

# Planetary Health Report Card (Medicine):

University of Oklahoma



#### 2024-2025 Contributing Team:

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#### Land acknowledgment:

Long before the University of Oklahoma was established, the land on which the University now resides was the traditional home of the "Hasinais" Caddo Nation and "Kirikir?i:s" Wichita & Affiliated Tribes. We acknowledge this territory that our institution stands upon once also served as a hunting ground, trade exchange point, and migration route for the Apache, Comanche, Kiowa and Osage nations. Today, 39 tribal nations dwell in the state of Oklahoma as a result of settler and colonial policies that were designed to assimilate Indigenous peoples.

The University of Oklahoma recognizes the historical connection our university has with its Indigenous community. We acknowledge, honor, and respect the diverse Indigenous peoples connected to this land. We fully recognize, support and advocate for the sovereign rights of all of Oklahoma's 39 tribal nations. This acknowledgement is aligned with our university's core value of creating a diverse and inclusive community. It is an institutional responsibility to recognize and acknowledge the people, culture, and history that make up our entire OU Community.

## **Summary of Findings**

Overall Grade C-

#### Curriculum D-

- The University of Oklahoma College of Medicine (OUCOM) does not significantly include planetary health in the curriculum, but it does support an elective course focused on the health effects of climate change. The OU-Tulsa School of Community Medicine continues to include some planetary health topics in one course.
- **Recommendations:** There is a lack of planetary health content throughout the core curriculum. Within the new curriculum launching July 2025, the medical school should formalize planetary health as a component of its educational program and learning objectives and assign a faculty member to oversee this responsibility.

#### **Interdisciplinary Research**

 $\mathbf{C}$ 

- 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.
- **Recommendations**: There is great opportunity for OUCOM and its students to work more closely with the College of Public Health in the research of sustainability within healthcare, specifically within topics concerning environmental exposures in Oklahoma and within anesthesia. We recommend students also utilize resources outside the academic institution to learn more about planetary health.

#### **Community Outreach and Advocacy**

 $\mathbf{C}$ 

- OUCOM provides support and opportunity for various community outreach projects through the
  Environmental and Sustainable Health Student Organization, an 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 the student lead
  group.
- **Recommendations**: Campuswide communication on environmentalism efforts, website centered on environmental efforts, and online patient-centered resources on the health impacts of climate change.

#### **Support for Student-Led Initiatives**

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- OU Health Sciences Center (OUHSC) and OUCOM continue to support student-led interest groups monetarily and through faculty mentorship. Additionally, OUCOM has supported students devoting time towards quality improvement (QI) projects involving healthcare sustainability.
- **Recommendations**: Make opportunities for research and QI projects involving planetary health and sustainability more accessible to medical students earlier on in their education; increase collaboration with other departments within the institution of OU, specifically the Hudson College of Public Health.

#### **Campus Sustainability**

 $C \pm$ 

- OUCOM is supportive of efforts towards increased campus sustainability. Some programs in place such as campus recycling serve this purpose. In the past year, OUHSC demonstrated marked improvement. However, there is room for improvement in multiple areas listed below. Complete divestment of fossil fuels was not achieved this year.
- **Recommendations**: Similar to last year's report, there is a lack of initiative and/or transparency in the following areas: campus-wide composting program, meat-free days in the cafeteria, supply procurement guidelines, and sustainability requirements for campus events. More improvement to sustainability sourcing should be prioritized by OUHSC's Energy Management team.

### **Statement of Purpose**

Planetary health is human health.

The Planetary Health Alliance describes planetary health as "a solutions-oriented, transdisciplinary field and social movement focused on analysing and addressing the impacts of human disruptions to Earth's natural systems on human health and all life on Earth." This definition is intentionally broad, intended to encompass the multitude of ways that the environment can affect health, including water scarcity, changing food systems, urbanisation, biodiversity shifts, natural disasters, climate change, changing land use and land cover, global pollution, and changing biogeochemical flows. The health of humanity is dependent on our environment, and our environment is changing rapidly and in disastrous ways. Although the World Health Organization has called climate change "the greatest threat to global health in the 21st century," many 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 colour, older adults sensitive to health threats, and individuals in low-resource settings), these issues are inherently ones of equity and justice.

With the purpose of increasing planetary health awareness and accountability among health professional schools, we have created a Planetary Health Report Card that students internationally can use to grade and compare their institutions on an annual basis. This student-driven initiative aims to compare health professional schools nationally and internationally on the basis of discrete metrics in five main category areas: 1) planetary health curriculum, 2) interdisciplinary research in health and environment, 3) university support for student planetary health initiatives, and 4) community outreach centred on environmental health impacts 5) 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/Department vs. Institution: When "Medical school" is specified in the report card, this only refers to curriculum and resources offered by the School/department of Medicine and does not include offerings from other parts of the university (e.g. undergraduate departments (USA), other related departments (e.g. Public Health, Population Health departments). In contrast, when "institution" is specified in the report card, we are referring to the university more broadly including all of its campuses. Any resource reasonably accessible by medical students, no matter where in the institution the resource comes from or if it is

specifically targeted for medical students, can meet this metric.

- Environmental history (Metric #19 in Curriculum Section): This is a series of questions students are taught to ask during medical encounters that elicits patients' exposures and environmental risk factors. Historically, this has included consideration of exposures like pesticides, asbestos, and lead, though in the modern era shaped by climate change, it can be expanded to include things like wildfire smoke exposure, air pollution and mould after flooding. Key components include place of residence over the lifecourse, occupational history, food and water sources (e.g. meat from industrial feeding operations, regular fishing in contaminated water, access to clean drinking water), and exposure to air pollution. Please be as specific as possible when providing evidence for this metric.
- **Elective:** The word "elective" refers to an optional course or lecture series that a 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.
- Core Curriculum: This refers to taught material that is develored to the entire cohort of students in one year.
- Clerkship / Outreach: This is a term used in the USA to refer to placements that medical students go on e.g. Pediatrics, General medicine, Psychiatry. In the UK these are referred to as rotations, outreach or placements. This is a relatively short (approximately 4-8 weeks) period of study and patient-centred clinical experience that takes place as part of the undergraduate programme.
- Clinical rotation: This is a term used to refer to placements that students go on (e.g., ophthalmology, surgery, cardiology).
- **Physiotherapy vs Physical Therapy:** For the purposes of this report card these terms are considered interchangeable. However, physiotherapy will be used primarily.
- Community organisations: For most institutions, there are existing groups that are not directly affiliated with the university and exist as a product of what the community the institution exists in cares about or needs. These specific community organisations relevant to this report include those that are focused around some aspect of climate and health preservation. These community organisations can include but are not limited to local mutual aid initiatives, underserved-resource distribution groups, clean-up and nature conservation groups, community gardeners, and other environmental-related organisations. If your institution does not have access to local volunteerships with community groups, please report any community organisations your institution or school has collaborated with.
- Climate justice: The idea that certain population groups and geographical locations
  which are disproportionately more impacted by climate change are already
  economically and socially disadvantaged. This double vulnerability sits alongside
  pre-existing social justice concerns and should therefore shift policy and practice to
  mitigate the inequitable effects of the climate crisis.
- Extractivisim: The removal of natural resources typically in large quantities. Within anthropology this term is often used in the context of colonialism to refer to

