



Planetary Health Report Card **(Medicine): *Creighton University*** ***School of Medicine - Omaha Campus***

Creighton
UNIVERSITY

School of Medicine

2023-2024 Contributing Team:

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Summary of Findings

Overall	C+
<u>Curriculum</u>	C+
<ul style="list-style-type: none"> • Creighton SOM established a Planetary Health & Sustainability Horizontally Integrated Discipline in 2021. • Creighton SOM briefly covers the effects of climate change and health epidemiology in a few of the M1 and M2 system-based blocks. This could be covered in greater depth and extended to all blocks. • Recommendations: The SOM can improve this category by ensuring that planetary health topics are integrated into all core curriculum and extends to clerkship years. In addition, planetary health and sustainability topics may be discussed in lectures, electives, or case based learning. Indigenous values, plant-based diets, and sustainability in clinical practice are largely absent in the curriculum. 	
<u>Interdisciplinary Research</u>	B+
<ul style="list-style-type: none"> • The SOM has connections to interdisciplinary planetary health research through Creighton's Masters of Public Health. However, it is not clear how many faculty members research planetary health issues and students' knowledge of this potential collaboration is limited. • Creighton SOM is supportive, sponsors, and hosts the Global Health Conference Midwest, a key platform for PH education and research advancement. • Recommendation: With the Research Chair position in the SOM's Student Government this year, there is opportunity to establish a stronger relationship with faculty in the MPH program. This can be a collaboration between the Research Chair of the class and the faculty directors to foster a relationship to develop opportunities in planetary health research and healthcare sustainability research. 	
<u>Community Outreach and Advocacy</u>	C-
<ul style="list-style-type: none"> • Creighton University as an institution is actively involved in partnerships with the community for planetary health and sustainability. However, Creighton University School of Medicine is not involved in these partnerships or involved in student volunteering with organizations promoting planetary health. • Recommendations: Creighton University SOM should foster partnerships with community organizations that are involved in planetary health and sustainability. 	
<u>Support for Student-Led Initiatives</u>	B
<ul style="list-style-type: none"> • The SOM has a Planetary Health and Sustainability Task Force that actively promotes the creation of student-initiated PH projects. There are also avenues for funding through the institution and through the M1 Summer research program. However, there is no dedicated mentorship for those interested in PH, student options for sustainability initiatives are limited. • Recommendations: Create a list of PH interested mentors and can assist students in implementing sustainability initiatives within the SOM. 	
<u>Campus Sustainability</u>	D+
<ul style="list-style-type: none"> • Creighton SOM is making progress towards becoming a more sustainable campus, with increasing transportation options for students and working towards carbon neutrality. As an institution, initiatives are in place to improve campus sustainability in upcoming decades. • Recommendations: We recommend improving food, drink, and energy sustainability on the medical school campus in the coming years. Increasing advertising of and accessibility, through student bus passes, to public transportation can advance Creighton SOM's sustainability program. 	

Statement of Purpose

Planetary health is human health.

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

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

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

Definitions & Other Considerations

Definitions:

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

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

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

Other considerations:

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

Added to our resources in 2022, the Planetary Health Report Card [Literature Review by Metric](#) collates the evidence behind each of the metrics in the Planetary Health Report Card. It serves as a collection of references for further learning and a resource for those advocating for increased planetary health engagement at their institutions.

Planetary Health Curriculum

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

Curriculum: General

1.1. Did your <u>medical school</u> offer elective courses (student selected modules) to engage students in Education for Sustainable Healthcare or Planetary Health in the last year?	
3	Yes, the medical school has offered more than one elective whose primary focus is ESH/planetary health in the past year.
2	Yes, the medical school has offered one elective whose primary focus is ESH/planetary health in the past year.
1	The medical school does not have any electives whose primary focus is ESH/planetary health, but there are one or more electives that include a lecture on planetary health.
0	No, the medical school has not offered any electives on planetary health or electives that include ESH/planetary health topics in the past year.
<p><i>Score explanation:</i> Creighton University School of Medicine offers a 5-week Student Interest Selective titled “Intersections Between Food Security, Climate Change, and Public Health” to both M1 and M2s which covers the impact of climate change on food insecurity, the decreasing biodiversity of our planet, and the effects on agriculture. The course also addresses sustainable food practices that would aim to diminish the effects of the corporate food industry on the planet.</p> <p>Along with this course, CUSOM offers “Restorative Recreation” to both M1 and M2s. This elective goes over Laudato Si and how it relates to care for our common home and also explores the benefits of nature in relation to human health. While the main focus of the course is the effects of nature on mental and physical health which lies outside the primary scope of planetary health, the course does contain a lecture on advocacy and restorative practices to repair our ecosystems.</p>	

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?	
3	This topic was explored in depth by the core curriculum.
2	This topic was briefly covered in the core curriculum.
1	This topic was covered in elective coursework.

