Planetary Health Report Card:

The University of Utah School of Medicine

2020-2021 Contributing Team:
- Students: Baley Kynaston, Roman Kovtun, Kade Loveridge, Chris Nielson, Anna Brandes
- Faculty Mentors: Dr. John Pearson, Dr. Smitha Warrier, Joan Gregory
- *Primary Contact: Anna Brandes, anna.brandes@hsc.utah.edu

Summary of Findings

Curriculum	C-

- Planetary health education is interspersed throughout the curriculum but for the most part, opportunities for learning about the intersection between climate change and health are limited to opt-in elective courses.
- Since accepting Climate Change as a societal problem in 2019, the curriculum committee is well-poised to incorporate lectures throughout the didactics years and beyond that focus on these issues.

Interdisciplinary Research	C-

- Researchers from the School of Medicine and the institution at-large have contributed significantly to planetary health research, especially in the realm of air quality and its impacts on human health.
- Due to the size of this institution and volume of research done here, the school would benefit from a stand alone department that fosters collaboration on planetary health research. A good first step toward this goal would be creating a planetary health database through the School of Medicine's website.

Community Outreach and Advocacy	D+

- Through the Global Change and Sustainability Center at The University of Utah, there are many opportunities and resources for community outreach and advocacy. The School of Medicine should use this support to develop educational and volunteer experiences that benefit the public's knowledge of and resiliency toward the effects of climate change on health.
- There have been a number of excellent planetary health outreach and advocacy events led by faculty and students at the University to foster conversations at our institution and in the broader community. We hope these events and related projects will continue to inspire further events and projects in this realm.

Support for Student-Led Initiatives	B-

- Overall, the administration at the School of Medicine is very supportive of student-led efforts surrounding planetary health. Due to the limited time students have in medical school, we hope to engage administration in longitudinal goals toward sustainability that will outlive our time at the institution.
- The administration could further support students in these efforts by offering grants for planetary health research, creating a sustainability advising board within administration that includes students, and inviting guest lecturers whose work focuses on the impacts of climate change and health to speak to students.

Sustainability	C

- While the university as a whole has taken great strides to make the campus more sustainable, the hospital system and medical school have been slower to implement similar changes.
- Supply procurement amendments, sustainable lab space initiatives and guidelines for reducing waste at school-sponsored events would be great places to start.

Statement of Purpose

Planetary health is human health.

The Planetary Health Alliance defines planetary health as “a field focused on characterizing the human health impacts of human-caused disruptions of Earth's natural systems.” 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 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.

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 change. Therefore, it is critical that medical students are trained to understand the health effects of climate change, as well as planetary health more broadly. Topics like the changing geography of vector-borne diseases, the health consequences of air pollution, environmental health inequities, and disaster response principles must be part of every medical school's core curriculum.*

Curriculum: General

1. Did your medical school offer elective courses 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.
Score explanation: The University of Utah School of Medicine offers one elective related to planetary health titled MDID 6004: Sustainability, Medicine & Health. The elective is offered through the RUUTE (Rural & Underserved Utah Training Experience) program and is taught by course director and pediatrician Lucy Hansen, MD.	

Curriculum: Health Effects of Climate Change

2. Does your medical school curriculum address the relationship between extreme temperature health risks and climate change, as well as the socioeconomic/racial disparities in extreme heat exposure?	
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: This topic was covered in the MDID 6500 Intro to Global Health course. It was included in the lecture Climate Change and Health given by Dr. Simon Brewer. This lecture covered how extreme temperatures increase mortality indirectly and directly. This topic was also covered in the MDID 6004 course.	

3. Does your medical school curriculum address the impacts of extreme weather events on individual health and/or on healthcare systems?	
3	This topic was explored in depth by the core curriculum.
2	This topic was briefly covered in the core curriculum.
1	**This topic was covered in elective coursework.**
0	This topic was not covered.
Score explanation: The University of Utah School of Medicine offers one elective related to planetary health titled MDID 6004: Sustainability, Medicine & Health. The elective is offered through the RUUTE (Rural & Underserved Utah Training Experience) program and is taught by course director and pediatrician Lucy Hansen, MD. The impacts of extreme weather events is discussed in the context of individual health and the healthcare system.	

