dr. Adam Quick, the neurology and psychiatry block leader. Finally, the health benefits of non-pharmaceutical management of conditions where appropriate, such as exercise or yoga classes for type 2 diabetes, are discussed. However, the environmental effects are not discussed.*

**Curriculum: Clinical Applications**

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

2	Yes, there are strategies introduced for having conversations with patients about climate change in the core curriculum.
1	Yes, there are strategies introduced for having conversations with patients about climate change in elective coursework.
0	No, there are not strategies introduced for having conversations with patients about climate change

*Score explanation: Strategies for discussing climate change and health with patients are not included in the current curriculum and are excluded from small group discussion topics.*

**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: During 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.*

**Curriculum: Administrative Support for Planetary Health**

<b>20. Is your medical school currently in the process of implementing or improving Education for Sustainable Healthcare (ESH)/planetary health education?</b>	
4	Yes, the medical school is currently in the process of making major improvements to ESH/planetary health education.
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.
<p><i>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, adding one introductory climate change and health e-module, adding a climate change focused community charity organization as one option for students to complete a mandatory service project, creating a small group discussion and standardized patient practice focused on a climate change- health chief complaint, adding climate health lectures into third year curriculum, and creating elective options for first, second, and fourth year students. The group is applying for institutional funding to support dedicated students and programming, which was already approved for a match grant by the OSU Sustainability Institute and gained support of our Deans. In addition, a small group discussion and patient interaction surrounding climate health has already been approved and will be piloted with MD/PhD students summer 2022. A four week elective for fourth years covering Climate Health has been approved to offer for the 2022-2023 school year.</i></p>	

<b>21. How well are the aforementioned planetary health/Education for Sustainable Healthcare topics integrated longitudinally into the core curriculum?</b>	
6	Planetary health/ESH topics are well integrated into the core medical school curriculum.
4	Some planetary health/ESH topics are appropriately integrated into the core medical student curriculum.
2	Planetary health/ESH is not integrated and is primarily addressed in (a) standalone lecture(s).
0	There is minimal/no education for sustainable healthcare.
<p><i>Score explanation: The planetary health/education for sustainable healthcare topics are not discussed in a standalone lecture nor integrated into the core curriculum.</i></p>	

**22. Does your medical school employ a member of faculty to specifically oversee and take**

<b>responsibility for the incorporation of planetary health and sustainable healthcare as a theme throughout the course?</b>	
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.
<p><i>Score explanation: There is no specific faculty member to oversee and take responsibility for the incorporation of planetary health and sustainable healthcare as a theme throughout the curriculum. However, 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. Additionally, there are efforts underway to financially support a portion of Dr. Claire Bollinger's time, a Health Science and Rehabilitation professor and PhD, to be dedicated to working on this. The Wexner Medical Center employs Lauren Koch as a Sustainability Project Manager of the hospital system, however, her 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.</i></p>	

<b>Section Total (x out of 69)</b>	<b>8</b>
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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.*

<b>1. Are there researchers engaged in planetary health research and healthcare sustainability research at your medical school?</b>	
3	Yes, there are faculty members at the School of Medicine who have a primary research focus in planetary health <b>or</b> healthcare sustainability.
2	Yes, there are individual faculty members at the School of Medicine who are conducting research related to planetary health or healthcare sustainability, but it is not their primary research focus.
1	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> <a href="#">Dr. Kym Gowdy</a> is an Associate Professor at OSUCOM who studies air pollution and environmental exposure <a href="#">impact on immune response</a>. <a href="#">Dr. Loren Wold</a> is the Associate Dean for research operations and compliance in the OSU College of Medicine and is researching cardiac disease triggers and air pollution. Dr. Wold presented his research at OSUCOM's "<a href="#">Climate Change and Health – Implications for Clinical Practice</a>" conference held in October 2021. The College of Public Health also has researchers studying planetary health.</p>	

<b>2. Is there a dedicated department or institute for interdisciplinary planetary health research at your institution?</b>	
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: The Ohio State University has the <a href="#">Sustainability Institute</a>, which collaborates with academic and operations units across the university to advance sustainability and resilience scholarship and activities. While they have some <a href="#">exploratory research groups</a> that include health impacts, they do not yet have one dedicated to planetary health or a core set of researchers. Additionally, Ohio State University has the <a href="#">Changing Climate Outreach Team</a>, 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.</i></p>	

<b>3. Is there a process by which communities disproportionately impacted by climate change and environmental injustice give input or make decisions about the research agenda at your medical school?</b>	
3	Yes, there is a process in which community members impacted by climate and environmental injustice have decision-making power in the climate + environmental research agenda.
2	Yes, there is a process in which community members impacted by climate and environmental injustice advise the climate + environmental research agenda.
1	No, but there are current efforts to establish a process for community members to advise or make decisions on the research agenda.
0	There is no process, and no efforts to create such a process.
<p><i>Score explanation: <a href="#">CCTS Community Engagement Program</a> is aimed to improve the health of the communities in Ohio by engaging partnerships and conducting stakeholder-engaged research.</i></p>	

