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# Planetary Health Report Card (Medicine): *University of Oklahoma*

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2022-2023 Contributing Team:

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## Summary of Findings

Overall	D
<u>Curriculum</u>	F
<ul style="list-style-type: none"> <li>The University of Oklahoma College of Medicine (OUCOM) does not significantly include planetary health in the curriculum. The OU-Tulsa School of Community Medicine does include some planetary health topics in one course.</li> <li><b>Recommendations:</b> There is a lack of planetary health content throughout the core and elective curriculum. During the upcoming curriculum reform, the medical school should formalize planetary health as a component of its educational program and learning objectives.</li> </ul>	
<u>Interdisciplinary Research</u>	C
<ul style="list-style-type: none"> <li>OU houses many researchers from different fields interested in planetary health and sustainable healthcare, however, there is a lack of centralized organization for this interest and interdisciplinary opportunity.</li> <li><b>Recommendations:</b> There is great opportunity for OUCOM and its students to work more closely with the College of Public Health and the Norman Undergraduate Campus in the research of sustainability within healthcare. Additionally, Oklahoma provides an ample environment to learn more about sustainability, planetary health, and environmental justice from communities outside of our academic institution.</li> </ul>	
<u>Community Outreach and Advocacy</u>	C -
<ul style="list-style-type: none"> <li>OUCOM provides support and opportunity for various community outreach projects through the Environmental and Sustainable Health Interest Group (ESHIG), a MS4SF Affiliate organization, and campus wide events such as the annual Big Event, supporting environmental projects such as Closer to Earth and OKC Beautiful. However, there is much room for improvement outside of the efforts of ESHIG.</li> <li><b>Recommendations:</b> Optional CME courses for sustainable healthcare, campuswide communications on environmentalism efforts, online patient-centered resources on the health impacts of climate change</li> </ul>	
<u>Support for Student-Led Initiatives</u>	C
<ul style="list-style-type: none"> <li>OUCOM supports ESHIG monetarily and through faculty mentorship. Additionally, OUCOM has supported students devoting time towards Quality Improvement projects involving healthcare sustainability.</li> <li><b>Recommendations:</b> Opportunities for research and QI projects involving planetary health and sustainability within healthcare could be made more accessible to medical students earlier on in their education. Students interested in applying for funding for sustainability research should look into collaborating with other departments within the institution of OU, as there seems to be potential for grants and other monetary support from OU Health and OU's undergraduate programs.</li> </ul>	
<u>Campus Sustainability</u>	D
<ul style="list-style-type: none"> <li>OUCOM is supportive of efforts towards increased campus sustainability. Some programs in place such as campus recycling serve this purpose. However, there is room for improvement in multiple areas listed below.</li> <li><b>Recommendations:</b> More sustainable transportation services (such as bike rentals, electric vehicles, etc.), campus-wide composting program, meat-free days in the cafeteria, more transparency with supply procurement guidelines and increasing efforts towards sustainable sourcing in this area, more sustainability requirements for campus events, divestment from fossil fuels.</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 “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 medical school education. Throughout this report card, we use the term planetary health to refer to this broad swath of topics, but resources do not need to explicitly include the term “planetary health” to satisfy the metric.
- **Sustainable Healthcare:** As defined by the Academy of Royal Colleges, sustainable healthcare involves ensuring the ability to provide good quality care for future generations by balancing the economic, environmental, and social constraints and demands within health care settings. A sustainable healthcare system maintains population health, reduces disease burden and 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 vs. Institution:** When “medical school” is specified in the report card, this only refers to curriculum and resources offered by the School of Medicine and does not include offerings from other parts of the university (e.g. undergraduate departments (USA), other related departments (e.g. Public Health, Population Health departments). In contrast, when “institution” is specified in the report card, we are referring to the university more

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

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

**Other considerations:**

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

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

# Planetary Health Curriculum

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

## Curriculum: General

1. Did your <u>medical school</u> offer elective courses (student selected modules) to engage students in Education for Sustainable Healthcare or Planetary Health in the last year?	
3	Yes, the medical school has offered <b>more than one</b> elective whose primary focus is ESH/planetary health in the past year.
2	Yes, the medical school has offered <b>one</b> elective whose primary focus is ESH/planetary health in the past year.
1	The medical school does <b>not</b> have any electives whose primary focus is ESH/planetary health, but there are one or more electives that include a <b>lecture</b> on planetary health.
0	No, the medical school has <b>not</b> offered any electives on planetary health or electives that include ESH/planetary health topics in the past year.
<p><i>Score explanation: The University of Oklahoma College of Medicine (OUCOM) and the OU-TU School of Community Medicine (OU-TU SCM), an integrated track within the OU College of Medicine, do not offer electives on planetary health. The course director for third year electives has indicated interest in creating a planetary health elective for next year, which will likely be established by the fall of 2024.</i></p>	

## Curriculum: Health Effects of Climate Change

2. Does your <u>medical school</u> curriculum address the relationship between extreme heat, health risks, and climate change?	
3	This topic was explored <b>in depth</b> by the <b>core</b> curriculum.
2	This topic was <b>briefly</b> covered in the <b>core</b> curriculum.
1	This topic was covered in <b>elective</b> coursework.
0	This topic was <b>not</b> covered.
<p><i>Score explanation: OUCOM does not cover this topic in the core curriculum or in elective coursework. OU-TU SCM briefly covered this topic in its core curriculum. In the MS2 year, Tulsa medical students take the course "America's Quest for Health," which discussed extreme heat and the Dust Bowl during</i></p>	

the “Migration and Health” lecture. The lecturer describes the effect of poor farming practices on soil conditions, which contributed to the extreme weather event known as the “Dust Bowl” and ultimately forced many inhabitants of the area to emigrate. The lecture also discussed how extreme heat around the world is leading to modern migration in places such as North Africa. Because this topic was only covered in the OU-TU curriculum and not the main OKC curriculum, OU is awarded 1 point for this metric.