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

- Global South: Nations that often have less economic and industrial development and are typically in the southern hemisphere. These nations have been found to be disproportionately impacted by the climate crisis.
- Low socioeconomic status (SES): An individual or geographical area that across a variety of socioeconomic factors (e.g., income, education, race/ethnicity) is considered vulnerable. This vulnerability has been correlated to more adverse health outcomes often as a consequence of encountering more barriers in accessing and receiving healthcare.
- Low and Middle-Income Countries (LMIC): Countries that have lower degrees of economic affluence.
- **Anthropogenic:** Created through human activity
- Marginalized communities: Groups excluded from mainstream economic, educational, social, and/or cultural experiences due to race, gender identity, sexual orientation, age, physical ability, language, and/or immigration status (Sevelius et al., 2020).

#### Other considerations:

• If there are more than one "tracks" at your institution with two different curricula (for example, Harvard Medical School has a Pathways and HST curriculum track), you can choose to fill out a report card for each track, or fill out just one report card and average the scores received by each track in cases where the scores are different (see the 2021 Harvard or Oxford report cards as examples). Where possible please indicate the proportion of students that are on each track.

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

## Planetary Health Curriculum

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

Curriculum: General

## 1.1. Did your <u>medical school</u> offer elective courses (student selected modules) to engage students in Education for Sustainable Healthcare or Planetary Health in the last year?

Yes, the medical school has offered **more than one** elective whose primary focus is ESH/planetary health in the past year. (3 points)

Yes, the medical school has offered **one** elective whose primary focus is ESH/planetary health in the past year. (2 points)

The medical school does **not** have any electives whose primary focus is ESH/planetary health, but there are one or more electives that include a **lecture** on planetary health. (1 points)

No, the medical school has **not** offered any electives on planetary health or electives that include ESH/planetary health topics in the past year. (0 points)

Score Assigned:

Score explanation: The University of Oklahoma College of Medicine (OUCOM) offers an elective within its Humanities Enrichment courses available for second year medical students focused on Planetary Health. The course, entitled "Impact of Climate Change on Health and Medicine," occurred for the second time during the fall semester of 2024 and was delivered by a faculty member whose research interests include environmentalism as it applies to anesthesiology as well as 3rd and 4th year medical students.

Curriculum: Health Effects of Climate Change

## 1.2. Does your <u>medical school</u> curriculum address the relationship between extreme heat, health risks, and climate change?

This topic was explored in depth by the core curriculum. (3 points)

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

This topic was covered in **elective** coursework. (1 point)

This topic was **not** covered. (0 points)

Score Assigned:

1

*Score explanation:* This metric is addressed within the elective course "Impact of Climate Change on Health and Medicine" Section 1: Climate Health and the Environment and Section 2: Climate and Human Health.

Furthermore, for second year medical students, within the Joint, Skin, and Bone course, a "Skin of Color" lecture covers the effect of sunlight on skin health and its effect on cancer. As well, self-study <a href="Marketan Academy of Dermatology">American Academy of Dermatology</a> (AAD) modules are provided in order to fulfill course objectives. There exists <a href="AAD content">AAD content</a> related to climate change, however this is not part of the curriculum. Thus, although not fulfilling this metric, there is an opportunity for suggested learning to augment the curriculum.

Because this topic is covered in OUCOM elective coursework, OU is awarded 1 point for this metric.

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

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

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

This topic was covered in **elective** coursework. (1 point)

This topic was **not** covered. (0 points)

Score Assigned:

1

*Score explanation:* The elective course entitled "Impact of Climate Change on Health and Medicine" covers topics such as the effects of extreme heat or extreme cold on individual health, as well as how these events impact health care systems as a whole.

Because this topic is covered in OUCOM elective coursework, OU is awarded 1 point for this metric.

## 1.4. Does your <u>medical school</u> curriculum address the impact of climate change on the changing patterns of infectious diseases?

This topic was explored in depth by the core curriculum. (3 points)

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

This topic was covered in **elective** coursework. (1 point)

This topic was **not** covered. (0 points)

core Assigned:	1
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*Score explanation:* OUCOM does not cover this topic in the core curriculum. This topic was discussed as potentially being added to our Infectious Disease and Immunology preclinical course during the new curriculum being implemented July of 2025.

OUCOM offers an elective section of its Humanities course available for second year medical students entitled "Impact of Climate Change on Health and Medicine." This elective course discusses changing patterns of infectious disease and implications globally as well as the local implications from the change in diseases we are beginning to see and treat in Oklahoma.

Because this topic was not explicitly covered in the core curriculum and is covered in an elective of the OKC curriculum, OU is awarded 1 point for this metric.

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

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

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

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

This topic was **not** covered.

Score Assigned:

1

Score explanation: The elective course entitled "Impact of Climate Change on Health and Medicine," offered to MS2 students during the fall 2024 semester covers topics such as the effects of air pollution on individual health, particularly in reported cases of asthma and COPD exacerbations, as well as how these events impact health care systems as a whole.

Because this topic is covered in OUCOM elective coursework, OU is awarded 1 point for this metric.

## 1.6. Does your <u>medical school</u> curriculum address the cardiovascular health effects of climate change, including increased heat

This topic was explored in depth by the core curriculum.

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

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

This topic was **not** covered.

Score Assigned:

1

Score explanation: The elective course entitled "Impact of Climate Change on Health and Medicine," offered to MS2 students during the fall 2024 semester covers topics such as the effects of extreme heat on individual health, specifically with regards to cardiovascular health, as well as how these events impact health care systems as a whole.

Because this topic is covered in OUCOM elective coursework, OU is awarded 1 point for this metric.

1.7. Does your <u>medical school</u> curriculum address the mental health and neuropsychological effects of environmental degradation and climate change?
This topic was explored <b>in depth</b> by the <b>core</b> curriculum.