<b>4. Does your institution have a planetary health website that centralizes ongoing and past research related to health and the environment?</b>	
3	There is an easy-to-use, adequately comprehensive website that centralizes various campus resources related to health and the environment including all of the following: upcoming events, leaders in planetary health at your institution, and relevant funding opportunities.
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 OSU Sustainability Institute has a [place on their website](#) where they centralize all researchers related to sustainability topics, and research by topics. Additionally, the OSUWMC Sustainability department has a website summarizing its initiatives including a section on “Sustainability Program: Employee Engagement, Education and Research” (<https://wexnermedical.osu.edu/about-us/sustainability>)

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

4	Yes, the <b>medical school</b> has hosted at least one conference or symposium on topics related to planetary health in the past year.
3	Yes, the <b>institution</b> has hosted at least one conference or symposium on topics related to planetary health in the past year.
2	Yes, the institution has hosted a conference on topics related to planetary health in the past three years.
1	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.

Score explanation: [Ohio Clinicians for Climate Action](#) in partnership with the Byrd Polar Institute and College of Medicine at the Ohio State University has put together a [Climate Change and Health Symposium: Implications for Clinical Practice](#) on October 22, 2021. The agenda included basic knowledge of climate change, its connection to health, and how we as medical professionals can help bring change by encouraging discussion amongst key stakeholders on campus.

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

1	Yes, the medical school is a member of a national or international planetary health or ESH organization
0	No, the medical school is not a member of such an organization

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 (x out of 17)	15
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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.*

<b>1. Does your medical school partner with community organizations to promote planetary and environmental health?</b>	
3	Yes, the medical school meaningfully partners with multiple community organizations to promote planetary and environmental health.
2	Yes, the medical school meaningfully partners with one community organization to promote planetary and environmental health.
1	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: 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.</i></p>	

<b>2. Does your medical school offer community-facing courses or events regarding planetary health?</b>	
3	The medical school offers community-facing courses or events at least once every year.
2	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 medical school has not offered such community-facing courses or events.

*Score explanation: OSU Wexner Medical Center hosted a full day symposium titled “Climate Change and Health - Implications for Clinical Practice” on October 22, 2021 (<https://byrd.osu.edu/events/cch>). This event was open to the community, but not primarily created for a community audience.*

**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 regularly receive communications about planetary health or sustainable healthcare.

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

**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: OSU Wexner Medical Center hosted a full day symposium titled “Climate Change and Health - Implications for Clinical Practice” on October 22, 2021 (<https://byrd.osu.edu/events/cch>). CME was available for this event. No additional planetary health courses are offered by the OSUWMC or are available for CME credit.*

**5. Does your medical school or its primary affiliated hospital have accessible educational**

materials for patients about environmental health exposures?	
2	Yes, all affiliated hospitals have accessible educational materials for patients.
1	Some affiliated hospitals have accessible educational materials for patients.
0	No affiliated medical centers have accessible educational materials for patients.
<p><i>Score explanation: OSU Wexner Medical Center website includes a link to a <a href="#">Patient Education Library</a>, which includes the topic of environmental health and has individual education materials for a variety of environmental illnesses.</i></p>	

6. Does your medical school or its primary affiliated hospital have accessible educational materials for patients about climate change and health impacts?	
2	Yes, all affiliated hospitals have accessible educational materials for patients.
1	Some affiliated hospitals have accessible educational materials for patients.
0	No affiliated hospitals have accessible educational materials for patients.
<p><i>Score explanation: OSU Wexner Medical Center website includes one informative patient centered blog that explicitly mentions climate change. This article directly discusses the <a href="#">impact of climate change on parasite migration and infectious disease patterns</a>. Several other articles discuss topics related to climate change but do not explicitly make the connection between the topic and climate change (<a href="#">one discussing extreme weather and disaster preparedness</a>, others discuss air pollution). Nationwide Children’s Hospital also features information about climate change on their <a href="#">website</a>. For the James Cancer Center and several other affiliated community hospitals, searching “climate change”, “environmental justice”, or “planetary health” in the search function yielded no patient information.</i></p>	

<b>Section Total (x out of 14)</b>	<b>8</b>
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*Are there additional community engagement and advocacy resources offered at your medical school or institution not yet asked about that you would like to describe? If so, please do so below.*