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

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

*Score explanation: OUCOM does not cover this topic in the core curriculum or in elective coursework. OU-TU SCM briefly covered this topic in its core curriculum. In the MS2 year, Tulsa medical students take the course “America’s Quest for Health,” which discussed the extreme weather event causing the Dust Bowl during the “Migration and Health” lecture. The lecture described the impact of this weather event causing significant illness such as dust pneumonia. Because this topic was only covered in the OU-TU curriculum and not the main OKC curriculum, OU is awarded 1 point for this metric.*

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

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

*Score explanation: OUCOM and OU-TU SCM do not cover this topic in the core curriculum or in elective coursework.*

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

3	This topic was explored <b>in depth</b> by the <b>core</b> curriculum.
2	This topic was <b>briefly</b> covered in the <b>core</b> curriculum.
1	This topic was covered in <b>elective</b> coursework.

0	This topic was <b>not</b> covered.
<p><i>Score explanation: OUCOM and OU-TU SCM do not cover this topic in the core curriculum or in elective coursework. In the “Restrictive and Interstitial Lung Diseases” lecture, environmental causes of interstitial lung disease such as exposure to coal, asbestos, silica, smoke, beryllium, and other organic or inorganic materials are discussed, but the respiratory health effects of climate change and air pollution are not addressed.</i></p>	

<p><b>6. Does your <u>medical school</u> curriculum address the cardiovascular health effects of climate change, including increased heat?</b></p>	
3	This topic was explored <b>in depth</b> by the <b>core</b> curriculum.
2	This topic was <b>briefly</b> covered in the <b>core</b> curriculum.
1	This topic was covered in <b>elective</b> coursework.
0	This topic was <b>not</b> covered.
<p><i>Score explanation: OUCOM and the OU-TU SCM do not cover this topic in the core curriculum or in elective coursework.</i></p>	

<p><b>7. Does your <u>medical school</u> curriculum address the mental health and neuropsychological effects of environmental degradation and climate change?</b></p>	
3	This topic was explored <b>in depth</b> by the <b>core</b> curriculum.
2	This topic was <b>briefly</b> covered in the <b>core</b> curriculum.
1	This topic was covered in <b>elective</b> coursework.
0	This topic was <b>not</b> covered.
<p><i>Score explanation: OUCOM does not cover this topic in the core curriculum or in elective coursework. OU-TU SCM briefly covered this topic from a historical perspective in its core curriculum. In the MS2 year, Tulsa medical students take the course “America’s Quest for Health,” which discussed the extreme weather event causing the Dust Bowl during the “Migration and Health” lecture. The lecture described the impact of this weather event causing significant psychological distress and adverse childhood experiences for those affected leading to poor mental health outcomes.</i></p> <p><i>Because this topic was only covered in the OU-TU curriculum and not the main OKC curriculum, OU is awarded 1 point for this metric.</i></p>	

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



1	This topic was covered in <b>elective</b> coursework.
0	This topic was <b>not</b> covered.
<p><i>Score explanation: OUCOM does not cover this topic in the core curriculum or in elective coursework. OU-TU SCM briefly covered this topic in its core curriculum. In the MS2 year, Tulsa medical students take the course “America’s Quest for Health,” which described food and water insecurity during the “Migration and Health” lecture. The lecture discussed how extreme weather can threaten food and water security leading to conflict and migration.</i></p> <p><i>Because this topic was only covered in the OU-TU curriculum and not the main OKC curriculum, OU is awarded 1 point for this metric.</i></p>	

<b>9. Does your <u>medical school</u> curriculum address the outsized impact of climate change on marginalized populations such as those with low SES, women, communities of color, Indigenous communities, children, homeless populations, and older adults?</b>	
3	This topic was explored <b>in depth</b> by the <b>core</b> curriculum.
2	This topic was <b>briefly</b> covered in the <b>core</b> curriculum.
1	This topic was covered in <b>elective</b> coursework.
0	This topic was <b>not</b> covered.
<p><i>Score explanation: OUCOM does not cover this topic in the core curriculum or elective coursework. The MS4 elective on Tribal Health does allow students to rotate through a local tribal health system for 1 month, but climate change and environmental health are not integrated into the course. OU-TU SCM briefly covered this topic in its core curriculum. In the MS2 year, Tulsa medical students take the course “America’s Quest for Health,” which described the impact of extreme weather events on marginalised populations during the “Migration and Health” lecture. The lecture discussed how extreme weather events disproportionately impact marginalised populations due to their limited resources and limited ability to cope with changes to local temperature, water supply, and food supply.</i></p> <p><i>Because this topic was only covered in the OU-TU curriculum and not the main OKC curriculum, OU is awarded 1 point for this metric.</i></p>	