4. Does your medical school 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.
Score explanation: The University of Utah School of Medicine offers one elective related to planetary health titled MDID 6004: Sustainability, Medicine & Health. The elective is offered through the RUUTE (Rural & Underserved Utah Training Experience) program and is taught by course director	

and pediatrician Lucy Hansen, MD. The impact of climate change on the changing patterns of infectious disease is covered in this course.

5. Does your medical school curriculum address the cardiorespiratory health effects of climate change, including 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.
Score explanation: During the second year course, Circulation Respiration and Regulation (CRR), Dr. Payne discusses the impacts of air quality, both locally and globally, on human health. He provides a brief introduction to the science of air pollution particles and monitoring and its impact on multiple organ systems and morbidity/mortality. History of this body of knowledge and relevant research was discussed as well.	

6. Does your medical school curriculum address the mental health and neuropsychological effects of environmental degradation and climate change?	
3	This topic was explored in depth by the core curriculum.
2	This topic was briefly covered in the core curriculum.
1	**This topic was covered in elective coursework.**
0	This topic was not covered.
Score explanation: The University of Utah School of Medicine offers one elective related to planetary health titled MDID 6004: Sustainability, Medicine & Health. The elective is offered through the RUUTE (Rural & Underserved Utah Training Experience) program and is taught by course director and pediatrician Lucy Hansen, MD. One of the modules within the course focuses on Green Buildings, Hospitals, and Healthcare Purchasing.	

7. Does your medical school curriculum address the relationships between health, individual patient food and water security, ecosystem health, and climate change?	
3	This topic was explored in depth by the core curriculum.
2	This topic was briefly covered in the core curriculum.
1	**This topic was covered in elective coursework.**

0	This topic was not covered.

Score explanation: The University of Utah School of Medicine offers one elective related to planetary health titled MDID 6004: Sustainability, Medicine & Health. The elective is offered through the RUUTE (Rural & Underserved Utah Training Experience) program and is taught by course director and pediatrician Lucy Hansen, MD. One of the modules in the course focuses on Food Justice.

8. Does your medical school curriculum address the outsized impact of climate change on marginalized populations such as those with low SES, women, communities of color, 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.

Score explanation: The University of Utah School of Medicine offers one elective related to planetary health titled MDID 6004: Sustainability, Medicine & Health. The elective is offered through the RUUTE (Rural & Underserved Utah Training Experience) program and is taught by course director and pediatrician Lucy Hansen, MD. Two of the modules within this course focus on Health Disparities Related to Sustainability and Homelessness and Environmental Justice.

9. Does your medical school curriculum address the unequal 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: This topic was covered in the MDID 6500 Intro to Global Health course. It was included in the lecture Climate Change and Health given by Dr. Simon Brewer. This lecture covered how climate change will exacerbate existing inequities in the access to health care and health outcomes in vulnerable communities.

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

10. 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: The University of Utah School of Medicine offers one elective related to planetary health titled MDID 6004: Sustainability, Medicine & Health. The elective is offered through the RUUTE (Rural & Underserved Utah Training Experience) program and is taught by course director and pediatrician Lucy Hansen, MD. The reproductive health effects of industry-related environmental toxins is covered in this course.	

11. Does your medical school curriculum address important human-caused environmental threats that are relevant to the university's surrounding community?	
3	This topic was explored in depth by the core curriculum.
2	**This topic was briefly covered in the core curriculum.**
1	This topic was covered in elective coursework.
0	This topic was not covered.
Score explanation: Medical school curriculum covers air pollution-in CRR (see metric 17 in this section), as well as in guest lectures and both the MDID 6004 and 6500 elective courses. Air quality is a significant issue in SLC, UT as the city's air quality is often some of the worst in the country and rates of asthma and allergen exposure are increasing.	