0	This topic was not covered.
<p><i>Score explanation:</i> Creighton University School of Medicine provides various lectures that explore this relationship.</p> <p>In a lecture called “Planetary Health: Existential Threats and Clinical Opportunities” multiple slides show the links between heat, climate change, and the effects that this has on human health, including emphasizing the interplay of heat on infectious disease, respiratory disease, heat stroke, mental health, and chronic diseases.</p> <p>Additionally, various Case Based Learning (CBL) activities provided students with knowledge on these topics. The M1s were given a CBL on severe burns which included information on climate change and wildfires. It included the learning objective “Describe the role of climate change in risk of wildfires and the health consequences of smoke exposure.” The M2s were provided a CBL on kidney stones with the learning objective “Understand how climate change affects kidney health, particularly the pathophysiology of and risk factors for rhabdomyolysis, kidney stones, and acute kidney injury (AKI) during heat waves.” The M2s were given another CBL on heat stroke and hypothermia which covered the relationship between extreme heat and health risks, but this was not directly connected to increased global temperatures due to climate change.</p>	

1.3. Does your <u>medical school</u> curriculum address the impacts of extreme weather events on individual health and/or on healthcare systems?	
3	This topic was explored in depth by the core curriculum.
2	This topic was briefly covered in the core curriculum.
1	This topic was covered in elective coursework.
0	This topic was not covered.
<p><i>Score explanation:</i> Creighton University has a lecture for M1s titled “Introduction to Planetary Health” which includes the effects of extreme weather on healthcare and the healthcare system. The effects of heat and wildfires were additionally covered in the M1 CBL on severe burns and the M2 CBL on hypothermia and heat stroke. For Creighton students in Omaha, more information or lectures could be provided on the health effects of hurricanes, earthquakes, or other natural disasters. Additionally, it would be beneficial to focus on health presentations following cold weather, and flooding exposures. It is imperative to integrate this metric into multiple lectures and CBLs to increase longitudinal learning. Additionally, we recommend addressing the impacts of extreme weather events on the healthcare system as a whole by emphasizing, for example, the cost of treating increased incidence of heat stroke or hypothermia as well as the cost of damages from storms and flooding.</p>	

1.4. Does your <u>medical school</u> curriculum address the impact of climate change on the changing patterns of infectious diseases?	
3	This topic was explored in depth by the core curriculum.
2	This topic was briefly covered in the core curriculum.
1	This topic was covered in elective coursework.

0	This topic was not covered.
<p><i>Score explanation:</i> An M2 CBL on infectious diarrhea contained the learning objective, “Understand the mechanisms by which climate change leads to increased risk of water-borne GI illnesses.” This topic was additionally briefly covered in multiple lectures throughout the Infectious Disease block including in a lecture about the increasing incidence of Chagas disease further North due to climate change and a CBL about Lyme Disease that discussed the living patterns of ticks in relationship to climate change. This was also generally discussed in relation to vector-borne diseases in a lecture titled “Infectious Disease with Multisystem Consequences.”</p>	

1.5. Does your <u>medical school</u> curriculum address the respiratory health effects of climate change and air pollution?	
3	This topic was explored in depth by the core curriculum.
2	This topic was briefly covered in the core curriculum.
1	This topic was covered in elective coursework.
0	This topic was not covered.
<p><i>Score explanation:</i> Through a CBL on Asthma and COPD, M2s learn about the various particles that change the atmosphere from climate change and their effects on respiratory health. The learning objective for this CBL is “Understand how climate change influences levels of ground-level ozone, fine particulate matter (PM2.5), coarse particulate matter (PM10), and aeroallergens, and how these affect respiratory diseases.” Additionally, this topic was briefly introduced in a Gold Track lecture on “Planetary Health: Existential Threats and Clinical Opportunities.”</p>	

1.6. Does your <u>medical school</u> curriculum address the cardiovascular health effects of climate change, including increased heat?	
3	This topic was explored in depth by the core curriculum.
2	This topic was briefly covered in the core curriculum.
1	This topic was covered in elective coursework.
0	This topic was not covered.
<p><i>Score explanation:</i> The M1 CBL on severe burns and the M2 CBLs on hypothermia and heat stroke address the effects of extreme heat and cold. While the Cardiology block itself does not directly address the effect of climate change on the organ system, these two CBLs discuss the increase in temperatures from climate change and relate that to the prevalence of cardiovascular health concerns. The M2 CBL specifically examines heat stroke, addressing the exacerbating effects on cardiovascular health caused by changes in the climate.</p>	

1.7. Does your <u>medical school</u> curriculum address the mental health and neuropsychological effects of environmental degradation and climate change?
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3	This topic was explored in depth by the core curriculum.
2	This topic was briefly covered in the core curriculum.
1	This topic was covered in elective coursework.
0	This topic was not covered.
<p><i>Score explanation:</i> This is covered extensively in the selective “Restorative Recreation.” This elective emphasizes the impacts of an “increasing disconnectedness to nature on human health” and focuses on how reestablishing a physical connection with earth through nature immersion can ameliorate these effects. Additionally a new M4 elective on planetary health and ecopsychology is being offered this year.</p> <p>We recommend that this topic is covered during the Brain and Behavior block through a new CBL or lecture or lectured on in greater detail during the Gold Track Planetary Health sessions.</p>	

1.8. Does your <u>medical school</u> curriculum address the relationships between health, individual patient food and water security, ecosystem health, and climate change?	
3	This topic was explored in depth by the core curriculum.
2	This topic was briefly covered in the core curriculum.
1	This topic was covered in elective coursework.
0	This topic was not covered.
<p><i>Score explanation:</i> This topic was covered briefly in a CBL given the first week of school to the M1s where students were asked to evaluate the physical environment and access to clean water and food as it relates to the social determinants of health. Further a new elective titled “Intersections between food security, climate change, and public health” is being offered to M1s and M2s.</p>	

1.9. Does your <u>medical school</u> curriculum address the outsized impact of climate change on marginalized populations such as those with low SES, women, communities of color, Indigenous communities, children, homeless populations, and older adults?	
3	This topic was explored in depth by the core curriculum.
2	This topic was briefly covered in the core curriculum.
1	This topic was covered in elective coursework.
0	This topic was not covered.
<p><i>Score explanation:</i> In the M1 Gold track lecture “Introduction to Planetary Health”, a video assigned as prework mentioned communities that are disproportionately impacted by climate change. During the lecture, students were given time in small groups to discuss how climate change impacts the health of vulnerable and marginalized groups. We recommend incorporation of this topic in other Gold Track lectures through case studies and examples that provide students with additional understanding of the</p>	

effects of climate change on these populations. This topic is addressed in more detail through the new elective titled “Intersections between food security, climate change, and public health” which is offered to M1s and M2s.