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

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

This topic was **not** covered.

Score Assigned:

1

Score explanation: The elective course entitled "Impact of Climate Change on Health and Medicine," offered to MS2 students during the fall 2024 semester covers topics of mental health issues experienced due to and exacerbated by climate change, particularly anxiety and depression as related to the impending effects of climate change.

Because this topic is covered in OUCOM elective coursework, OU is awarded 1 point for this metric.

1.8. Does your medical school curriculum address the relationships between health, individ	dual
patient food and water security, ecosystem health, and climate change?	

This topic was explored in depth by the core curriculum.

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

This topic was covered in elective coursework.

This topic was **not** covered.

Score Assigned:

1

Score explanation: The elective course entitled "Impact of Climate Change on Health and Medicine," offered to MS2 students during the fall 2024 semester covers topics of ecosystem health, including food and water security. Students read and presented training modules produced by the WHO covering these topics.

Because this topic is covered in OUCOM elective coursework, OU is awarded 1 point for this metric.

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

This topic was explored in depth by the core curriculum.

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

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

This topic was **not** covered.

Score Assigned:

1

*Score explanation:* The elective course entitled "Impact of Climate Change on Health and Medicine," offered to MS2 students during the fall 2024 semester covers these topics in Section 3: Humanities and Ethics of Climate Change.

Several courses list objectives relevant to climate change through the lens of population health, though these objectives are specific to the Tulsa School of Community Medicine pathway. Courses that include the below objectives include the Psychiatry, OB/GYN, and Internal Medicine clerkships.

- Use principles of evidence-based practice to promote population health.
- Apply principles of quality improvement to promote population health.
- Apply principles of population health to daily practice.

For the Joint, Skin, and Bone course, a "Skin of Color" lecture covers the effect of sunlight on skin health and its effect on cancer. As well, self-study <u>American Academy of Dermatology (AAD)</u> modules are provided in order to fulfill course objectives. There exists <u>AAD content</u> related to climate change, however this is not part of the curriculum. Thus, although not fulfilling this metric, there is an opportunity for suggested learning to augment the curriculum.

Because this topic is covered in OUCOM elective coursework, OU is awarded 1 point for this metric.

1.10. Does your <u>medical school</u> curriculum address the unequal regional health impacts of climate change globally?		
This topic was explored in depth by the core curriculum.		
This topic was <b>briefly</b> covered in the <b>core</b> curriculum.		
This topic was covered in <b>elective</b> coursework.		
This topic was <b>not</b> covered.		
Score Assigned:	1	

Score explanation: The elective course entitled "Impact of Climate Change on Health and Medicine," offered to MS2 students during the fall 2024 semester includes lectures covering how the effects of climate change will unequally impact global regions, particularly how the global south will disproportionately be impacted first.

Because this topic is covered in OUCOM elective coursework, OU is awarded 1 point for this metric.

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

1.11. Does your <u>medical school</u> curriculum address the reproductive health effects of industry-related environmental toxins (e.g. air pollution, pesticides)?	
This topic was explored in depth by the core curriculum.	
This topic was <b>briefly</b> covered in the <b>core</b> curriculum.	
This topic was covered in <b>elective</b> coursework.	
This topic was <b>not</b> covered.	
Score Assigned:	0
Score explanation: This topic is not covered in the elective course "Impact of Climate Change on Health and Medicine," offered to MS2 students during the fall 2024 or the core curriculum.	

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

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

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

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

This topic was **not** covered.

Score Assigned:

*Score explanation:* OUCOM does not cover this topic in the core curriculum or in elective coursework.

Several courses list objectives relevant to environmental threats through the lens of population health, though these objectives are specific to the Tulsa School of Community Medicine path. Courses that include the below objectives include the Psychiatry, OB/GYN, and Internal Medicine clerkships.

- Use principles of evidence-based practice to promote population health.
- Apply principles of quality improvement to promote population health.
- Apply principles of population health to daily practice.

1.13. To what extent does your <u>medical school</u> emphasise the importance of Indigenous knowledge and value systems as essential components of planetary health solutions?	
This topic was explored in depth by the core curriculum.	
This topic was <b>briefly</b> covered in the <b>core</b> curriculum.	
This topic was covered in <b>elective</b> coursework.	
This topic was <b>not</b> covered.	
0	
Score explanation: This topic is not covered in the elective course "Impact of Climate Change on Health and Medicine," offered to MS2 students during the fall 2024 or within the core curriculum.	

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

*Score explanation:* The elective course entitled "Impact of Climate Change on Health and Medicine," offered to MS2 students during the fall 2024 semester includes lectures covering how the effects of climate change will unequally impact marginalized groups in society disproportionately first relating to issues of power and available resources.

Curriculum: Sustainability

# 1.15. Does your medical school curriculum address the environmental and health co-benefits of a plant-based diet? This topic was explored in depth by the core curriculum. This topic was briefly covered in the core curriculum.

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

This topic was <b>not</b> covered.	
Score Assigned:	0

*Score explanation:* This topic is not covered in the elective course "Impact of Climate Change on Health and Medicine," offered to MS2 students during the fall 2024 or the core curriculum.

## 1.16. Does your <u>medical school</u> curriculum address the carbon footprint of healthcare systems?

This topic was explored in depth by the core curriculum.

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

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

This topic was **not** covered.

Score Assigned:

Score explanation: The elective course entitled "Impact of Climate Change on Health and Medicine," offered to MS2 students during the fall 2024 semester includes teaching on the carbon footprint of healthcare, focusing on the greenhouse gases produced by different anesthetic gases and techniques.

1

Because this topic is covered in OUCOM elective coursework, OU is awarded 1 point for this metric.

1.17. Does your <u>medical school</u> curriculum cover these components of sustainable clinical practice in the <u>core</u> curriculum? (points for each)	Score
The health <b>and</b> environmental <b>co-benefits</b> of <b>avoiding</b> over-medicalisation, over-investigation and/or over-treatment (2 points)	0
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 fulfil this metric. (2 points).	0
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 point)	0
Environmental impact of <b>surgical</b> healthcare on planetary health and the climate crisis, and how can it be mitigated. (1 point)	0
The impact of <b>anaesthetic</b> gases on the healthcare carbon footprint and ways to reduce anaestheisa's environmental impacts, such as total intravenous anaesthesia or choosing	0

less environmentally harmful anaesthetic gas options with reduced greenhouse gas emissions. (1 point)	
The impact of <b>inhalers</b> on the healthcare carbon footprint and the environmental benefit of dry powdered inhalers over metered dose inhalers. (1 point)	0
Waste production within healthcare clinics and strategies for reducing waste in clinical activities (e.g. single use items in the inpatient or outpatient setting) (1 point)	0

*Score explanation:* These topics are not covered in the **core** curriculum. 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

OU College of Medicine (OUCOM) partially covers 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 does 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.