# Support for Student-Led Planetary Health Initiatives

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

<b>1. Does your institution offer support for medical students interested in enacting a sustainability initiative/QI project?</b>	
2	Yes, the institution <i>either</i> offers grants for students to enact sustainability initiatives/QI projects <i>or</i> sustainability QI projects are part of the core curriculum.
1	The medical school encourages sustainability QI projects (to fulfill clerkship or longitudinal requirements) and offers resources to help students succeed in these projects, but there is no student funding available and there is no requirement to participate.
0	No, the institution does not offer opportunities or support for sustainability initiatives or QI projects.
<p><i>Score explanation: Sustainability in Medicine student group was able to secure a grant in 2019 to replace browsers on <a href="#">Medical center to Ecosia</a>, which plants trees for browser searches. The OSU Zero Waste team also worked 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. Finally, the Sustainability Institute provided match funding for the student-led effort to integrate climate and health into medical school curriculum.</i></p>	

<b>2. Does your institution offer opportunities for medical students to do research related to planetary health and/or sustainable healthcare?</b>	
2	The institution has a specific research program or fellowship for students interested in doing planetary health/sustainable healthcare research.
1	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.



*Score explanation: 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 so many different colleges at this institution, students would be able to carry out planetary health/sustainable healthcare research and would qualify for medical student research funding, but medical students would need to find their own research lab and mentor on their own.*

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

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

*Score explanation: The [Ohio State University Wexner Medical Center website](#) describes some interdisciplinary research Wexner Medical Center is conducting, such as a recent project to analyze the environmental impact of anesthesia gases during surgery. However, there is a lack of direct mentor contact information (aside from the general [sustainability@osu.edu](mailto:sustainability@osu.edu) email) for students to reach out and get involved in these initiatives. This was the only related webpage to the above metric.*

**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: 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 faculty members Dr. Kathi Kemper, Laura Begue, and Dr. Claire Bollinger.*

**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 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.*

*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).*

**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)
<p><i>Score Explanation:</i>  OSUCOM Sustainability in Medicine (SiM) has an OSUCompost Program that teaches and trains students how to properly compost. Additionally, OSUCOM SiM has a partnership with Best Food Forward to practice bulk grocery buying for better sustainable food consumption in the Columbus food system.</p> <p>OSUCOM SIM and Medical Student – Physicians Action Network (MSPAN) hosted “Advocacy 101: Environment, Climate, and Health.” This was an opportunity to meet and interact with leaders of environmental advocacy within the OSU Wexner Medical Center and surrounding areas. This event had panelists that discussed the intersection of healthcare with climate/environment, their experience with advocacy, and ways for medical students to get involved.</p> <p>Byrd Polar Climate Research Center and OSUWMC hosted a “<a href="#">Climate Change and Health – Implications for Clinical Practice</a>” symposium for healthcare professionals. This event addressed the increasing evidence of climate change's impacts on health from an expert perspective. It focused on advocacy and solutions that individual providers and the entire healthcare system can implement in their daily lives and office/hospital. There is also an intention for a future conference specific to advocacy.</p> <p>“<a href="#">Climate Changing: On Artists, and Social Environment</a>” was an art exhibit put on at the Wexner Center for the Arts (OSU Contemporary Art Museum) January 20-May 9 2021. The Wexner center is on campus and admission is always free for students. The Sustainability in Medicine student group advertised this exhibit to medical students and organized a group visit.</p> <p>OSUCOM SiM has partnered with Friends of the Lower Olentangy Watershed (FLOW) and the Society for Ecological Restoration to have a Fall Tree Planting and Litter Cleanup event. SiM also hosted a leaf raking event with the Village in the Ville program of the Clintonville-Beechwold Community Resource Center.</p> <p>OSUCOM has a Wilderness Medicine Interest Group (WMIG) that hosts multiple student outings and workshops related to practicing wilderness medicine. This past fall, SiM partnered with WMIG to host a group hike at Battelle Darby Creek Metro Park. Lastly, before the COVID-19 pandemic, OSUCOM Student Council had hosted student canoe trips as an outing for students to attend.</p>	

<b>Section Total (x out of 15)</b>	<b>13</b>
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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.*

<b>1. Does your medical school and/or institution have an Office of Sustainability?</b>	
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: Ohio State University has a <a href="#">Sustainability Institute</a> that serves the <a href="#">entire campus</a>. Lauren Koch is a full time Sustainability Program Manager at the Ohio State University Wexner Medical Center, reporting to Aparna Dial, Senior Director of Sustainability for campus. Dr. Dial has an additional team of five working across campus: zero waste (2 FTEs), assistant director of sustainability, sustainability analyst, and a water resources engineer. At the medical center, there is also a full time Commodity Manager for Sustainability and Supplier Diversity, Kai Peters. The medical center facilities team is adding an energy engineer to their team in 2022, and we're working towards dedicating a few physicians' time (10% or so) to sustainability in various areas: Hematology, General Internal Medicine, and Anesthesiology.</i></p>	

<b>2. How ambitious is your medical school/institution's plan to reduce its own carbon footprint?</b>	
4	The institution has a stated goal of carbon neutrality by 2030 or earlier and the medical school / institution has a well-defined and adequate plan in place to achieve this goal.
3	Yes, there is a stated carbon neutrality goal by at least 2040 and the medical school/institution has a well-defined and adequate plan in place to achieve this goal.