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

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

Score explanation: A lecture titled, “Planetary Health: Existential Threats and Clinical Opportunities,” addressed the disproportionate effects of pollution on lower-income countries. Creighton medical students have the opportunity to attend [medical mission trips](#) to locations such as the Dominican Republic. Through these experiences, the students learn and see firsthand how climate change affects the availability and effectiveness of health treatments. We recommend providing additional information on how different biomes both affect population health and are impacted by climate change.

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

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

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

Score explanation: In a lecture titled “Adverse Drug Reactions, Drug-Drug Interactions, Overdose & Toxicity”, the topic of industrial-related environmental toxins and their teratogenic effects is briefly mentioned. Further this topic is briefly discussed in the “Introduction to Planetary Health”. We recommend more incorporation of this material in the core curriculum and integration into the Reproductive block.

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

3	This topic was explored in depth by the core curriculum.
2	This topic was briefly covered in the core curriculum.

1	This topic was covered in elective coursework.
0	This topic was not covered.
<p><i>Score explanation:</i> This was covered in a Gold Track Lecture titled “Academic Service Learning” as well as Case Based Learning Cases in Year 1 and Year 2 in MSK, Respiratory, and Renal blocks. The lecturer emphasized that Omaha’s high caseload of children presenting with lead poisoning was and continues to be due to The American Smelting and Refining Company, Inc. In South Omaha, there are many active factories releasing carbon monoxide in the air. In a Case named “Dante’s Inferno,” the risk of wildfires from climate change were discussed in relation to populations they traditionally impact, health risks from wildfire/wildfire smoke, and the potential reinforcing feedback loop of climate change, wildfires, and health risks. These were taught under the learning objective “Describe the role of climate change in risk of wildfires and the health consequences of smoke exposure.” This topic was revisited in regards to respiratory diseases through the Respiratory Case Based Learning objective “Understand how climate change influences levels of ground-level ozone, fine particulate matter, coarse particulate matter, and aeroallergens, and how these affect respiratory diseases.” Air pollution and climate change was examined once again in the Renal Case Based Learning objective “Understand how climate change affects kidney health, particularly the pathophysiology of and risk factors for rhabdomyolysis, kidney stones, and acute kidney injury (AKI) during heat waves.” Compared to last year, Creighton SOM has encouraged students to learn about air pollution in Omaha, as well as its effects on its population, and has thoroughly incorporated this information regarding air quality into the curriculum.</p>	

1.13. To what extent does your <u>medical school</u> emphasize the importance of Indigenous knowledge and value systems as essential components of planetary health solutions?	
3	Indigenous knowledge and value systems are integrated throughout the medical school’s planetary health education
2	Indigenous knowledge and value systems as essential components of planetary health solutions are included briefly in the core curriculum.
1	Indigenous knowledge and value systems as essential components of planetary health solutions are included in elective coursework.
0	This topic was not covered.
<i>Score explanation:</i> Creighton SOM does not cover this topic.	

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

Score explanation: A lecture titled “Academic Service Learning” covered the effects of lead and other toxic chemicals historically released by The American Smelting and Refining Company, Inc and how this remains a justice issue that disproportionately affects children, immigrants, communities of color, and those with low SES based on proximity to where the factories operated. Another lecture, “Planetary Health: Existential Threats and Clinical Opportunities,” addressed the disproportionate effects of pollution on lower-income countries. In the MSK Case Based Learning session on "Dante's Inferno," the focus was on exploring human-induced wildfires and those exacerbated by climate change. These were analyzed in terms of their impact on vulnerable populations, such as pregnant women, who face heightened risks of preterm birth and low birth weight. Additionally, the wildfires were seen to disproportionately affect low-income communities. This question was addressed in two Gold Track Lectures and briefly in a MSK Case Based Learning and we could continue to incorporate this topic in greater depth across the various curricular tracks.

Curriculum: Sustainability

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

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

Score explanation: In the lecture “Nutrition for Medical Students,” the presenter highlighted the benefit of a plant-based diet on the human body. However, they did not relate the plant-based diet with environmental benefits.

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

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

Score explanation: A particular Gold Track lecture discussed waste generated by hospitals and the idea of the circular economy. It emphasized the goals of preservation of natural capital and optimization of resources through reuse and recycling. It also touched on ensuring effective design of the health system in order to limit pollution, greenhouse gas emissions, and toxic materials. Additionally, another lecture entitled “Sustainability in Laboratory Practice” was given to the SOM graduate IDC601 cohort, but this is focused on ways to reduce energy consumption and materials in a research lab without emphasis on how to do this in a hospital or clinic setting.