12. Does your medical school curriculum address the unique climate and environmental health challenges that have impacted and are impacting Indigenous communities?	
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: This topic was briefly covered in the MDID 6500 Intro to Global Health course. The expected compounding of existing health disparities are discussed including loss of traditional foods and practices, mental stress from permanent displacement and increased injuries from various climate related disasters.

13. Does your medical school curriculum address the outsized impact of anthropogenic environmental toxins on marginalized populations such as those with low SES, women, communities of color, children, homeless populations, and older adults?	
3	This topic was explored in depth by the core curriculum.
2	This topic was briefly covered in the core curriculum.
1	**This topic was covered in elective coursework.**
0	This topic was not covered.
Score explanation: The University of Utah School of Medicine offers one elective related to planetary health titled MDID 6004: Sustainability, Medicine & Health. The elective is offered through the RUUTE (Rural & Underserved Utah Training Experience) program and is taught by course director and pediatrician Lucy Hansen, MD. The outsized impact of anthropogenic environmental toxins on marginalized populations is covered in this course.	

Curriculum: Sustainability

14. Does your medical school curriculum address the environmental and health co-benefits of a plant-based diet?	
3	This topic was explored in depth by the core curriculum.
2	This topic was briefly covered in the core curriculum.
1	**This topic was covered in elective coursework.**
0	This topic was not covered.
Score explanation: The University of Utah School of Medicine offers one elective related to planetary health titled MDID 6004: Sustainability, Medicine & Health. The elective is offered through the RUUTE (Rural & Underserved Utah Training Experience) program and is taught by course director and pediatrician Lucy Hansen, MD. The environmental and health co-benefits of a plant-based diet are addressed in this course.	

15. Does your medical school curriculum highlight the waste generated by the healthcare system and identify ways to advocate for and implement sustainable best practices in health care?	
3	This topic was explored in depth by the core curriculum.
2	This topic was briefly covered in the core curriculum.
1	**This topic was covered in elective coursework.**
0	This topic was not covered.
Score explanation: The University of Utah School of Medicine offers one elective related to planetary health titled MDID 6004: Sustainability, Medicine & Health. The elective is offered through the RUUTE (Rural & Underserved Utah Training Experience) program and is taught by course director and pediatrician Lucy Hansen, MD. One of the modules within the course focuses on Green Buildings, Hospitals, and Healthcare Purchasing.	

Curriculum: Clinical Applications

16. In training for patient encounters, does your medical school's curriculum introduce strategies to have conversations with patients about the health effects of climate change?	
2	Yes, there are strategies introduced for having conversations with patients about climate change in the core curriculum.
1	Yes, there are strategies introduced for having conversations with patients about climate change in elective coursework.
0	**No, there are not strategies introduced for having conversations with patients about climate change**
Score explanation: The current medical school curriculum does not include any training or discussion on how to have conversations with patients about the health effects of climate change.	

17. 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 the second year course, Circulation Respiration and Regulation (CRR), relevant environmental exposures are reviewed and their significance to respiratory and cardiovascular disease is elucidated. This is further emphasized in the pulmonary unit of the Clinical Methods and Skills (CMC) course when students are taught to ask standardized patients about any potential environmental exposures that could affect pulmonary function.	

Curriculum: Administrative Support for Planetary Health

18. Is your medical school currently in the process of 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: Climate Change was accepted by the curriculum committee as a societal problem submitted to the LCME in 2019. There are currently efforts to expand climate health education into the general curriculum. While most of this is student-driven, there is interest and some initial steps from administration to implement more topics into the general longitudinal curriculum in the first two years.	

19. How well are the aforementioned planetary health/Education for Sustainable Healthcare topics integrated longitudinally into the core 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.
Score explanation: Currently these topics are only explored in stand alone lectures interspersed throughout didactics curriculum in the first two years. Significant information is provided in the MDID 6004 course, however this is currently just an elective course and is opt-in.	