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

OUCOM does not cover this topic in the core curriculum or in the Surgery Clerkship or Anesthesia Selective courses.

5. The impact of anesthetic gasses on the healthcare carbon footprint and ways to reduce anesthesia environmental impacts, such as total intravenous anesthesia or choosing less environmentally harmful anesthetic gas options with reduced greenhouse gas emissions

OUCOM does not cover this topic in the core curriculum or in the Surgery Clerkship or Anesthesia Selective courses. The Environmental and Sustainable Health Interest Group has hosted multiple guest lectures that address this point and it has been covered in the elective course entitled "Impact of Climate Change on Health & Medicine," however, there is no core curriculum coverage.

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

OUCOM and OU-Tulsa School of Community Medicine do not cover this topic in the core curriculum or in the elective coursework.

7. 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 does not cover this topic in the core curriculum or in the elective coursework.

Curriculum: Clinical Applications

## 1.18. In training for patient encounters, does your <u>medical school's</u> curriculum introduce strategies to have conversations with patients about the health effects of climate change?

Yes, there are strategies introduced for having conversations with patients about climate change in the **core** curriculum. (2 points)

Yes, there are strategies introduced for having conversations with patients about climate change in **elective** coursework. (1 points)

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

Score Assigned:

0

*Score explanation:* OUCOM does not cover this topic in the core curriculum or in elective coursework.

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

Yes, the **core** curriculum includes strategies for taking an environmental history. (2 points)

Only **elective** coursework includes strategies for taking an environmental history. (1 point)

No, the curriculum does **not** include strategies for taking an environmental history. (0 points)

Score Assigned:

2

Score explanation: OUCOM core curriculum trains students to ask about various environmental exposures when taking a patient's history. These include (but are not limited to): home environment, travel, and occupational exposures. This is enforced in both preclinical (Clinical Medicine I and II) and clinical (Pediatrics and Internal Medicine) rotations.

Therefore, OU is awarded 2 points.

Curriculum: Administrative Support for Planetary Health

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

Yes, the medical school is currently in the process of making <b>major</b> improvements to ESH/planetary health education. (4 points)		
Yes, the medical school is currently in the process of making <b>minor</b> improvements to ESH/planetary health education. (2 points)		
No, there are <b>no</b> improvements to planetary health	n education in progress. (0 points)	
Score Assigned:	2	
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. There are no clear proposals to formalize planetary health into the core curriculum and most of the efforts regarding improving education for sustainable healthcare have been student-driven. Therefore, a score of 2 is awarded.		
1.21. How well are the aforementioned planetary health/Education for Sustainable Healthcare topics integrated longitudinally into the <u>core</u> curriculum?		
Planetary health/ESH topics are well integrated i	nto the core medical school curriculum. (6 points)	
<b>Some</b> planetary health/ESH topics are appropriately integrated into the core medical student curriculum. (4 points)		
Planetary health/ESH is not integrated and is primarily addressed in (a) standalone lecture(s). (2 points)		
There is <b>minimal/no</b> education for sustainable he	althcare. (0 points)	
Score Assigned:	0	
Score explanation: OUCOM has not longitudinal medical school curriculum. There is an elective the Climate Change on Health") but it is not required	nat covers planetary health ("The Impact of	
1.22. Does your <u>medical school</u> employ a member responsibility for the incorporation of planetar throughout the course?	per of faculty to specifically oversee and take ry health and sustainable healthcare as a theme	
Yes, the medical school has a specific faculty/statintegration of planetary health and sustainable hea		
No, the <b>medical school</b> does <b>not</b> have a specific for curricular integration of planetary health and susta		
Score Assigned:	0	

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

Section Total (17 out of 72)	23.61%
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## **Interdisciplinary Research**

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

## 2.1. Are there researchers engaged in planetary health research and healthcare sustainability research at your <u>institution</u>?

Yes, there are faculty members at the **institution** who have a **primary** research focus in planetary health **or** sustainable healthcare/vetcare. (3 points)

Yes, there are individual faculty members at the **institution** who are conducting research **related** to planetary health or healthcare sustainability, OR are part of a national/international sustainability working group, but it is not their primary research focus. (2 points)

There are sustainability researchers at the **institution**, but not specifically associated with healthcare/vetcare. (1 point)

No, there are **no** planetary health and/or sustainability researchers at the **institution** at this time. (0 points)

3

Score Assigned:

Score explanation: Dr. Kaitlyn Kulesus would consider planetary health to be her primary research focus. Her research focuses on the differing environmental impacts of desflurane, sevoflurane, and isoflurane anesthetic gasses. Her ongoing research seeks to minimise use of desflurane, which scaled by clinical potency has 50 times the global warming potential than sevoflurane or isoflurane. Additionally, there are faculty that have been willing to be advisors for quality improvement projects, including a project pending publication that sought to quantify and provide a framework for eliminating waste in the operating room.

## 2.2. Is there a dedicated department or institute for interdisciplinary planetary health research at your <u>institution</u>?

There is **at least one** dedicated department or institute for interdisciplinary planetary health research. (3 points)

There is **not currently** a department or institute for interdisciplinary planetary health research, but there are **plans** to open one in the next 3 years. (2 points)

There is an Occupational and Environmental Health department, but no interdisciplinary department or institute for planetary health research. (1 points) There is **no** dedicated department or institute. (0 points) Score Assigned: 1

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, the Occupational and Environmental Health Department lists that its aim is to unite interdisciplinary teams in order to further research programs in environmental fields of study.

The Environmental Protection Agency funded a grant for OU researchers in the Fall of 2023 to create a Children's Environmental Health Center. This center's aim is a multidisciplinary approach to investigate the chemical and non-chemical exposures amongst children in Oklahoma and Texas that may cause absenteeism due to respiratory and gastrointestinal illnesses.

#### 2.3. Is there a process by which communities disproportionately impacted by climate change and environmental injustice give input or make decisions about the research agenda at your institution?