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)	
2	The health and environmental co-benefits of avoiding over-medicalisation, over-investigation and/or over-treatment
2	The environmental impact of pharmaceuticals and over-prescribing as a cause of climate health harm. Alternatively teaching on deprescribing where possible and its environmental and health co-benefits would fulfill this metric.
1	The health and environmental co-benefits of non-pharmaceutical management of conditions where appropriate such as exercise or yoga classes for type 2 diabetes; social group activities such as gardening for mental health conditions; active transport such as bicycle schemes. This is commonly known as social prescribing in the UK.
1	Environmental impact of surgical healthcare on planetary health and the climate crisis, and how can it be mitigated
1	The impact of anaesthetic gases on the healthcare carbon footprint and ways to reduce anesthesia environmental impacts, such as total intravenous anaesthesia or choosing less environmentally harmful anaesthetic gas options with reduced greenhouse gas emissions
1	The impact of inhalers on the healthcare carbon footprint and the environmental benefit of dry powdered inhalers over metered dose inhalers.
1	Waste production within healthcare clinics and strategies for reducing waste in clinical activities (e.g. single use items in the inpatient or outpatient setting)
<p><i>Score explanation:</i> Creighton curriculum does not cover these aspects. While a Gold Track lecture, from the Social Context of Care curriculum track, emphasized the amount of waste that the healthcare system creates, few resources or strategies are given to mitigate this waste production. Creighton SOM curriculum does not address the pharmaceutical effect on climate change nor give avenues to mitigate this. While social prescribing is vital to our knowledge base as physicians, Creighton does not emphasize this in lecture, and it is not evident in students' experiences on clinic rotations.</p>	

Curriculum: Clinical Applications

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

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

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

Score explanation: During Pulmonology, we are given tools to take a thorough occupational and household exposure social history and how this relates to increased risk for certain diseases – for example, how asbestos and silicone can impair alveolar macrophage function. We are also taught to take a detailed social history during our Clinical Skills Experiences, including occupational history, smoking, and recent traveling history. We recommend expanding these lessons to include exposures to air pollution and vector-borne diseases.

Curriculum: Administrative Support for Planetary Health

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

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

Score explanation: Creighton University School of Medicine has a task force composed of faculty/staff as well as a subset of students whose primary focus is on integrating Education for Sustainable Healthcare/planetary health education into the curriculum. Students have continued to add planetary health content in CBLs/TBLs for M1s and M2s, and by the end of this academic year there will be 6 Cases for Case Based Learning that will incorporate planetary health learning objectives. Faculty/staff along with the [Kingfisher Institute](#) are working on inviting speakers who have done notable work in ESH/planetary health to speak during Grand Rounds. Students compiled a list of potential speakers and sent it to the Kingfisher Institute for review. Efforts into creating planetary health electives for M4s have succeeded with the new Planetary Health/Ecopsychology elective as well as the upcoming Climate Justice for Clinicians elective. Instructors are expressing interest and willingness to incorporate these topics and the initiative to make these changes are apparent. Outreach to clinical affiliates involved in topics such as waste reduction, surgical sustainability, and heat related injuries are being explored. While these improvements have been gradual, there have been many changes over the past year and noticeable interest from the school outside of the task force in addressing planetary health in the curriculum.

1.21. How well are the aforementioned planetary health/Education for Sustainable Healthcare

topics integrated longitudinally into the <u>core</u> curriculum?	
6	Planetary health/ESH topics are well integrated into the core medical school curriculum.
4	Some planetary health/ESH topics are appropriately integrated into the core medical student curriculum.
2	Planetary health/ESH is not integrated and is primarily addressed in (a) standalone lecture(s) .
0	There is minimal/no education for sustainable healthcare.
<p><i>Score explanation:</i> At Creighton SOM, Planetary Health receives attention during the first and second years through standalone lectures as part of the Humanities track and through several cases in our Case Based Learnings seen during our M1 and M2 years. However, its incorporation directly into the organ system blocks outside of these cases is currently minimal. Enhancing Planetary Health Education could involve lectures that take time to highlight the impact of environmental factors on each organ system, thereby fostering a more comprehensive understanding of the interplay between human health and the environment.</p>	

1.22. Does your <u>medical school</u> 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.
<p><i>Score explanation:</i> The SOM's Planetary Health and Sustainability Task Force is responsible for curricular integration of planetary health and sustainable healthcare.</p>	

Section Total (43 out of 72)	59.72%
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Are there additional curriculum resources offered at your medical school or institution not yet asked about that you would like to describe? If so, please do so below.

Interdisciplinary Research

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

2.1. Are there researchers engaged in planetary health research and healthcare sustainability research at your <u>medical school</u>?	
3	Yes, there are faculty members at the medical school who have a primary research focus in planetary health or healthcare sustainability.
2	Yes, there are individual faculty members at the medical school who are conducting research related to planetary health or healthcare sustainability, but it is not their primary research focus.
1	There are planetary health and/or healthcare sustainability researchers at the institution , but none associated with the medical school.
0	No, there are no planetary health and/or healthcare sustainability researchers at the institution or medical school at this time.
<p><i>Score explanation:</i> Creighton’s Master’s of Public Health program moved to the School of Medicine in January of 2022. There is at least one faculty member for the MPH program who researches environmental health, specifically climate and natural disasters and their ecological impact on human health. Additional sustainability and health research takes place across the university. However, there are no research efforts dedicated specifically to Planetary Health or healthcare sustainability among MD faculty. We recommend that the SOM identifies faculty who are willing to conduct and/or mentor MD students in Planetary Health research.</p>	

2.2. Is there a dedicated department or institute for interdisciplinary planetary health research at your <u>institution</u>?	
3	There is at least one dedicated department or institute for interdisciplinary planetary health research.
2	There is not currently a department or institute for interdisciplinary planetary health research, but there are plans to open one in the next 3 years.
1	There is an Occupational and Environmental Health department , but no interdisciplinary department or institute for planetary health research.
0	There is no dedicated department or institute.
<p><i>Score explanation:</i> The Masters of Public Health program within the Creighton School of Medicine offers opportunities to work with a faculty member who researches environmental health. However,</p>	

there is no established organization that streamlines students' access to interdisciplinary planetary health research.