<b>10. Does your <u>medical school</u> curriculum address the unequal regional health impacts of climate change globally?</b>	
3	This topic was explored <b>in depth</b> by the <b>core</b> curriculum.
2	This topic was <b>briefly</b> covered in the <b>core</b> curriculum.
1	This topic was covered in <b>elective</b> coursework.
0	This topic was <b>not</b> covered.
<p><i>Score explanation: OUCOM does not cover this topic in the core curriculum or in elective coursework. OU-TU SCM briefly covered this topic in its core curriculum. In the MS2 year, Tulsa medical students take the course “America’s Quest for Health,” which described the impact of climate change on</i></p>	

migration during the “Migration and Health” lecture. The lecture discussed how climate change unequally impacts certain parts of the world and can result in mass migration. The lecture also covered the healthcare interactions and health needs of these migrant communities.

Because this topic was only covered in the OU-TU curriculum and not the main OKC curriculum, OU is awarded 1 point for this metric.

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

*Score explanation: OUCOM and the OU-TU SCM do not cover this topic in the core curriculum or in elective coursework. In the Reproductive System course, two lectures include brief information on the reproductive health effects of the physical environment. The lecture on “Male Infertility” lists environmental toxins as a potential cause of infertility on a powerpoint slide. This learning point, however, is not mentioned during the lecture nor included as part of a learning objective. The lecture slide notes on “The State of Women’s Health” contextualises women’s health rankings in Oklahoma compared to other states and lists physical environment factors — such as air and water quality, housing and transit, and climate change policy — as one such area where Oklahoma ranks poorly. Despite this, the presenter does not mention environmental factors during the lecture.*

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

*Score explanation: OUCOM and the OU-TU SCM do not cover this topic in the core curriculum or in elective coursework.*

**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 <b>integrated throughout</b> the medical school’s planetary health education
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2	Indigenous knowledge and value systems as essential components of planetary health solutions are included <b>briefly</b> in the core curriculum.
1	Indigenous knowledge and value systems as essential components of planetary health solutions are included in <b>elective</b> coursework.
0	This topic was <b>not</b> covered.
<i>Score explanation: OUCOM and the OU-TU SCM do not emphasize this topic in the core curriculum or in elective coursework.</i>	

<b>14. Does your <u>medical school</u> curriculum address the outsized impact of anthropogenic environmental toxins on marginalized populations such as those with low SES, women, communities of color, children, homeless populations, Indigenous populations, and older adults?</b>	
3	This topic was explored <b>in depth</b> by the <b>core</b> curriculum.
2	This topic was <b>briefly</b> covered in the <b>core</b> curriculum.
1	This topic was covered in <b>elective</b> coursework.
0	This topic was <b>not</b> covered.
<i>Score explanation: OUCOM does not cover this topic in the core curriculum or in elective coursework. OU-TU SCM briefly covered this topic in its core curriculum. In the MS1 and MS2 years, Tulsa medical students take the longitudinal course “Lifestyle Medicine.” The “Physical Disabilities/Adaptive Cooking” module and the “Community Engaged Lifestyle Medicine” case study partially covered elements of the impact of environmental toxins on marginalized populations.</i>	
<i>Because this topic was only covered in the OU-TU curriculum and not the main OKC curriculum, OU is awarded 1 point for this metric.</i>	

**Curriculum: Sustainability**

<b>15. Does your <u>medical school</u> curriculum address the environmental and health co-benefits of a plant-based diet?</b>	
3	This topic was explored <b>in depth</b> by the <b>core</b> curriculum.
2	This topic was <b>briefly</b> covered in the <b>core</b> curriculum.
1	This topic was covered in <b>elective</b> coursework.
0	This topic was <b>not</b> covered.
<i>Score explanation: OUCOM does not cover this topic in the core curriculum or in elective coursework. OU-TU SCM covered the health benefits of a plant-based diet in depth in its core curriculum but did not cover the environmental co-benefits. In the MS1 and MS2 years, Tulsa medical students take the longitudinal course “Lifestyle Medicine.” All culinary medicine modules involved plant-based whole foods and discussed the benefits of a plant-based diet. Module 4 on Cancer Prevention specifically</i>	

*discusses the benefits of a plant-based diet for cancer prevention. Because the environmental benefits of a plant-based diet were not covered, OU is awarded 0 points for this metric.*

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

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

*Score explanation: OUCOM and the OU-TU SCM do not cover this topic in the core curriculum or in elective coursework.*

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

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

*Score explanation: See below for a description of OU's coverage for each component.*

- 1. The health and environmental co-benefits of avoiding over-medicalisation, over-investigation and/or over-treatment***  
*OUCOM and the OU-TU SCM partially cover this topic during the Neurosciences course. The*

*course discusses how unnecessary imaging leads to unnecessary surgeries and treatments, but it does not discuss the environmental co-benefits.*