Yes, there is a process in which community members impacted by climate and environmental injustice have **decision-making power** in the climate + environmental research agenda. (3 points)

Yes, there is a process in which community members impacted by climate and environmental injustice advise the climate + environmental research agenda. (2 points)

No, but there are current efforts to establish a process for community members to advise or make decisions on the research agenda. (1 points)

There is **no** process, and **no** efforts to create such a process. (0 points)

0 Score Assigned:

Score explanation: There is no process by which communities or individuals disproportionately impacted by climate change injustice can provide suggestions or input regarding planetary health policy or research at the University of Oklahoma Health Science Center.

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

There is an easy-to-use, adequately comprehensive website that centralises various campus resources related to health and the environment including all of the following: upcoming events, leaders in planetary health at your institution, and relevant funding opportunities. (3 points)

There is a website that **attempts to centralise** various campus resources related to health and the environment, but it is hard-to-use, not updated, or not adequately comprehensive. (2 points)

The **institution** has an **Office of Sustainability website** that includes **some** resources related to health and the environment. (1 point)

There is **no** website. (0 points)

Score Assigned:

2

Score explanation:

There is one University of Oklahoma <u>website</u> that aims to consolidate research related to health and the environment. The Institute for Resilient Environmental and Energy Systems (IREEC) is a recent initiative aligned with OU's institutional goals, their website is also given <u>here</u>. It lists some events but is not up-to-date and thus cannot receive full marks. The Health Sciences Center has a dedicated <u>site</u> for Occupational and Environmental Health. Overall, this area could be a good target for improvement in future years, as the College of Medicine is currently working on a website to collate various research opportunities for students.

## 2.5. Has your <u>institution</u> recently hosted a conference or symposium on topics related to planetary health?

Yes, the **institution** has hosted at least one conference or symposium on topics related to planetary health in the past year. (4 points)

Yes, the **institution** has hosted at least one conference or symposium on topics related to sustainable healthcare/vetcare in the past year. (3 points)

Yes, the **institution** has hosted a conference on topics related to planetary health / sustainable healthcare/vetcare in the past three years. (2 points)

The **institution** has not hosted any conferences directly, but they have provided financial support for a local planetary health event. (1 point)

No, the **institution** has not hosted a conference on topics related to planetary health in the past three years. (0 points)

Score Assigned:

2

Score explanation: The University of Oklahoma Hudson School of Public Health hosted a symposium focused on climate change in October of 2023. The title of the keynote talk was "Climate Change: A Challenge for Public Health, Education, Research, and Practice." No conference or symposium focused on climate change has happened since then.

2.6. Is your <u>institution</u> a member of a national or international planetary health or ESH/ESV organisation?

Yes, the institution is a member of a national or international planetary health <b>or</b> ESH/ESV organisation. (1 points)		
No, the institution is <b>not</b> a member of such an organisation. (0 points)		
Score Assigned:	0	
Score explanation: The institution as a whole is not a member of a national or international planetary health or ESH/ESV organization.		

Section Total (8 out of 17)	47.06%
,	

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## **Community Outreach and Advocacy**

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

## 3.1. Does your <u>institution</u> partner with community organisations to promote planetary and health?

Yes, the **institution** meaningfully partners with **multiple** community organisations to promote planetary and environmental health. (3 points)

Yes, the **institution** meaningfully partners with **one** community organisation to promote planetary and environmental health. (2 points)

The **institution** does not partner with community organisations, but has participated in community focused events relating to planetary health. (1 point)

No, there is **no** such meaningful community partnership. (0 points)

Score Assigned:

3

Score explanation: OUCOM deserves a 3 because it has developed a partnership with many community groups through the Environmental and Sustainable Health Interest Group (ESHIG), a MS4SF affiliate organization. Medical students participate in community gardens such as Common Wealth Urban Farms, and Closer To Earth Youth Garden, contributing to the gardening and composting activities in Oklahoma City. ESH IG also collaborates with OKC Beautiful's Litterblitz, participating in organized trash clean-up events with emphasis on community parks. Therefore OUCOM should be awarded a score of three.

## 3.2. Does your <u>institution</u> offer community-facing courses or events regarding planetary health?

The **institution** offers community-facing courses or events at least once every year. (3 points)

The **institution** offers courses or events open to the community at least once per year, but they are not primarily created for a community audience. (2 points)

The **institution** has promoted community-facing courses or events, but was not involved in planning those courses or events. (1 point)

The **institution/medical school** have not offered such community-facing courses or events. (0 points)

Score Assigned:	2	
Score explanation:  A score of 2 should be awarded to this category. OUHSC Environmental and Sustainable Health Interest Group (ESHIG) hosts numerous events centered around planetary health which are open to the community, but these events are primarily created for students within the Oklahoma Health Science Center. The events focus on various topics of planetary health, including the impact of anesthesia and surgical waste on the environment and potential solutions to limit such impacts. In the spring of 2024, ESH IG hosted its first free community swap event (including clothing, books, supplies used by health professions students, etc.) open to all people on the health science center campus, focused on raising awareness on sustainable practices as consumers. 2 points are merited because these events are open to everyone but mostly cater to health science center students and employees.		
3.3. Does your <u>institution</u> have regular coverage sustainable healthcare in university update cor		
Yes, all students <b>regularly</b> receive communication updates dedicated to planetary health and/or sustainable healthcare. (2 points)		
Yes, planetary health and/or sustainable healthcare topics are regularly included in communication updates to <b>some courses</b> . (1 point)		
Students <b>do not</b> receive communications about planetary health or sustainable healthcare. (0 points)		
Score Assigned:	1	
Score explanation: A score of 1 should be applied to this category. Environmental and Sustainable Health Interest Group (ESHIG), a MS4SF Affiliate organization, sends out emails to students who are part of the interest group. As with last year, the communication is not solely pertaining to planetary health/sustainable healthcare but this is often included.		
3.4. Does the <u>institution</u> or <u>main affiliated hospital trust</u> engage in professional education activities targeting individuals post graduation with the aim of ensuring their knowledge and skills in planetary health and sustainable healthcare remain up to date during their professional career?		
Yes, the <b>institution</b> or <b>main affiliated hospital tr</b> relating to planetary health and/or sustainable hea least one with a primary focus of planetary health	althcare for post-graduate providers, including at	
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 provider. (1 point)

Score Assigned:

There are **no** such accessible courses for post-graduate providers. (0 points)

0

*Score explanation:* The CME office at the University of Oklahoma Health Science Center does not report any courses pertaining to environmental impact on health offered in the past year. Therefore, a score of 0 should be applied.

## 3.5. Does your <u>institution</u> or its <u>affiliated teaching hospitals</u> have accessible educational materials for patients about environmental health exposures?