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

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

Score explanation: Current efforts in the School of Medicine to develop a new [strategic plan](#) include discussions about promoting health equity in the community through engagement, advocacy, research, and environmental sustainability.

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

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

Score explanation: Creighton University has a [sustainability webpage](#) that centralizes campus sustainability efforts, including the Sustainable Creighton Initiative, a pledge to follow the doctrines laid out in "Our Common Future," grant opportunities for students, volunteer engagement opportunities for students, and undergraduate academic programs. The webpage includes upcoming events, relevant funding and scholarship opportunities, and leaders in planetary health at the institution, including the new addition of a project and reporting coordinator.

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

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

Score explanation: Creighton has not hosted any conferences or symposiums strictly dedicated to planetary health. However, Creighton’s annual [Global Health Conference Midwest](#) includes speakers focused on planetary health. In 2024, the conference included keynote presentations on “Planetary Health- Health in the Anthropocene” and “Hostile Environments: The complicated relationship between Planetary Health and Conflict.” There were breakout speakers on “Environmental Health Consequences in Rural Dominican Republic: A Student Perspective” and “Leading future research & advocacy – health impacts of climate change on vulnerable populations.” The conference is hosted in partnership by multiple schools within the University, including the School of Medicine.

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

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

Score explanation: In the fall of 2021, Creighton School of Medicine joined the [Global Consortium on Climate and Health Education](#). We recommend Creighton SOM meaningfully engage in the work of this and other climate-health organizations.

Section Total (13 out of 17)	76.47%
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Are there additional research resources offered at your medical school or institution not yet asked about that you would like to describe? If so, please do so below.

Community Outreach and Advocacy

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

3.1. Does your medical school partner with community organizations to promote planetary and environmental health?	
3	Yes, the medical school meaningfully partners with multiple community organizations to promote planetary and environmental health.
2	Yes, the medical school meaningfully partners with one community organization to promote planetary and environmental health.
1	The institution partners with community organizations, but the medical school is not part of that partnership.
0	No, there is no such meaningful community partnership.
<p><i>Score explanation:</i> As an institution, Creighton University maintains meaningful partnerships with community organizations to promote planetary and environmental health through the Office of Sustainability. This webpage lists Creighton’s sustainability focused community partnerships, such as through the Schlegel Center for Service and Justice. The Schlegel Center for Service and Justice, along with community partners, allowed students to focus on sustainability through presentations, a site visit, and interactions with people in that community.</p> <p>While Creighton as an institution partners with community organizations, the School of Medicine is not integrated into these partnerships. In addition, while students within the School of Medicine volunteer with community organizations that contain a focus on sustainability, it is not facilitated by the School of Medicine.</p> <p>It is recommended that the School of Medicine promote and integrate into the already developed community partnerships with the Creighton institution.</p>	

3.2. Does your medical school offer community-facing courses or events regarding planetary health?	
3	The medical school offers community-facing courses or events at least once every year.
2	The medical school offers courses or events open to the community at least once per year, but they are not primarily created for a community audience.

1	The institution has offered community-facing courses or events, but the medical school was not involved in planning those courses or events.
0	The institution/medical school have not offered such community-facing courses or events.
<p><i>Score explanation:</i> Creighton University School of Medicine is deeply involved with the Global Health Conference Midwest. This conference features multiple lectures related to planetary health and is open to the community for a fee of \$15-\$40 on campus at CUSOM or through the online platform, Zoom, for no fee. In addition, two lectures, one titled “Do No Harm: Climate Change, Healthcare, and Net-Zero Emissions” on August 31, 2023 and “Heat, Air Quality, and Human Health: Global Challenges, Local Solutions” May 2nd, 2023 both offered community facing education regarding planetary health.</p>	

3.3. Does your <u>medical school</u> have regular coverage of issues related to planetary health and/or sustainable healthcare in university update communications?	
2	Yes, all students regularly receive communication updates dedicated to planetary health and/or sustainable healthcare.
1	Yes, planetary health and/or sustainable healthcare topics are sometimes included in communication updates.
0	Students do not receive communications about planetary health or sustainable healthcare.
<p><i>Score explanation:</i> The School of Medicine at the Omaha campus does not provide regular coverage of sustainable healthcare initiatives in university update communications. University-wide emails have increased updates on sustainability initiatives since last year, and the emails provide information about regularly scheduled sustainability events on campus. However, these updates often do not address sustainable healthcare. Students may opt in to receive emails from the Office of Sustainability, however these emails infrequently discuss specific sustainable healthcare initiatives. We recommend that the School of Medicine sends biannual or quarterly updates on sustainability efforts and that students be invited to join the Office of Sustainability listserv each August in addition to learning about our Planetary Health Task Force.</p>	

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?	
2	Yes, the institution or main affiliated hospital trust offers multiple in-person or online courses relating to planetary health and/or sustainable healthcare for post-graduate providers, including at least one with a primary focus of planetary health.
1	Yes, the institution or main affiliated hospital trust offers one course relating to planetary health and/or sustainable healthcare for post-graduate providers
0	There are no such accessible courses for post-graduate providers
<p><i>Score explanation:</i> CME credit is available for participants of the Global Health Conference Midwest. This conference is co-hosted by the School of Medicine and features lectures that relate to planetary health.</p>	