**2. The environmental impact of pharmaceuticals and over-prescribing as a cause of climate health harm.**

*OUCOM and OU-TU SCM do not cover this topic.*

**3. 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.**

*OUCOM discusses the health benefits of non-pharmaceutical management of conditions during the Neurosciences course and the Family Medicine Clerkship. The Neurosciences course discusses managing psychiatric and neurologic conditions with non-pharmaceutical treatments such as yoga, massage therapy, meditation, acupuncture, and special diets. The Family Medicine Clerkship discusses the health benefits of non-pharmaceutical management of conditions such as Type II Diabetes Mellitus. Neither course discusses the environmental co-benefits.*

*During the “Lifestyle Medicine” course, First Year Orientation, and other Tulsa-specific courses, the OU-TU SCM covers in depth the health benefits of non-pharmaceutical management of conditions but does not cover the environmental co-benefits.*

**4. Environmental impact of surgical healthcare on planetary health and the climate crisis, and how can it be mitigated**

*OUCOM and the OU-TU SCM do not cover this topic in the core curriculum or in the Surgery Clerkship or Anesthesia Selective courses.*

**5. The impact of inhalers on the healthcare carbon footprint and the environmental benefit of dry powdered inhalers over metered dose inhalers.**

*OUCOM and OU-TU SCM do not cover this topic in the core curriculum or in the elective coursework.*

**6. Waste production within healthcare clinics and strategies for reducing waste in clinical activities (e.g. single use items in the inpatient or outpatient setting)**

*OUCOM and OU-TU SCM do not cover this topic in the core curriculum or in the elective coursework.*

*No points are awarded.*

**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 <b>core</b> curriculum.
1	Yes, there are strategies introduced for having conversations with patients about climate change in <b>elective</b> coursework.
0	No, there are <b>not</b> strategies introduced for having conversations with patients about climate change

*Score explanation: OUCOM and OU-TU SCM do not cover this topic in the core curriculum or in the elective coursework.*

**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 <b>core</b> curriculum includes strategies for taking an environmental history.
1	Only <b>elective</b> coursework includes strategies for taking an environmental history.
0	No, the curriculum does <b>not</b> include strategies for taking an environmental history.

*Score explanation: OUCOM and OU-TU SCM do not cover this topic in the core curriculum or in the elective coursework.*

### *Curriculum: Administrative Support for Planetary Health*

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

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

*Score explanation: OUCOM is undergoing the process of curriculum reform and the Assistant Dean for Preclinical Curriculum has indicated interest in incorporating planetary health into the longitudinal curriculum. Presently, there are efforts to establish a planetary health elective for 2nd year medical students, but there are no clear proposals to formalise planetary health into the core curriculum. Most of these efforts have been student-driven.*

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

6	Planetary health/ESH topics are <b>well integrated</b> into the core medical school curriculum.
4	<b>Some</b> 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 <b>(a) standalone lecture(s)</b> .
0	There is <b>minimal/no</b> education for sustainable healthcare.

*Score explanation: OUCOM and OU-TU SCM do not longitudinally integrate planetary health topics into the core medical school curriculum.*

**22. Does your medical school employ a member of faculty to specifically oversee and take responsibility for the incorporation of planetary health and sustainable healthcare as a theme throughout the course?**

1

**Yes**, the **medical school** has a specific faculty/staff member responsible for overseeing curricular integration of planetary health and sustainable healthcare

0

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

*Score explanation: OUCOM and OU-TU SCM do not employ a member of faculty to specifically oversee and take responsibility for the incorporation of planetary health into the curriculum.*

**Section Total (9 out of 72)**

**12.5%**

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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.*

1. Are there researchers engaged in planetary health research and healthcare sustainability research at your <u>medical school</u> ?	
3	Yes, there are faculty members at the <b>medical school</b> who have a <b>primary</b> research focus in planetary health <b>or</b> healthcare sustainability.
2	Yes, there are individual faculty members at the <b>medical school</b> who are conducting research <b>related</b> 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 <b>institution</b> , but none associated with the medical school.
0	No, there are <b>no</b> planetary health and/or healthcare sustainability researchers at the <b>institution</b> or <b>medical school</b> at this time.
<p><i>Score explanation: There are faculty members of OUCOM, such as within the Department of Anesthesiology, whose research interests are involved with planetary health and environmental impacts of their specific fields.</i></p>	

2. Is there a dedicated department or institute for interdisciplinary planetary health research at your <u>institution</u> ?	
3	There is <b>at least one</b> dedicated department or institute for interdisciplinary planetary health research.
2	There is <b>not currently</b> a department or institute for interdisciplinary planetary health research, but there are <b>plans</b> to open one in the next 3 years.
1	There is an <b>Occupational and Environmental Health department</b> , but no interdisciplinary department or institute for planetary health research.
0	There is <b>no</b> dedicated department or institute.
<p><i>Score explanation: The OUHSC Interdisciplinary Program, the office on campus responsible for interdisciplinary engagement, does not include any mention of planetary health research on their website. However, <a href="#">the Occupational and Environmental Health Department</a> lists that its aim is to unite interdisciplinary teams in order to further research programs in environmental fields of study.</i></p>	



**3. Is there a process by which communities disproportionately impacted by climate change and environmental injustice give input or make decisions about the research agenda at your medical school?**

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

*Score explanation: This is not occurring at the medical school level, though there are efforts to promote this at the institution of the University of Oklahoma, e.g. [the X-GEM project](#).*

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

3	There is an <b>easy-to-use, adequately comprehensive</b> website that <b>centralizes</b> 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 <b>attempts to centralize</b> various campus resources related to health and the environment, but it is hard-to-use, not updated, or not adequately comprehensive.
1	The <b>institution</b> has an <b>Office of Sustainability website</b> that includes <b>some</b> resources related to health and the environment.
0	There is <b>no</b> website.