Yes, the **medical school** or <u>all</u> **affiliated hospitals** have accessible educational materials for patients. (2 points)

**Some** affiliated hospitals have accessible educational materials for patients. (1 point)

No affiliated medical centres have accessible educational materials for patients. (0 points)

Score Assigned:

0

Score explanation: There are currently no patient-centered materials focused on environmental exposures on OU Health's website. There are a few blog posts discussing relevant topics such as "Health and Climate Change is Theme of Bridges to Access Conference" in addition to a few materials that can be found through OU Health's library. However, the blog posts do not educate patients on environmental health exposures and the information found on the OU health library are primarily news articles and not easily accessible for patients. Therefore, OUCOM should receive a score of 0.

## 3.6. Does your <u>institution</u> or its <u>affiliated teaching hospitals</u> have accessible educational materials for patients about the health impacts of climate change?

Yes, the **medical school** or <u>all</u> **affiliated hospitals** have accessible educational materials for patients. (2 points)

**Some** affiliated hospitals have accessible educational materials for patients. (1 point)

No affiliated hospitals have accessible educational materials for patients. (0 points)

Score Assigned:

1

Score explanation: There are currently a few patient-centered materials in "Our Health Library" that are focused on the health impacts of 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." A few news articles concerning climate and health can also be accessed through the OU Health website.

#### Section Total (7 out of 14)

50.00%

## **Support for Student-Led Planetary Health Initiatives**

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

## 4.1. Does your <u>institution</u> offer support for students interested in enacting a sustainability initiative/QI project?

Yes, the **institution** *either* offers grants for students to enact sustainability initiatives/QI projects *or* sustainability QI projects are part of the core curriculum. (2 points)

The **institution** encourages sustainability QI projects (to fulfil clerkship or longitudinal requirements) and offers resources to help students succeed in these projects, **but** there is no student funding available and there is no requirement to participate. (1 point)

No, **neither** the medical school or the institution offer opportunities or support for sustainability initiatives or QI projects. (0 points)

Score Assigned:

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.

2

The OU institution as a whole offers <u>grants</u> for climate <u>research</u> that foster collaboration among departments within OU as well as with other universities. These include funding from the USGS and the US DOI.

In the 2023-2024 school year, the OU Hudson College of Public Health researchers were awarded a \$1.8 million grant from the US Environmental Protection Agency. The grant was being used towards the creation of a <u>Children's Environmental Health Center in the U.S. Southern Great Plains</u>, with a goal to "reduce environmental health disparities and promote environmental justice for children living in underserved, rural agricultural communities." The research aims to take a multidisciplinary approach to address environmental health disparities.

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.

4.2. Does your <u>institution</u> offer opportunities for students to do research related to planetary health and/or sustainable healthcare/vetcare?

The **institution** has a **specific** research program or fellowship for students interested in doing planetary health/sustainable healthcare/vetcare research. (2 points)

There are research opportunities for students to perform research related to planetary health/sustainable healthcare, but these **require student initiative** to seek these out and carry them out in their spare time. (1 point)

There are **no opportunities** for students to engage in planetary health/sustainable healthcare research. (0 points)

Score Assigned:

1

Score explanation: There is no institution-wide research program or fellowship at the University of Oklahoma Health Science Center related to planetary health. There is however, given some student initiative, a multitude of opportunities for planetary health related research. There are several faculty scattered across different colleges in the Health Science Center who have done planetary health research in the past. There are also numerous scholarships, stipends, and programs designed to facilitate student-initiated research projects. Support and guidance for interested students is present, but an institutional push for more planetary health research is lacking.

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

The institution has a webpage with specific information related to planetary health or sustainable healthcare/vetcare that includes up-to-date information on relevant initiatives and contact information of potential mentors. (2 points)

There is an institution webpage that features some information on projects and mentors within planetary health and sustainable healthcare within the medical school, but it lacks key information. (1 point)

There is **no institution** specific webpage for locating planetary health and/or sustainable healthcare projects or mentors. (0 points)

Score Assigned:

0

Score explanation: OUHSC does not currently have such an institutional webpage. No clear examples exist for finding specific planetary health opportunities within the medical school. Current work within the research outreach apparatus includes listing research liaisons for student interest groups, which does not presently include ESHIG, and a Linktree with links that direct students to present research opportunities among the College of Medicine. None of these target planetary health and/or sustainable healthcare activities specifically, however.

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

Yes, there is a student organisation **with faculty support** at my medical school dedicated to planetary health or sustainability in healthcare. (2 points)

Yes, there is a student organisation at my medical school dedicated to planetary health or sustainability in healthcare but it **lacks faculty support.** (1 point)

No, there is **not** a student organisation at my institution dedicated to planetary health or sustainability in healthcare. (0 points)

Score Assigned:

Score explanation: OU Health Sciences Center'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 medicine as well as sustainable practices on campus. The interest group is supported monetarily and recognized by the OU Health Sciences Center Student Government Association as a Registered Student Organization and is supported by a College of Medicine faculty mentor.

2

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

Yes, there is a student representative that serves on a department or institutional decision-making council/committee. (1 points)

No, there is no such student representative. (0 points)

Score Assigned:

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.

4.6. In the past year, has the <u>institution</u> had one or more co-curricular planetary health programs or initiatives in the following categories? (1 point each)	
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.	0
Events in which students learn directly from members of a local environmental justice community about the climate and environmental challenges they face, and how health professionals can partner with their community to address these exposures and impacts.	0

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

#### Score explanation:

The Environmental and Sustainable Health Interest Group (an MS4SF affiliate group) organizes volunteer events with <u>Closer to Earth</u>, a local community garden, where students have the opportunity to learn about sustainable food and waste, gardening, and urban agriculture. The student organization also organizes community clean ups, a sustainable clothing swap, the passing down of medical school materials from class to class, and hosts speakers to educate students on topics within sustainability and healthcare.

The Wilderness and Medicine Interest Group organizes and hosts outdoor programs and activities 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 institution. The healthcare industry is a major contributor to greenhouse gas emissions as well as pollution that harms local, regional, and global ecosystems. While healthcare is, by nature, a resource-intensive endeavour, the healthcare sector is well poised to lead the world to a more sustainable future. This will involve scrutinising every aspect of how our systems operate, from where we source our energy, to how we build our infrastructure, to what companies we invest in. Our medical schools, clinics, and hospitals must set the standard for sustainable practices, and show other sectors what is possible when it comes to minimising environmental impact.