3.5. Does your <u>medical school</u> or its <u>affiliated teaching hospitals</u> have accessible educational materials for patients about environmental health exposures?	
2	Yes, the medical school or all affiliated hospitals have accessible educational materials for patients.
1	Some affiliated hospitals have accessible educational materials for patients.
0	No affiliated medical centres have accessible educational materials for patients.
<p><i>Score explanation:</i> Educational materials regarding environmental health exposures are not available at the majority of hospitals that are affiliated with the School of Medicine. One clinical site, Children’s Nebraska, offers physical copies of educational materials describing environmental health exposures. The Task Force recommends increasing accessibility of educational materials through posting in patient areas at CHI clinical sites, as well as making distributable materials available at clinical sites and online.</p>	

3.6. Does your <u>medical school</u> or its <u>affiliated teaching hospitals</u> have accessible educational materials for patients about the health impacts of climate change?	
2	Yes, the medical school or all affiliated hospitals have accessible educational materials for patients.
1	Some affiliated hospitals have accessible educational materials for patients.
0	No affiliated hospitals have accessible educational materials for patients.
<p><i>Score explanation:</i> The School of Medicine and its affiliated teaching hospitals do not have easily accessible educational materials for patients regarding the health impacts of climate change, both at CHI clinical sites and online. The Task Force recommends making materials regarding climate change and its health impacts available for patient review on-site, as well as online.</p>	

Section Total (6 out of 14)	42.86%
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Back to Summary Page [here](#)

Are there additional community engagement and advocacy resources offered at your medical school or institution not yet asked about that you would like to describe? If so, please do so below.

Support for Student-Led Planetary Health Initiatives

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

4.1. 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 medical school or institution <i>either</i> offers grants for students to enact sustainability initiatives/QI projects <i>or</i> sustainability QI projects are part of the core curriculum.
1	The medical school or institution encourages sustainability QI projects (to fulfill clerkship or longitudinal requirements) and offers resources to help students succeed in these projects, but there is no student funding available and there is no requirement to participate.
0	No, neither the medical school or the institution offer opportunities or support for sustainability initiatives or QI projects.

Score explanation: In the Autumn of 2021, Creighton University established the Office of Sustainability, heralding a new era in sustainability endeavors. This initiative has given rise to the [Creighton Student Sustainability Action Fund \(CSSAF\)](#), which extends grants to all university students, including those in the medical school, aspiring to undertake sustainability initiatives and quality improvement projects. The overarching mission of CSSAF is to foster a culture of sustainability at Creighton University by empowering, nurturing, and financially backing student-led initiatives that collectively address environmental, social, and economic challenges in an integrated manner.

The School of Medicine (SOM) has an [M1 Summer Research Program](#), offering funding for a diverse range of student projects, including those focused on quality improvement (QI) initiatives. Students are encouraged to propose projects of their own and seek out mentors in their fields or interests. Furthermore, SOM annually provides a roster of research mentors within specific fields, fostering collaboration between students and mentors in the inception and execution of various research projects, many of which are geared towards achieving QI objectives.

4.2. Does your <u>institution</u> offer opportunities for medical students to do research related to planetary health and/or sustainable healthcare?	
2	The institution has a specific research program or fellowship for students interested in doing planetary health/sustainable healthcare research.
1	There are research opportunities for students to perform research related to planetary health/sustainable healthcare, but these require student initiative to seek these out and carry them out in their spare time.

0	There are no opportunities for students to engage in planetary health/sustainable healthcare research.
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Score explanation: There is no specific research program or fellowship tailored for students interested in planetary health or sustainable healthcare research. However, the School of Medicine has an [MI Summer Research Program](#) that allocates funding for student-led projects. Students are encouraged to propose projects of their own design and reach out to mentors independently for guidance. Our database of research mentors do not feature those specializing in Planetary Health, and instead mentors are categorized by medical specialty or field of expertise. Despite this, mentors actively support students in pursuing sustainability-focused Quality Improvement (QI) initiatives and research within their respective fields. Additionally, mentors provide opportunities for students to collaborate on research projects aimed at enhancing sustainable healthcare practices within their respective medical specialties.

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

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

Score explanation: The School of Medicine website does not have a dedicated section/webpage providing information on planetary health and sustainable healthcare projects or mentors.

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

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

Score explanation: The SOM created a Planetary Health and Sustainability Task Force (TF) and a student branch was established in 2021. This branch welcomes student contributions to the task force's objectives, empowering them to engage in projects centered around planetary health and healthcare sustainability. Moreover, the student branch is tasked with updating the Planetary Health Report Card,

enabling students to evaluate areas that require improvement. While officially recognized within the SOM, the student branch is not formally registered in the institution as a student organization student group and does not currently receive funding.

There are other student organizations within the School of Medicine that include initiatives related to climate justice and environmental related health outcomes, including Justice in Medicine and the Medical Innovation, Collaboration, and Entrepreneurship (MICE) club. While these initiatives are not explicitly stated in the mission statements of these groups, they have all incorporated these topics into their foundation.