*Score explanation: There are several University of Oklahoma websites that attempt to centralize research pertaining to health and the environment. Notably, the most recent effort in OU's institutional goals is the [Institute for Resilient Environmental and Energy Systems \(IREEC\)](#). The Norman campus also has a [website](#) for sustainability that details research there. The Health Sciences Center has a [website](#) for Occupational and Environmental Health that links to some [research](#).*

**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 <b>institution</b> has hosted a conference on topics related to planetary health in the past three years.

1	The <b>institution</b> has not hosted any conferences directly, but they have provided financial support for a local planetary health event.
0	No, the <b>institution</b> has not hosted a conference on topics related to planetary health in the past three years.
<p><i>Score explanation: Students of the OUCOM hosted a <a href="#">Bridges to Access Conference</a> that focused on Health and Climate in February 2022. Bridges to Access is an entirely student-organized conference that focuses on underserved patient populations and problems within the healthcare system. Each year, the organization invites physicians, healthcare industry experts, and community leaders to speak to health and pre-health students.</i></p> <p><i>There was also the <a href="#">Youth Perspectives on Climate Change Symposium</a> hosted by the University of Oklahoma in April 2022.</i></p>	

6. Is your <b>medical school</b> 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 <b>not</b> a member of such an organization
<p><i>Score explanation: No, the medical school is not currently a member of any such organization.</i></p>	

<b>Section Total (8 out of 17)</b>	<b>47.06%</b>
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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.*

1. Does your <b>medical school</b> partner with community organizations to promote planetary and environmental health?	
3	Yes, the <b>medical school</b> meaningfully partners with <b>multiple</b> community organizations to promote planetary and environmental health.
2	Yes, the <b>medical school</b> meaningfully partners with <b>one</b> community organization to promote planetary and environmental health.
1	The <b>institution</b> partners with community organizations, but the medical school is not part of that partnership.
0	No, there is <b>no</b> such meaningful community partnership.
<p><i>Score explanation: Environmental and Sustainable Health Interest Group (ESHIG), a MS4SF Affiliate organization, at OUCOM partners with multiple community organizations to promote planetary and environmental health. These programs include community gardens such as Commonwealth Urban Farms (<a href="http://commonwealthurbanfarms.com">http://commonwealthurbanfarms.com</a>) and Closer to Earth (<a href="http://closertoearth.org">http://closertoearth.org</a>). Students from the medical school visit these programs weekly to volunteer. These organizations serve the community by educating individuals on organic gardening and composting.</i></p> <p><i>ESHIG has also partnered with OKC Beautiful's Litterblitz (<a href="https://www.okcbeautiful.com">https://www.okcbeautiful.com</a>) on multiple occasions. Litterblitz provides resources for organized trash clean-up events throughout Oklahoma City. The school provides the manpower for the clean-up, and groups of student volunteers use the supplies provided by Litterblitz to clean up parks in the city. Therefore, a score of 3 should be applied.</i></p>	

2. Does your <b>medical school</b> offer community-facing courses or events regarding planetary health?	
3	The <b>medical school</b> offers community-facing courses or events at least once every year.
2	The <b>medical school</b> 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 <b>institution</b> has offered community-facing courses or events, but the <b>medical school</b> was not involved in planning those courses or events.
0	The <b>institution/medical school</b> have not offered such community-facing courses or events.

*Score explanation: Environmental and Sustainable Health Interest Group (ESHIG), a MS4SF Affiliate organization, hosts at least one event per year that is open to the community, but these events are primarily created for students within the health science center. The events focus on various topics of planetary health. In 2022, one of the events discussed the impact of anesthesia on the environment. Therefore, a score of 2 should be applied.*

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

*Score explanation: Environmental and Sustainable Health Interest Group (ESHIG), a MS4SF Affiliate organization, sends a regular newsletter to students who are a part of the interest group. Additionally, other information is shared on the student interest group's slack channel for all of those who subscribe to the channel to read. This communication is not solely dedicated to issues of planetary health and sustainable healthcare, but it sometimes includes such information. Therefore, a score of 1 should be applied.*

**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 <b>institution</b> or <b>main affiliated hospital trust</b> 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 <b>institution</b> or <b>main affiliated hospital trust</b> offers one course relating to planetary health and/or sustainable healthcare for post-graduate providers
0	There are <b>no</b> such accessible courses for post-graduate providers

*Score explanation: There are no current CME courses offered on [cme.ouhsc.edu](http://cme.ouhsc.edu) pertaining to planetary or sustainable health. The CME office confirmed no current or past courses regarding sustainability but offer their support for future endeavours in this area. Therefore, a score of zero should be applied with the recommendation to incorporate courses for next year.*

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

2	Yes, <b>all</b> affiliated hospitals have accessible educational materials for patients.
1	<b>Some</b> affiliated hospitals have accessible educational materials for patients.