20. Bonus: Does your medical school have a program that offers incentives for faculty/departments to develop new planetary health/ESH courses and/or incorporate planetary health/ESH into existing courses?	
1*	Yes, the medical school has an incentive program.
0	**No, the medical school does not have an incentive program.**
Score explanation: No incentives are currently offered, however The Global Change and Sustainability Center has offered support to the medical school in this regard.	

Section Total (x out of 58)	**24**

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.*

1. Are there researchers engaged in planetary health research and healthcare sustainability research at your medical school?	
4	Yes, there are faculty members at the School of Medicine who have a primary research focus in planetary health and healthcare sustainability.
3	Yes, there are faculty members at the School of Medicine who have a primary research focus in planetary health or healthcare sustainability.
2	**Yes, there are individual faculty members at the School of Medicine who are conducting research related to planetary health or healthcare sustainability, but it is not their primary research focus.**
1	There are planetary health and/or healthcare sustainability researchers at the institution, but none associated with the medical school.
0	No, there are no planetary health and/or healthcare sustainability researchers at the institution or medical school at this time.
Score explanation: There are a number of researchers at the University of Utah School of Medicine working on interdisciplinary projects related to Planetary Health. While there are no individuals whose primary research focus is planetary health, there are faculty members such as Dr. Robert Paine who have devoted a significant amount of time on topics such as air quality and respiratory disease. Air quality and air pollution are big research subjects at the institution and at least 49 School of Medicine researchers have written 33 articles on the topic in the past 5 years.	

2. Is there a dedicated department or institute for interdisciplinary planetary health research at your institution?	
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.
Score explanation: Global Change and Sustainability Center: The Global Change & Sustainability Center coordinates, promotes, and accelerates interdisciplinary research and training on natural and human-built systems, the dynamic interactions and interconnections that exist in those systems, and the role of humans in the environment. While this department exists, there is no open or working collaboration with the Health Sciences Campus. The school has an Environmental Health and Safety Department, however there is no institute specifically designed to support planetary health research.	

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: While we as students would love to see this happen, there is not currently any such process.	

4. Does your institution have a planetary health website, or a website centralizing various campus resources 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: While we as students would love to see this happen, there is not currently any such process.	

5. Has your institution recently hosted a conference or symposium on topics related to planetary health?	
4	**Yes, the institution has hosted more than one conference or symposium on topics related to planetary health in the past year, including at least one on climate change.**
3	Yes, the institution has hosted 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:

Eccles Health Sciences Library - Climate Changes Health and Health Equity Series:

- *LibGuide: https://campusguides.lib.utah.edu/CommunityReads/ClimateChangesHealth*
- *Series Recordings: https://library.med.utah.edu/publishing/collection/climate-changes-health-and-health-equity/*

Law School:

- *Wallace Stegner Center Symposium: https://law.utah.edu/projects/stegner-annual-symposium/ The Wallace Stegner Center annually holds a symposium during spring semester on an environmental or natural resources topic of regional, national, and international importance. The symposium is interdisciplinary in nature, and includes speakers from the sciences and social sciences, academia, government, industry, and the legal profession.*
- *Wallace Stegner Center Green Bag Events: https://law.utah.edu/events/category/highlighted-events/?tribe_paged=1&tribe_event_display=list&tribe-bar-date=2020-11-23&tribe-bar-search=green+bag*

Global Change and Sustainability Center

- *Global Change and Sustainability Center: https://environment.utah.edu/events/symposium/ Held every spring, the annual Environment and Sustainability Research Symposium celebrates interdisciplinary student research related to the environment and/or sustainability. The symposium provides a great opportunity for students from across campus to synthesize and present their research in a poster session in a friendly and fun atmosphere. Like other GCSC events, the Symposium helps to cultivate relationships across the U of U community, and can serve as a catalyst for new research ideas and collaborations. ONLY 2 HS students 2020 - COH*