#### 5.1. Does your institution have an Office of Sustainability?

Yes, there is an Office of Sustainability with multiple full-time staff dedicated to campus sustainability. If the Office of Sustainability serves the entire campus, there is **at least one designated staff member** for sustainability at the hospital. (3 points)

There is an Office of Sustainability with one or more full-time staff dedicated to campus sustainability, but **no specific staff member** in charge of hospital sustainability. (2 points)

There are **no salaried sustainability staff**, but there is a sustainability task force or committee. (1 point)

There are **no** staff members **or** task force responsible for overseeing campus sustainability. (0 points)

Score Assigned:

3

Score explanation: OUHSC has an Office of Sustainability called the <a href="Energy Management">Energy Management</a>
<a href="Department">Department</a>. They have a designated staff member in charge of energy conservation. They have also previously worked on LED retrofitting, stream pipe insulation, and infrared thermography inspection. Therefore, OUCOM should be awarded a 3.

5.2. How ambitious is your <u>institution's</u> plan to reduce its own carbon footprint?	
The institution has a written and approved plan to achieve carbon neutrality by 2030 (5 points)	
The institution has a written and approved plan to achieve carbon neutrality by 2040 (3 points)	
The institution has a stated goal of carbon neutrality by <b>2040</b> but has <b>not created a plan</b> to reach that goal or the <b>plan is inadequate</b> (1 point)	
The institution/medical school does <b>not</b> meet any of the requirements listed above (0 points)	
Score Assigned:	1

*Score explanation:* OUHSC has a goal to become carbon neutral by 2040. However, there is no formal plan in place, with a goal to create this roadmap in 2025. According to the OUHSC office of Energy Management has been undertaking the following upgrades to move closer to their goal:

- HVAC, chiller, and boiler upgrades
- LED lighting installations
- Interior lighting and occupancy sensor retrofits
- Exterior lighting replacements
- Steam system upgrades
- Infrared roof scans and roof replacements
- Building automation control upgrades

Therefore OUHSC should be awarded a score of 1.

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

Yes institution buildings are 100% powered by renewable energy. (3 points)

Institution buildings source >80% of energy needs from off-site and/or on-site renewable energy. (2 points)

Institution buildings source >20% of energy needs from off-site and/or on-site renewable energy. (1 point)

Institution buildings source <20% of energy needs from off-site and/or on-site renewable energy. (0 points)

Score Assigned:

1

Score explanation: OUHSC sources all of its energy from OG&E with a power mix of 60% natural gas, 20% renewable energy (wind and solar), and 20% coal. With OG&E providing the following statement "Our customers rely on a variety of devices to power their homes and businesses every day. Using some of the nation's premier wind and solar resources, we have reduced our carbon emissions by investing in 32 MW of owned solar capacity, 449 MW of owned wind power generation, 342 MW of wind-purchased power contracts, and converting over 1,000 MW of coal generation to natural gas. To better meet the needs of those we serve and mitigate the impact of increasing extreme weather, we've invested more than \$3.7 billion in transmission, distribution, and grid advancements to improve reliability and resilience."

Based on this OUHSC Energy Management Office estimates that they source >20% of their energy from renewable resources and therefore should receive a score of 1.

5.4. Are sustainable building practices utilised for new and old buildings on the <u>institution's</u> campus, with design and construction of new buildings and remodelling of old buildings conforming to a published sustainability rating system or building code/guideline?

Yes, sustainable building practices are utilised for new buildings on the institution's campus and the **majority** of old buildings **have been retrofitted** to be more sustainable. (3 points)

Sustainable building practices are utilised for new buildings on the institution's campus, but most old buildings have **not been retrofitted.** (2 points)

Sustainable building practices are **inadequately or incompletely** implemented for new buildings. (1 point)

Sustainability is **not considered** in the construction of new buildings. (0 points)

Score Assigned:

3

#### Score explanation:

All new construction projects are adapting sustainable building practices and are following modern building codes and guidelines. The majority of our existing facilities have been retrofitted with high efficiency equipment and modern building automation control systems. We have also taken action to convert our facilities to have high efficiency LED lighting. The OUHSC campus has made great strides to adapt to sustainable building practices. Examples cited by the office of Energy management include:

- Energy Efficiency Measures: We perform regular energy audits to identify areas where energy efficiency can be improved. This includes upgrading lighting systems to LED (mentioned above), installing energy-efficient HVAC systems, and implementing smart building technologies to optimize energy use. We do this across campus for all of our OUHSC properties that we maintain.
- 2) Renewable Energy Generation: We have power purchase agreements for renewable electricity through OG&E and take advantage of all the renewable energy opportunities that they offer. At this time, we do not have any on-site renewable energy generation such as solar panels, wind turbines, or geothermal systems.
- 3) Green Building Standards: When constructing new buildings or renovating existing ones, we do our best to adhere to green building standards such as LEED (Leadership in Energy and Environmental Design) certification. These standards promote energy efficiency, water conservation, and the use of sustainable materials.

Therefore OUHSC should be awarded a score of 3.

# 5.5. Has the <u>institution</u> implemented strategies to encourage and provide environmentally-friendly transportation options for students and reduce the environmental impact of commuting?

Yes, the institution has implemented strategies to encourage and provide **environmentally-friendly transportation options** such as safe active transport, public transport, or carpooling and these options are well-utilised by students. Alternatively, the campus location is not amenable to unsustainable forms of transportation by default. (2 points)

The institution has implemented **some** strategies to provide environmentally-friendly transportation options, but the options are **unsatisfactorily** accessible or advertised. (1 point)

The institution has **not** implemented strategies to encourage and provide environmentally-friendly transportation options. (0 points)

Score Assigned:

2

Score explanation: The OUHSC campus offers shuttle access to the public, students, and staff. Information about the shuttle and its schedule can be found on the OUHSC parking and transportation website, as well as the "Ride Systems" app. Bike racks are present on campus, with few near the medical school. There are no electric vehicle charging ports on the OUHSC campus according to the OUHSC Parking and Transportation Services. There are four on OU Health campus, and there are some at the VA hospital that are only allowed for federal vehicles, with no increase in the amount of stations within the last two years.. Therefore OUHSC should be awarded a score of 2

## 5.6. Does your <u>institution</u> have an organics recycling program (compost) and a conventional recycling program (aluminium/paper/plastic/glass)?

Yes, the institution has **both** compost **and** recycling programs accessible to students and faculty. (2 points)

The institution has **either** recycling **or** compost programs accessible to students and faculty, but not both. (1 point)

There is **no** compost or recycling program at the medical school. (0 points)

Score Assigned:

1

*Score explanation:* The University of Oklahoma Health Sciences Center has recycling bins available around the medical campus. However there is no composting program available on campus. Therefore OUHSC should be awarded a score of 1.