0	<b>No</b> affiliated medical centers have accessible educational materials for patients.
<p><i>Score explanation: There are currently no patient-centered materials at <a href="https://www.ouhealth.com/">https://www.ouhealth.com/</a> focused on environmental exposures. There are a few blog posts discussing relevant topics such as “OU Wastewater Surveillance Team to Monitor Long-Term for Foodborne Pathogens, a Global First” and “Health and Climate Change is Theme of Bridges to Access Conference.” However, these are primarily geared towards members of the science community. Therefore, a score of zero should be applied.</i></p>	

<b>6. Does your <u>medical school</u> or its <u>primary affiliated hospital</u> have accessible educational materials for patients about climate change and health impacts?</b>	
2	Yes, <b>all</b> affiliated hospitals have accessible educational materials for patients.
1	<b>Some</b> affiliated hospitals have accessible educational materials for patients.
0	<b>No</b> affiliated hospitals have accessible educational materials for patients.
<p><i>Score explanation: There are currently no patient-centered materials at <a href="https://www.ouhealth.com/">https://www.ouhealth.com/</a> focused on climate change. There are a few blog posts discussing relevant topics such as “OU Wastewater Surveillance Team to Monitor Long-Term for Foodborne Pathogens, a Global First” and “Health and Climate Change is Theme of Bridges to Access Conference.” Therefore a score of zero should be applied.</i></p>	

<b>Section Total (6 out of 14)</b>	<b>42.86%</b>
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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 (F) initiatives, discover mentors in their area of interest, and receive funding for planetary health projects.*

1. Does your <u>medical school</u> or your <u>institution</u> offer support for medical students interested in enacting a sustainability initiative/QI project?	
2	Yes, the <b>medical school</b> or <b>institution</b> <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 <b>medical school</b> or <b>institution</b> encourages sustainability QI projects (to fulfill clerkship or longitudinal requirements) and offers resources to help students succeed in these projects, <b>but</b> there is no student funding available and there is no requirement to participate.
0	No, <b>neither</b> the medical school or the institution offer opportunities or support for sustainability initiatives or QI projects.

*Score explanation: The College of Medicine has allowed a curriculum-fulfilling Independent Study where time during 4th year of medical school can be designated towards Sustainable QI projects. However, sustainability QI projects are not part of the College of Medicine's core curriculum. Students have also been assisted in seeking resources to help with these QI projects, but there are no current designated grants from the College of Medicine itself. Medical students have sought scholarship and financial assistance through the organization Health Care Without Harm as well as Emerging Physician Leadership Award.*

*The OU institution as a whole offers [grants](#) for climate [research](#) that foster collaboration among departments within OU as well as with other universities. These include funding from the USGS and the US DOI.*

*This section receives a score of 2 due to OU's institutional allocation of grants towards interdisciplinary climate change research that could be pursued by medical school students. 4th year medical students working on QI projects to assess surgical waste management and equipment utilization at OU Health this past year elected not to pursue funding and instead accepted equipment from OU Health to help with their project.*

2. Does your <u>institution</u> offer opportunities for medical students to do research related to planetary health and/or sustainable healthcare?	
2	The <b>institution</b> has a <b>specific</b> 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 <b>require student initiative</b> to seek these out and carry them out in their spare time.

0	There are <b>no opportunities</b> for students to engage in planetary health/sustainable healthcare research.
<p><i>Score explanation: There is no specific research program or fellowship for students to engage in planetary health/sustainable healthcare research, but there are faculty members at the School of Medicine as well as researchers at the College of Public Health who have research interests in sustainable healthcare practices. Medical students have previously been supported and mentored by faculty within the College of Medicine in their pursuit of research projects involving sustainability and quality improvement, but these have been through student initiative.</i></p>	

<p><b>3. Does the <u>medical school</u> 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.</b></p>	
2	The <b>medical school</b> 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 <b>medical school</b> 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 <b>no medical-school</b> specific webpage for locating planetary health and/or sustainable healthcare projects or mentors.
<p><i>Score explanation: There is no medical-school specific webpage for locating planetary health projects. Within the medical school, a school-wide Slack page contains resources from the Environmental and Sustainable Health (MS4SF Affiliate) student interest group on campus, which details sustainability initiatives, mentors, and options for sustainable practices within and outside of medicine. <a href="#">The Hudson College of Public Health</a>, however, provides a list of faculty as well as research publications.</i></p>	

<p><b>4. Does your <u>medical school</u> have registered student groups dedicated towards fostering a culture of planetary health engagement, scholarship, and advocacy on campus, supported by faculty advisors?</b></p>	
2	Yes, there is a student organization <b>with faculty support</b> 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 <b>lacks faculty support</b> .
0	No, there is <b>not</b> a student organization at my institution dedicated to planetary health or sustainability in healthcare.
<p><i>Score Explanation: OUCOM's Environmental and Sustainable Health (MS4SF Affiliate) Interest Group advocates for educating the student body on planetary health initiatives in relation to the practice of</i></p>	

medicine as well as sustainable practices on campus. The interest group is supported monetarily and recognized by the OU College of Medicine Student Council and is supported by a faculty mentor.