The Air We Breathe: A Multidisciplinary Approach on Air Quality Symposium:

- *https://cleanair.utah.edu/ (October 2019) - from this symposium the Sustainability Education team developed a new online course that allows students to explore and integrate a variety of*

approaches to air quality. Students will learn about local initiatives through the lenses of geography, policy, and health, as well as explore air quality as an environmental justice issue. https://sustainability.utah.edu/air-quality-education/

6. Has your institution or medical school joined the Planetary Health Alliance and/or the Global Consortium on Climate and Health Education?	
2	Yes, the medical school has joined the Planetary Health Alliance and/or the Global Consortium on Climate and Health Education.
1	Yes, the institution has joined the Planetary Health Alliance and/or the Global Consortium on Climate and Health Education, but the medical school specifically has not.
0	**No, the institution has not joined the Planetary Health Alliance or the Global Consortium on Climate and Health Education.**
Score explanation: The school has an active Practice Greenhealth membership but has not yet joined either the Planetary Health Alliance or the Global Consortium on Climate and Health Education.	

Section Total (x out of 19)	**8**

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.*

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.
Score explanation: The institution partners with organizations such as the Utah Climate Action Network to advance sustainability outreach, however the medical school does not currently partner with any community organizations for this purpose. There are a number of organizations that the medical school would be well-poised to interface with, such as Utah Physicians for a Healthy Environment and HEAL Utah, among others.	

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 medical school has not offered such community-facing courses or events.

Score explanation: The library hosted an event titled Climate Changes Health and Health Equity- a community read/journal club discussion. This was very successful and was well-received by the community. Members of the medical school were involved as speakers of the event and attendees but the event was planned by the Eccles Health Sciences Library.

3. Does your medical school have regular coverage of issues related to planetary health and/or sustainable healthcare in university update communications?	
2	Yes, all students regularly receive communication updates dedicated to planetary health and/or sustainable healthcare.
1	Yes, planetary health and/or sustainable healthcare topics are sometimes included in communication updates.
0	**Students do not regularly receive communications about planetary health or sustainable healthcare.**
Score explanation: University update communications do not include regular coverage of these topics. There is an opt-in planetary health email group that provides updates about initiatives, research and outreach that is run by Joan Gregory, a librarian at the health sciences library on the medical campus and advocate to our Sustainability Club.	

4. Does the medical school offer continuing medical education (CME) courses that address planetary health and/or sustainable healthcare?	
2	Yes, multiple in-person or online CME courses relating to planetary health and/or sustainable healthcare are offered, including at least one with a primary focus of planetary health.
1	**Yes, one in-person or online CME course related to planetary health and/or sustainable healthcare is offered.**
0	There are no CME courses on planetary health or sustainable healthcare topics.
Score explanation: The event mentioned previously, Climate Changes Health and Health Equity offered CME credit. This was the only course related to planetary health/sustainable healthcare.	

5. Do hospitals affiliated with your medical school have accessible educational materials for patients about environmental health exposures?	
2	**Yes, all affiliated hospitals have accessible educational materials for patients.**
1	Some affiliated hospitals have accessible educational materials for patients.
0	No affiliated medical centers have accessible educational materials for patients.

Score explanation: The University Hospital published a podcast in it's patient-forward publication The Scope that discusses the health harms of air pollution.

6. Do hospitals affiliated with your medical school have accessible educational materials for patients about climate change and health impacts?	
2	Yes, all affiliated hospitals have accessible educational materials for patients.
1	Some affiliated hospitals have accessible educational materials for patients.
0	**No affiliated hospitals have accessible educational materials for patients.**
Score explanation: Currently the hospital does not have any pamphlets or educational materials that are accessible to patients in affiliated hospitals.	