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

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

Score explanation: Three medical students represent the School of Medicine on the university-wide [Climate Change Task Force](#) (CCTF) as mentioned in the catalog. The CCTF was created in November 2019 with the mission focused on various initiatives related to sustainability, such as reducing carbon footprint, promoting environmental stewardship, and mitigating the impacts of climate change within the university community based on the Sustainability Tracking Assessment and Rating system (STARS). Creighton was recently awarded a silver STARS rating in November of 2023.

4.6. In the past year, has the institution had one or more co-curricular planetary health programs or initiatives in the following categories? (1 point each)

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

Score explanation:

- Creighton University partners with various organizations in the community that focus on sustainability efforts through the [Schlegel Center for Service and Justice](#). Students can volunteer and gain experience with organizations including [City Sprouts Omaha](#), Holy Family Community Center – Churchyard Community Garden, and No More Empty Pots.
- The institution hosts speaker events related to planetary health with students as an intended audience. Examples include “Do No Harm: Climate Change, Health Care and Net Zero Emissions” and “Health Professional Action in the Climate Crisis”.
- The [Mayan Community Health Collaborative](#) organizes talks on ancient Mayan methods of environmentally-friendly agriculture.
- The Wilderness Medicine Interest Group and Student Government Wellness Chairs organize hikes for students.
- Students have the option to enroll in a selective class called Restorative Recreation, emphasizing the importance of outdoor activity.

Section Total (10 out of 15)

66.67%

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Are there additional student-led initiative resources offered at your medical school or institution not yet asked about that you would like to describe? If so, please do so below.

Campus Sustainability

Section Overview: *This section evaluates the support and engagement in sustainability initiatives by the medical school and/or institution. The healthcare industry is a major contributor to greenhouse gas emissions as well as pollution that harms local, regional, and global ecosystems. While healthcare is, by nature, a resource-intensive endeavor, the healthcare sector is well poised to lead the world to a more sustainable future. This will involve scrutinizing every aspect of how our systems operate, from where we source our energy, to how we build our infrastructure, to what companies we invest in. Our medical schools, clinics, and hospitals must set the standard for sustainable practices, and show other sectors what is possible when it comes to minimizing environmental impact.*

5.1. Does your <u>medical school</u> and/or <u>institution</u> have an Office of Sustainability?	
3	Yes, there is an Office of Sustainability with multiple full-time staff dedicated to campus sustainability. If the Office of Sustainability serves the entire campus, there is at least one designated staff member for sustainability at the hospital and/or medical school.
2	There is an Office of Sustainability with one or more full-time staff dedicated to campus sustainability, but no specific staff member in charge of medical school and/or hospital sustainability.
1	There are no salaried sustainability staff , but there is a sustainability task force or committee
0	There are no staff members or task force responsible for overseeing campus sustainability
<p><i>Score explanation:</i> Creighton University does have Office of Sustainability programs that support sustainability initiatives in Omaha. The office includes three full time staff members, as well as some student staff that helps implement sustainable living and sustainable practices across the Creighton campus. Creighton University School of Medicine does not have its own sustainability team of faculty. We recommend hiring additional full time staff to address the specific sustainability needs of the medical school.</p>	

5.2. How ambitious is your <u>institution/medical school</u> plan to reduce its own carbon footprint?	
5	The institution/medical school has a written and approved plan to achieve carbon neutrality by 2030
3	The institution/medical school has a written and approved plan to achieve carbon neutrality by 2040
1	The institution/medical school has a stated goal of carbon neutrality by 2040 but has not created a plan to reach that goal or the plan is inadequate
0	The institution/medical school does not meet any of the requirements listed above
<p><i>Score explanation:</i> In the Sustainable Creighton Initiative, Creighton addresses goals to reduce its carbon footprint. Its current goal is to reduce scope 1 and 2 greenhouse gas emissions by 50% by 2028, on its way to reaching carbon neutrality by 2050. This timeline does not meet the criteria outlined</p>	

above. We recommend revision of the initiative's goals and timeline to reach carbon neutrality earlier than 2040.

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

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

Score explanation: 78kW solar electric array is available on the CUSOM main building. This panel accounts for 1% of the CUSOM main building and Criss Complex combined electrical usage, and 5% of Werner usage, alone. Werner and Criss Complex account for 25% of full campus consumption. CUSOM does not notably rely on renewable energy sources for power. As a university, there are increasing efforts, in partnership with Omaha Public Power District, to utilize solar and wind arrays as energy sources for the institution.

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

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

Score explanation: While existing buildings are planned to be used efficiently and promoted for renovation, there is only [evidence of a couple existing campus buildings undergoing renovation](#). We recommend that Creighton University continue this process of renovation to meet the criteria of the majority of old buildings being renovated in a sustainable manner.

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

2	Yes, the medical school or institution has implemented strategies to encourage and provide environmentally-friendly transportation options such as safe active transport, public transport,
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	or carpooling and these options are well-utilized by students. Alternatively, the campus location is not amenable to unsustainable forms of transportation by default.
1	The medical school or institution has implemented some strategies to provide environmentally-friendly transportation options, but the options are unsatisfactorily accessible or advertised.
0	The medical school or institution has not implemented strategies to encourage and provide environmentally-friendly transportation options.
<p><i>Score explanation:</i> CUSOM does offer some strategies for sustainable transportation. CUSOM provides students with bike racks, and the medical school is accessible by local bus routes for students who do not live within walking distance of the school. Shuttles are available from parking lots to campus for students who drive to campus. However, for access to clinical sites and the hospital system, most students will need to commute by car. We recommend providing students with student bus passes, to increase utilization of public transport, as well as increase accessibility to transportation and carpooling options for students.</p>	