**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: While there are students advocating for curriculum reform within the College of Medicine, there is no such student representative at the moment that serves on a medical school or institutional decision-making council specifically dedicated to advocating for sustainable best practices. We do have a MS4SF Student Liaison who is a member of the executive team of Environmental and Sustainable Health Interest Group (ESHIG), a MS4SF Affiliate organization. Additionally, there are students who are a part of the ESHIG at OUCOM that are currently working with faculty to implement curriculum reform, but there is not a designated representative amongst the medical school or institutional curriculum committees.*

**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)

*Environmental and Sustainable Health Interest Group (ESHIG), a MS4SF Affiliate organization, at OUCOM provides the opportunity to students, faculty, and staff at OUHSC to volunteer at [Closer to Earth](#), a nonprofit community garden in Oklahoma City. ESHIG also provides opportunities for students to volunteer through clean-ups, recycling initiatives, community gardening, as well as educational events concerning climate change. The Wilderness and Medicine Interest Group at OUCOM provides wilderness activities and opportunities for students.*



Section Total (8 out of 15)	53.33%
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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.*

1. Does your <b>medical school</b> and/or <b>institution</b> have an Office of Sustainability?	
3	Yes, there is an Office of Sustainability with multiple full-time staff dedicated to campus sustainability. If the Office of Sustainability serves the entire campus, there is <b>at least one designated staff member</b> 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 <b>no specific staff member</b> in charge of medical school and/or hospital sustainability.
1	There are <b>no salaried sustainability staff</b> , but there is a sustainability task force or committee
0	There are <b>no</b> staff members <b>or</b> task force responsible for overseeing campus sustainability
<p><i>Score explanation: The University of Oklahoma has an office of sustainability called the Energy Management Department. There is a position within this office that is in charge of developing and executing strategies to address issues such as energy use, resource conservation, pollution reduction, behavioral education, and building design.</i></p>	

2. How ambitious is your <b>institution/medical school</b> plan to reduce its own carbon footprint?	
5	The institution/medical school has a <b>written and approved plan</b> to achieve carbon neutrality by <b>2030</b>
3	The institution/medical school has a <b>written and approved plan</b> to achieve carbon neutrality by <b>2040</b>
1	The institution/medical school has a stated goal of carbon neutrality by <b>2040</b> but has <b>not created a plan</b> to reach that goal or the <b>plan is inadequate</b>
0	The institution/medical school does <b>not</b> meet any of the requirements listed above
<p><i>Score explanation: While the University of Oklahoma Health Sciences Center is continuously lowering carbon emissions according to the Environmental Health and Safety Office, there is not a written and approved plan to become carbon neutral by 2040. Therefore, OUHSC should be rewarded 0 points.</i></p>	

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

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

*Score explanation: According to Environmental Health and Safety Office, OUHSC is unable to estimate the percentage of renewable energy it uses due to it “[varying] with time of use regulated by Oklahoma Gas & Electricity (OG&E).” In addition, OUHSC has “all its building elected in OG&E’s solar program where a portion of the energy consumed is produced by solar fields that are owned and maintained by OG&E.” OG&E did not respond to multiple contact attempts. Therefore, OUHSC should be awarded a score of 0 in this category. As a way to improve this score, OUHSC should assess the average amount of renewable energy that they use and publicly report this information.*

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

*Score explanation: According to the Environmental Health and Safety Office, OUHSC has increased building efficiency and reduced steam and chill water consumption. It also has ongoing projects to replace plant boilers with energy efficient boilers, as well as LED retrofit projects. The Basic Science Education Building, where preclinical medical students are concentrated, has lowered its carbon footprint 15% from 2021 to 2022. Therefore, OUHSC should be rewarded 1 point.*

**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 <b>environmentally-friendly transportation options</b> such as safe active transport, public transport, or carpooling and these options are well-utilized by students. Alternatively, the campus location is not amenable to unsustainable forms of transportation by default.
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1	The medical school has implemented <b>some</b> strategies to provide environmentally-friendly transportation options, but the options are <b>unsatisfactorily</b> accessible or advertised.
0	The medical school has <b>not</b> implemented strategies to encourage and provide environmentally-friendly transportation options.
<p><i>Score explanation: OUHSC does have public transport that is provided throughout the campus; however, it is not well advertised for students and is not promoted during orientation. OUHSC also recommends students use a car for off campus clinical activities and during third and fourth year for rotations. Bike racks are present on campus, but there are few of them near the medical school, and they are difficult to locate. Therefore, OUHSC should be rewarded 1 point.</i></p>	

6. Does your <u>medical school</u> have an organics recycling program (compost) and a conventional recycling program (aluminum/paper/plastic/glass)?	
2	Yes, the medical school has <b>both</b> compost <b>and</b> recycling programs accessible to students and faculty.
1	The medical school has <b>either</b> recycling <b>or</b> compost programs accessible to students and faculty, but not both.
0	There is <b>no</b> compost or recycling program at the medical school.
<p><i>Score explanation: The University of Oklahoma has some recycling stations in the Basic Science Education Building (in student module rooms and in two classrooms), but does not have large public recycling receptacles nor provide recycling stations in clinical settings. The medical school does not offer composting programs. Therefore, OUHSC should be rewarded 1 point.</i></p>	