## 5.7. Does the <u>institution</u> apply sustainability criteria when making decisions about the campus food and beverage selections (e.g. local sourcing, reduced meat, decreased plastic packaging)?

Yes, the institution has 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. (3 points)

There are sustainability guidelines for food and beverages, but they are **insufficient or optional**. The institution **is engaged** in efforts to increase food and beverage sustainability. (2 points)

There are sustainability guidelines for food and beverages, but they are **insufficient or optional.** The institution is **not** engaged in efforts to increase food and beverage sustainability. (1 point)

There are **no** sustainability guidelines for food and beverages. (0 points)

Score Assigned:

2

Score explanation: OUHSC's campus food and beverage services are managed by **Sodexo**, which implements **sustainable practices** such as **smart sourcing and food waste reduction**. However, it is unclear whether there are formal institutional **sustainability requirements** for food procurement, such as **meat-free days**, **no red meat policies**, **or plastic reduction mandates**. While Sodexo's

sustainability initiatives contribute to greener dining options, these appear to be company-led rather than institutionally mandated.

Based on the scoring criteria, OUHSC would likely receive **2 points**, as there are **sustainability guidelines in place** and efforts to enhance food and beverage sustainability.

## 5.8. Does the <u>institution</u> apply sustainability criteria when making decisions about supply procurement?

Yes, the institution has **adequate** sustainability requirements for supply procurement **and** is **engaged** in efforts to increase sustainability of procurement. (3 points)

There are sustainability guidelines for supply procurement, but they are **insufficient or optional.** The institution is **engaged** in efforts to increase sustainability of procurement. (2 points)

There are sustainability guidelines for supply procurement, but they are **insufficient or optional**. The institution is **not engaged** in efforts to increase sustainability of procurement. (1 point)

There are **no** sustainability guidelines for supply procurement. (0 points)

Score Assigned:

2

Score explanation: OUHSC applies sustainability criteria in procurement by ensuring that office supplies, furniture, and cleaning products meet environmental standards, such as using FSC-certified paper and non-toxic cleaning supplies. Additionally, the institution prioritizes proper e-waste recycling and purchases ENERGY STAR-rated IT equipment. While these guidelines promote sustainable purchasing, it is unclear whether they are strictly required or if there are ongoing efforts to further improve procurement sustainability.

Based on the scoring criteria, OUHSC would likely receive **2 points**, as there are sustainability guidelines in place and efforts to enhance procurement sustainability.

#### 5.9. Are there sustainability requirements or guidelines for events hosted at the institution?

Every event hosted at the institution **must** abide by sustainability criteria. (2 points)

The institution **strongly recommends or incentivizes** sustainability measures, but they are **not required.** (1 point)

There are **no** sustainability guidelines for institution events. (0 points)

Score Assigned:

1

Score explanation: OUHSC encourages sustainable event practices by requesting planners to minimize single-use plastics and prioritize compostable or recyclable materials. Additionally, events are often hosted in **LEED-certified buildings** or venues with energy-efficient lighting and HVAC systems. However, these measures are recommendations rather than strict requirements.

Based on the scoring criteria, OUHSC would likely receive **1 point**, as sustainability measures are encouraged but not mandated for all events.

## 5.10. Does your <u>institution</u> have programs and initiatives to assist with making lab spaces more environmentally sustainable?

Yes, the institution has **programs** and **initiatives** to assist with making lab spaces more environmentally sustainable. (2 points)

There are **guidelines** on how to make lab spaces more environmentally sustainable, but not programs or initiatives. (1 point)

There are **no** efforts at the institution to make lab spaces more sustainable. (0 points)

Score Assigned:

2

Score explanation: OUHSC has implemented several initiatives to improve lab sustainability, including encouraging the use of **ENERGY STAR-certified** and high-efficiency equipment, promoting **fume hood energy reduction** through the "Shut the Sash" campaign, and supporting **waste reduction programs** like chemical-sharing and proper recycling of lab materials. These efforts demonstrate a commitment to making lab spaces more environmentally sustainable.

Based on the scoring criteria, OUHSC would receive **2 points**, as the institution has active programs and initiatives to improve lab sustainability.

#### 5.11. Does your <u>institution's</u> endowment portfolio investments include fossil-fuel companies?

The institution is **entirely divested** from fossil fuels **and** has made a **commitment to reinvest divested funds** into renewable energy companies or renewable energy campus initiatives. (4 points)

The institution is **entirely divested** from fossil fuels. (3 points)

The institution has **partially divested** from fossil fuel companies **or** has made a **commitment to fully divest**, but **currently** still has fossil fuel investments. (2 points)

The institution has **not divested** from fossil-fuel companies, but faculty and/or students are **conducting organised advocacy** for divestment. (1 point)

Yes, the institution has investments with fossil-fuel companies and there have been **no efforts** to change that. (0 points)

Score Assigned:

0

*Score explanation:* OUHSC operates essential infrastructure that relies on a central steam and chilled water plant to support hospitals, labs, and research facilities, making complete divestment from fossil fuels impractical. However, the institution prioritizes sustainability by investing in

energy-efficient equipment, participating in all available green energy options through OG&E, and implementing efficiency upgrades such as LED lighting retrofits, advanced building automation systems, and high-efficiency HVAC equipment. While OUHSC has not fully divested from fossil fuels, its energy strategy focuses on minimizing environmental impact and maximizing resource efficiency.

Based on the scoring criteria, OUHSC would receive **0 points**, as the institution has investments in fossil fuel companies and has not made efforts to divest.

Section Total (18 out of 32)	56.25%
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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%
В	60% - 79%
С	40% - 59%
D	20% - 39%
F	0% - 19%

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

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

Section	Raw Score %	Letter Grade
Planetary Health Curriculum (30%)	$(17/72) \times 100 = 23.61\%$	D-
Interdisciplinary Research (17.5%)	(8/17) x 100 = 47.06%	С
Community Outreach and Advocacy (17.5%)	(7/14) x 100 = 50.00%	С
Support for Student-led Planetary Health Initiatives (17.5%)	(8/15) x 100= 53.33%	С
Campus Sustainability (17.5%)	(18/32) x 100 = 56.25%	C+
Institutional Grade	(Ax0.3 + Bx0.175 + Cx0.175 + Dx0.175 + Ex0.175) = 43.25%	C-

## **Report Card Trends**

#### **Section Overview**

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

## Planetary Health Report Card Trends for the University of Oklahoma College of Medicine