5.6. 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 both compost and recycling programs accessible to students and faculty.
1	The medical school has either recycling or compost programs accessible to students and faculty, but not both.
0	There is no compost or recycling program at the medical school.
<p><i>Score explanation:</i> Single stream recycling for plastic, aluminum, and paper is available in the Werner Center for Health Sciences Education, the education building for CUSOM. There are also conveniently located recycling drop-of bins on campus for both glass and paper. There is no compost program available at the medical school, though there is one on Creighton's larger undergraduate campus. We encourage Creighton to expand this program to the Werner Center.</p>	

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

Score explanation: There is no evidence of sustainability guidelines for food and beverages on campus. Because there are no medical school-associated cafeterias, food for most medical school activities is procured through university affiliated caterer Flavours by Sodexo. Sodexo offers a sustainable catering menu using products that are local and pesticide, hormone, and antibiotic free. We recommend that the medical school takes advantage of this option.

5.8. Does the medical school or institution apply sustainability criteria when making decisions about supply procurement?

3	Yes, the medical school has adequate sustainability requirements for supply procurement and is engaged in efforts to increase sustainability of procurement.
2	There are sustainability guidelines for supply procurement, but they are insufficient or optional . The medical school is engaged in efforts to increase sustainability of procurement.
1	There are sustainability guidelines for supply procurement, but they are insufficient or optional . The medical school is not engaged in efforts to increase sustainability of procurement.
0	There are no sustainability guidelines for supply procurement.

Score explanation: Creighton does have [sustainability procurement guidelines](#) which have not been updated since 2009. While the university requires that “products and packaging materials contain a prescribed minimum post-consumer recycled content and be minimized and/or substituted with more environmentally appropriate alternatives whenever possible,” sustainable options are chosen only when “quality, function and cost are equal or superior” or when deemed practical. The University has also published a [study on green purchasing](#) during the academic year of 2014-2015, in conjunction with the U.S. Environmental Protection Agency (EPA) and UNO’s Nebraska Business Development Center which outlines data on current sustainable purchasing and makes recommendations. We encourage the University to utilize these recommendations to strengthen policy on purchasing.

5.9. Are there sustainability requirements or guidelines for events hosted at the medical school?

2	Every event hosted at the medical school must abide by sustainability criteria.
1	The medical school strongly recommends or incentivizes sustainability measures, but they are not required .
0	There are no sustainability guidelines for medical school events.

Score explanation: There are sustainability guidelines, but not requirements, for medical school events. We recommend that the student government implement requirements, specifically for waste reduction.

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

2	Yes, the medical school has programs and initiatives to assist with making lab spaces more environmentally sustainable.
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1	There are guidelines on how to make lab spaces more environmentally sustainable, but not programs or initiatives.
0	There are no efforts at the medical school to make lab spaces more sustainable.
<p><i>Score explanation:</i> Creighton has a School of Medicine Planetary Health Task Force with a sub-committee focused on making lab spaces more sustainable. The subcommittee is a relatively new entity and although there are no current guidelines, there are efforts to create energy saving initiatives and ways to reduce lab waste through shared purchasing and sharing of materials. Additionally, Creighton has a preferred vendor (Fisher Scientific) for all lab supply procurement. Creighton’s online purchasing system (CUBuyPlus) identifies when an item/brand within the Fisher Scientific catalog is a “Trusted Sustainability Partner.” We recommend continued efforts to buy sustainably and publishable guidelines for all campus labs, specifically on water conservation, energy efficiency, and reducing lab waste.</p>	

5.11. Does your <u>institution’s</u> endowment portfolio investments include fossil-fuel companies?	
4	The institution is entirely divested from fossil fuels and has made a commitment to reinvest divested funds into renewable energy companies or renewable energy campus initiatives.
3	The institution is entirely divested from fossil fuels.
2	The institution has partially divested from fossil fuel companies or has made a commitment to fully divest , but currently still has fossil fuel investments.
1	The institution has not divested from fossil-fuel companies, but faculty and/or students are conducting organized advocacy for divestment.
0	Yes, the institution has investments with fossil-fuel companies and there have been no efforts to change that.
<p><i>Score explanation:</i> In a message to campus December 31, 2020, President Hendrickson announced that Creighton has committed to “withdraw from ownership of public securities of fossil fuel companies within the next five years, exit from its holdings in private fossil fuel investments within the next 10 years and seek investments that target a market rate of return in renewable energy and energy efficiency.” Because there have been no public updates on Creighton’s progress towards this goal in the three years since the initial statement was made, we recommend that Creighton publish an updated divestment goal with a more clearly defined timeline.</p>	

Section Total (12 out of 32)	37.5%
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Are there additional sustainability resources offered at your medical school or institution not yet asked about that you would like to describe? If so, please do so below.

Grading

Section Overview

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

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

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

Planetary Health Grades for the Creighton University School of Medicine

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

Section	Raw Score %	Letter Grade
Planetary Health Curriculum (30%)	$(43/72) \times 100 = 59.72\%$	C+
Interdisciplinary Research (17.5%)	$(13/17) \times 100 = 76.47\%$	B+
Community Outreach and Advocacy (17.5%)	$(6/14) \times 100 = 42.86\%$	C-
Support for Student-led Planetary Health Initiatives (17.5%)	$(10/15) \times 100 = 66.67\%$	B
Campus Sustainability (17.5%)	$(12/32) \times 100 = 37.5\%$	D+
Institutional Grade	57.03%	C+

Report Card Trends

Section Overview

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