7. Does the <u>medical school</u> apply sustainability criteria when making decisions about the campus food and beverage selections (e.g. local sourcing, reduced meat, decreased plastic packaging)?	
3	Yes, the medical school has <b>adequate</b> sustainability requirements for food and beverages, including meat-free days or no red-meat, and <b>is engaged</b> in efforts to increase food and beverage sustainability.
2	There are sustainability guidelines for food and beverages, but they are <b>insufficient or optional</b> . The medical school <b>is engaged</b> in efforts to increase food and beverage sustainability.
1	There are sustainability guidelines for food and beverages, but they are <b>insufficient or optional</b> . The medical school is <b>not</b> engaged in efforts to increase food and beverage sustainability.
0	There are <b>no</b> sustainability guidelines for food and beverages.
<p><i>Score explanation: According to the Office of Supply Procurement, OUHSC considers environmental matters and similar concerns during the solicitation evaluation and award process for all food and supplies. However, there are no current efforts towards increasing sustainability of sourcing nor meat-free days in the food options on campus.</i></p>	

8. Does the <u>medical school</u> or <u>institution</u> apply sustainability criteria when making decisions
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about supply procurement?	
3	Yes, the medical school has <b>adequate</b> sustainability requirements for supply procurement <b>and</b> is <b>engaged</b> in efforts to increase sustainability of procurement.
2	There are sustainability guidelines for supply procurement, but they are <b>insufficient or optional</b> . The medical school is <b>engaged</b> in efforts to increase sustainability of procurement.
1	There are sustainability guidelines for supply procurement, but they are <b>insufficient or optional</b> . The medical school is <b>not engaged</b> in efforts to increase sustainability of procurement.
0	There are <b>no</b> sustainability guidelines for supply procurement.
<i>Score explanation: According to the Office of Supply Procurement, OUHSC considers environmental matters and similar concerns during the solicitation evaluation and award process for supply procurement. However, there are no current efforts towards more sustainable sourcing.</i>	

9. Are there sustainability requirements or guidelines for events hosted at the <u>medical school</u> ?	
2	Every event hosted at the medical school <b>must</b> abide by sustainability criteria.
1	The medical school <b>strongly recommends or incentivizes</b> sustainability measures, but they are <b>not required</b> .
0	There are <b>no</b> sustainability guidelines for medical school events.
<i>Score explanation: There are currently no sustainability requirements for medical school events other than adequate disposal of waste in trash receptacles.</i>	

10. Does your <u>medical school</u> have programs and initiatives to assist with making lab spaces more environmentally sustainable?	
2	Yes, the medical school has <b>programs</b> and <b>initiatives</b> to assist with making lab spaces more environmentally sustainable.
1	There are <b>guidelines</b> on how to make lab spaces more environmentally sustainable, but not programs or initiatives.
0	There are <b>no</b> efforts at the medical school to make lab spaces more sustainable.
<i>Score explanation: According to the Office of Supply Procurement, there are no current efforts or guidelines towards sustainable lab spaces.</i>	

11. Does your <u>institution's</u> endowment portfolio investments include fossil-fuel companies?	
4	The institution is <b>entirely divested</b> from fossil fuels <b>and</b> has made a <b>commitment to reinvest divested funds</b> into renewable energy companies or renewable energy campus initiatives.
3	The institution is <b>entirely divested</b> from fossil fuels.

2	The institution has <b>partially divested</b> from fossil fuel companies <b>or</b> has made a <b>commitment to fully divest</b> , but <b>currently</b> still has fossil fuel investments.
1	The institution has <b>not divested</b> from fossil-fuel companies, but faculty and/or students are <b>conducting organized advocacy</b> for divestment.
0	Yes, the institution has investments with fossil-fuel companies and there have been <b>no efforts</b> to change that.
<i>Score explanation: According to online divestment databases, OUHSC has not divested from fossil fuels. There have been no efforts towards divestment or current advocacy for such.</i>	

<b>Section Total (8 out of 32)</b>	<b>25%</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%

## Planetary Health Grades for the University of Oklahoma School of Medicine

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

Section	Raw Score %	Letter Grade
<b>Planetary Health Curriculum (30%)</b>	$(9/72) \times 100 = 12.5\%$	F
<b>Interdisciplinary Research (17.5%)</b>	$(8/17) \times 100 = 47.06\%$	C
<b>Community Outreach and Advocacy (17.5%)</b>	$(6/14) \times 100 = 42.86\%$	C-
<b>Support for Student-led Planetary Health Initiatives (17.5%)</b>	$(8/15) \times 100 = 53.33\%$	C
<b>Campus Sustainability (17.5%)</b>	$(8/32) \times 100 = 25\%$	D
<b>Institutional Grade</b>	$(A \times 0.3 + B \times 0.175 + C \times 0.175 + D \times 0.175 + E \times 0.175) = 33.2\%$	<b>D</b>