Section Total (5 out of 14)	**5**

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.*

1. Does your institution offer support for medical students interested in enacting a sustainability initiative?	
2	**Yes, the institution offers grants available to medical students for students to enact sustainability initiatives.**
1	The medical school encourages sustainability QI projects (to fulfill clerkship or longitudinal requirements) and offers resources to help students succeed in these projects, but there is no student funding available.
0	No, the institution does not offer opportunities or support for sustainability initiatives.
Score explanation: The Global Change and Sustainability Center offers a program called the Sustainable Campus Initiative Fund. This is open to and has been used by medical students and offers grants up to $10,000.	

2. Does your institution offer opportunities for medical students to do research related to planetary health and/or sustainable healthcare?	
3*	The institution offers an explicit paid fellowship for medical students to do research related to planetary health and/or sustainable healthcare.
2	**The institution offers paid research opportunities for students and planetary health/sustainable healthcare projects would be considered eligible.**
1	There are unfunded research opportunities for students to perform research related to planetary health/sustainable healthcare.
0	There are no opportunities for students to receive funding for planetary health/sustainable healthcare research.
Score explanation: The medical school offers a program every summer called the Medical Student Research Program. This program offers a stipend of up to $1800 for students to engage in research approved by the program. Planetary health projects would be considered eligible as long as they relate to (heart, lung or blood) or (diabetes, metabolism or digestive or kidney diseases).	

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 web page 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: While there is a sub-page on the health science libraries' website, no such webpage exists on the School of Medicine website.	

4. Does your medical school have funded, 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 funded 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 and/or funding.
0	No, there is not a student organization at my institution dedicated to planetary health or sustainability in healthcare.
Score explanation: The Sustainability Club is a funded group run by medical students that has multiple mentors in the School of Medicine and at the Eccles Health Sciences Library.	

5. Is there a student liaison representing sustainability interests who serves on a medical school or institutional decision-making council to advocate for sustainability best practices?	
1	Yes, there is a student representative that serves on a medical school or institutional decision-making council.
0	**No, there is no such student representative.**
Score explanation: While the club has been consulted on sustainability goals for the new School of Medicine building, no such representative serves on an institutional decision-making council.	

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) that follow Leave No Trace principles.**
Score explanation: *The institution has community gardens (including one at the medical school), farm apprenticeships, fishery programs and urban agriculture projects.* *There have been several planetary health-related speaker series offered to students.* *The University of Utah's Outdoor Adventures program follows LNT principles.*	

Section Total (x out of 15)	**9**

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.*

1. Does your medical school and/or institution 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
Score explanation: The University of Utah has a Global Change and Sustainability Center that serves the institution as a whole. There is currently no specific staff member dedicated to the medical school and/or hospital sustainability however the center actively works with the medical school and hospital to advance sustainability goals.	

2. Does your medical school and/or institution have a stated goal of carbon neutrality by 2050?	
4*	The medical school is already carbon neutral.
3	Yes, there is a stated carbon neutrality goal and the medical school has a well-defined and adequate plan in place to achieve this goal.
2	**Yes, there is a stated carbon neutrality goal, but the medical school has not created a plan to reach that goal or the plan is inadequate.**
1	There is a CO2 emission reduction goal, but it is not one of carbon neutrality.
0	There is no stated goal for reduction of CO2 emissions.
Score explanation: The University of Utah has set a goal to be 100% carbon neutral by the year 2050. While this goal is not as timely as we believe is necessary, significant changes are being made	

throughout the university to accomplish this goal. This carbon neutral goal includes the medical campus which has been slower to adopt sustainability projects.

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: As part of the greater University of Utah campus, medical school buildings currently source 53% of their electricity from renewables. When talking about all energy, including natural gas and fuel oil, this number is not quite 53% but definitely exceeds 20%.	

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 rating system or sustainable 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: Student input about sustainability was included for the construction of the new School of Medicine building and most old medical buildings have been retrofitted to campus-wide sustainable building guidelines.	