2	Yes, there is a stated carbon neutrality goal by at least 2040, but the medical school/institution has not created a plan to reach that goal or the plan is inadequate.
1	There is a CO2 emission reduction goal, but it is not one of carbon neutrality.
0	There is no stated goal for reduction of CO2 emissions.

*Score explanation: The Ohio State University currently has a carbon neutrality goal by 2050, but discussions are underway to move that timeline up. There is a [climate action plan](#), but with the goal target date in flux, there needs to be a better developed roadmap on how the university will achieve the new goal.*

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

*Note: On-site renewables generally include rooftop solar, ground-mounted solar, bio energy, and onshore wind. As the name suggests, they are “on site” at the location of energy utilization. On the other hand, offsite renewable energy is accessed by purchasing power from large-scale projects via physical Power Purchase Agreements (PPAs) or financial/virtual Power Purchase Agreements (VPPAs). Consider looking at RECs (renewable energy certificates administered by the EPA) if you are a U.S. school, which would meet this metric. If your medical school is integrated into a larger campus and it is impossible to separate out medical school buildings from non-medical school buildings, can refer to campus data, but avoid including hospital data if possible. **Make sure that all energy sources are clarified eg gas as well as electricity** as often schools will highlight that all their electricity is from a renewable source but not mention the gas source.*

*Score explanation: On-campus electricity is at about [16% renewable energy](#) sources through the use of renewable energy credits (RECs). The offsite community hospital and outpatient locations are all at 100% renewable electricity through RECs.*

**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: The Ohio State University launched its new [Sustainable Design and Construction Policy](#) in February 2021. All construction projects 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. Has the medical school implemented strategies to encourage and provide environmentally-friendly transportation options for students and reduce the environmental impact of commuting?**

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

*Score explanation: 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](#). These resources are readily available online, well publicized, and utilized often by students and faculty.*

**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.
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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.
<p><i>Score explanation: The Zero Waste team at OSU can provide whatever recycling or composting infrastructure needed in any medical school buildings. Additionally, they supported students who wanted to compost or recycle at home by providing drop-off locations for those materials on campus. OSUCOM's Student-led Sustainability in Medicine organization has created medical-student specific compost/recycling program through OSUCompost program.</i></p>	

<b>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)?</b>	
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.
<p><i>Score explanation: There are sustainable procurement guidelines, but they are not mandatory. There has been great work done to improve local food procurement, and increase offerings of vegetarian/vegan meals as well as decrease sugar sweetened beverages but there are no formal guidelines or goals.</i></p>	

<b>8. Does the medical school or associated institution apply sustainability criteria when making decisions about supply procurement?</b>	
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 medical center adopted Sustainable Procurement Guidelines in 2019, which has helped integrate sustainability into most purchasing decisions. Additionally, on the Wexner Medical Center “About Us: Sustainability” page, [Sustainable Procurement](#) is publicly shared.*

**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 university does offer support for [zero waste events](#) to encourage students to host sustainable events, however, they are optional. OSUCOM has no requirements for events.*

**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.

*Score explanation: The university does have a [Green Lab certification](#), but it is currently getting updated as it needs to be much more comprehensive. The medical school could [access resources](#) particularly on environmental sustainability in lab spaces, however the current link does not provide direct access to information on lab sustainability, nor is this flyer directly from OSUCOM.*

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

4	The institution is entirely divested from fossil fuels and has made a commitment to reinvest divested funds into renewable energy companies or renewable energy campus initiatives.
3	No, the institution is entirely divested from fossil fuels.
2	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.
<i>Score explanation: OSUCOM has not made a public effort to divest with fossil-fuel companies, nor have student organizations taken on this initiative.</i>	

<b>Section Total (x out of 31)</b>	<b>17</b>
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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 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
<b>Planetary Health Curriculum (30%)</b>	$(8 / 69) \times 100 = 11.6\%$	F
<b>Interdisciplinary Research (17.5%)</b>	$(15 / 17) \times 100 = 88.2\%$	A
<b>Community Outreach and Advocacy (17.5%)</b>	$(8 / 14) \times 100 = 57.1\%$	C+
<b>Support for Student-led Planetary Health Initiatives (17.5%)</b>	$(13 / 15) \times 100 = 86.7\%$	A
<b>Campus Sustainability (17.5%)</b>	$(17 / 31) \times 100 = 54.8\%$	C+
<b>Institutional Grade</b>		<b>C (53.7%)</b>