5. Has the medical school implemented strategies to encourage and provide environmentally-friendly transportation options for students and reduce the environmental impact of commuting?	
2	**Yes, the medical school has implemented strategies to encourage and provide environmentally-friendly transportation options such as safe active transport, public**

	transport, or carpooling and these options are well-utilized by students. Alternatively, the campus location is not amenable to unsustainable forms of transportation by default.
1	The medical school has implemented some strategies to provide environmentally-friendly transportation options, but the options are unsatisfactorily accessible or advertised.
0	The medical school has not implemented strategies to encourage and provide environmentally-friendly transportation options.
Score explanation: The University of Utah as a whole offers a free pass for public transportation available in Salt Lake City, provides campus shuttles and offers campus biking infrastructure. All of these are easily accessible and frequently utilized by students.	

6. Does your medical school have an organics recycling program (compost) and a conventional recycling program (aluminum/paper/plastic/glass)?	
2	Yes, the medical school has both compost and recycling programs accessible to students and faculty.
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.
Score explanation: The medical school has a recycling program. There is a compost program available to the undergraduate campus but not to the School of Medicine.	

7. Does the medical school apply sustainability criteria when making decisions about the campus food and beverage selections?	
3	Yes, the medical school has adequate sustainability requirements for food and beverages 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: The medical school does not offer or require any sort of sustainability criteria for assessing campus food and beverage selections. There is, however, a student-led plant-based interest group that hosts lectures related to plant-based eating and consults with other student interest groups that are interested in implementing more sustainable food choices at their meetings.	

8. Does the medical school or associated 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: *The University of Utah has 'Environmentally Preferable Purchasing Guidelines' for supply procurement. While they are detailed and comprehensive, the hospital and medical school has been slow to implement such practices. The hospital system does, however, have a membership to Practice Greenhealth. This organization offers extensive supply procurement guidelines and there are active discussions (spearheaded by Dr. Smitha Warrier) about how to engage the hospital in such practices.*	

9. Are there sustainability requirements or guidelines for events hosted at the medical school?	
2	Every event hosted at the medical school must abide by sustainability criteria.
1	The medical school strongly recommends or incentivizes sustainability measures, but they are not required.
0	**There are no sustainability guidelines for medical school events.**
Score explanation: The medical school does not currently have any sustainability guidelines about the hosting of events.	

10. Does your medical school have programs and initiatives to assist with making lab spaces more environmentally sustainable?	
2	Yes, the medical school has programs and initiatives to assist with making lab spaces more environmentally sustainable.
1	There are guidelines on how to make lab spaces more environmentally sustainable, but not programs or initiatives.
0	**There are no efforts at the medical school to make lab spaces more sustainable.**

Score explanation: There are not currently any programs to assist with making lab spaces more environmentally sustainable, however this is actively being discussed in conversations at the Global Change and Sustainability Center as well as amongst students at the medical school.

11. Does your institution's endowment portfolio investments include fossil-fuel companies?	
4	The institution is entirely divested from fossil fuels and has made a commitment to reinvest divested funds into renewable energy companies or renewable energy campus initiatives.
3	No, the institution is entirely divested from fossil fuels.
2	The institution has partially divested from fossil-fuel companies.
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.
Score explanation: In 2016 the Board of Trustees rejected the University of Utah Academic Senate resolution calling on divestment from fossil fuels. However, there is renewed and active advocacy by students and faculty for divestment. The Senate Ad Hoc Committee for Divestment and Reinvestment Investigation (SAHCDRI) will present their final report to the academic senate on April 26.	

Section Total (x out of 29)	**14**

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%

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

Section	Raw Score	Grade
Planetary Health Curriculum (30%)	24 / 58 = 41%	C-
Interdisciplinary Research (17.5%)	8 / 19 = 42%	C-
Community Outreach and Advocacy (17.5%)	5 / 14 = 36%	D+
Support for Student-led Planetary Health Initiatives (17.5%)	9 / 15 = 60%	B-
Campus Sustainability (17.5%)	14 / 29 = 48%	C
Institutional Grade	**45%**	**C-**