Planetary Health Report Card (Medicine):

University of California, San Diego

2024-2025 Contributing Team:

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Land acknowledgment: The UC San Diego community holds great respect for the land and the original people of the area where our campus is located. The university was built on the unceded territory of the Kumeyaay Nation. Today, the Kumeyaay people continue to maintain their political sovereignty and cultural traditions as vital members of the San Diego Community. We acknowledge their tremendous contributions to our region and thank them for their stewardship.

Summary of Findings

Overall Grade	A-

Curriculum	A-

UCSD School of Medicine has made significant improvements to the curriculum to better incorporate planetary health into preclinical and clinical education since the previous year's report. This includes the creation of a new elective in planetary health (Climate Change, Planetary Health, and Impact on Healthcare), the addition of another planetary health based clinical case focused on rural health, heat stress, and disaster medicine in the core preclinical course Equity and Systems Science, and the inclusion of value-based medicine and sustainable healthcare lectures in the new core preclinical MS2 course Clinical Decision Making. The curriculum has room for growth in incorporating the effects of climate change on infectious diseases, cardiovascular disease, and reproductive health into the core curriculum, which could be addressed as a clinical case in the Equity and Systems Science course or expanded upon in other core course lectures.

Recommendations: UCSD School of Medicine could create a clinical case in the Equity and Systems Science class focused on the effects of climate change on infectious disease, cardiovascular disease, and reproductive health, or offer a lecture on these topics as part of the Multi-Organ System Diseases core course or in the Epidemiology lectures during MS1.

Interdisciplinary Research	A

UC San Diego is home to multiple departments and many faculty members who are focused on planetary health and/or healthcare sustainability research. Since last year, UC San Diego has established a new website on Climate Change that highlights labs and initiatives focused on climate change and public health. Additionally, the Center for Community Health established a project that allows local urban growers to provide input on research related to barriers in urban growing and possible solutions.

Recommendations: Continue developing and expanding processes in which community members can influence the research being conducted at the School of Medicine.

Community Outreach and Advocacy	A

UC San Diego hosted the second annual San Diego Heat and Human Health Summit this past year to raise awareness about the impacts of increasing temperatures on human health, which was granted funding from the San Diego Foundation this year to further expand the event. UC San Diego students in the Sustainability and Planetary Health SIG are partnering with additional community organizations to organize a community health forum addressing Hydrogen Sulfide exposure in San Diego's South Bay communities. The health system continues to offer and develop resources for patients and providers to learn about environmental exposures and planetary health.

Recommendations: Develop sustainable medical student relationships with longstanding community organizations like Environmental Health Coalition, and create regular, brief communications with medical students regarding updates and ways to get involved in planetary health and sustainable healthcare.

Support for Student-Led Initiatives	B

The UC San Diego School of Medicine (SOM) offers several initiatives to address sustainability and planetary health. The Climate Action, Resilience, and Environmental Sustainability (CA CARES) initiative empowers stakeholders to combat climate change through research, technology innovation, and outcomes-driven policy. Planetary health research opportunities are also available through the Herbert Wertheim School of Public Health, the Department of Pediatrics Division of Environmental Science and Health, and the Scripps Institution of

Oceanography, as well as a campus-wide climate change research database.While SOM currently does not have a dedicated program or organization focused specifically on planetary health or climate change, students can access opportunities through these channels and faculty-supported research. Student engagement is also supported by groups such as Planetary Health and Global Health in Medicine, curriculum-focused committees, and campus community gardens promoting sustainability and food security. UCSD SOM also co-hosted the 2024 Heat and Human Health Summit, which addressed climate and environmental health issues.

Recommendations:
We recommend that UCSD SOM develop and maintain a dedicated webpage to consolidate information on planetary health and sustainable healthcare initiatives. This platform could highlight research projects, connect students with faculty mentors, and foster greater engagement and collaboration in this critical area.

Campus Sustainability | A+

Under the UC systemwide Sustainable Practices Policy, UCSD campuses and medical centers have set key sustainability goals and launched extensive initiatives. In October 2024, UCSD shared a decarbonization study that outlined a comprehensive roadmap to achieve a 90% emissions reduction by 2045. In addition, UCSD Health has a dedicated Office of Sustainability with an appointed Medical Director of Sustainability. In 2024, UCSD Health received a Greenhealth Emerald Award, Greening the Operating Room Recognition Award, and Circle of Excellence awards for green building, food, leadership, sustainable procurement and transportation. Despite no change in the campus sustainability grade, efforts continue to address challenges in key areas.

Recommendations: 1) Continue efforts to increase utilization of renewable energy for all campus and health sites. 2) Continue initiatives to reduce natural gas usage and move toward decarbonization of the UCSD microgrid with planned improvements such as the installation of a new battery system by the end of 2025 and installation of a high-temperature thermal energy storage system by RedoxBlox in 2026. 3) Move towards ensuring the majority of old buildings have been retrofitted to be more sustainable. 4) Create and implement sustainable event guidelines. 5) Continue to strengthen the ties between UCSD Campus, UCSD Health, and UCSD medical school to facilitate greater awareness of and collaboration in sustainability efforts.

Statement of Purpose

Planetary health is human health.

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

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

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

Definitions & Other Considerations

Definitions:

- **Planetary Health:** is described by the Planetary Health Alliance as "the health of human civilisation and the state of the natural systems on which it depends." For example, topics such as climate change, declining biodiversity, shortages of arable land and freshwater, and pollution would all fall under the realm of planetary health. Both planetary health and traditional 'environmental health' examine the relationship between human health and the external environment, including extreme temperatures, chemicals, vector-borne diseases, etc. Planetary health explicitly concerns itself with the potential health harms associated with human-caused perturbations of natural systems. Therefore, the human health focus of planetary health makes the field well-adapted for the context of medical school education. Throughout this report card, we use the term planetary health to refer to this broad swath of topics, but resources do not need to explicitly include the term "planetary health" to satisfy the metric.

- **Sustainable Healthcare:** As defined by the Academy of Royal Colleges, sustainable healthcare involves ensuring the ability to provide good quality care for future generations by balancing the economic, environmental, and social constraints and demands within health care settings. A sustainable healthcare system maintains population health, reduces disease burden and minimises use of healthcare services.

- **Education for Sustainable Healthcare (ESH):** is defined as the process of equipping current and future health professionals with the knowledge, attitudes, skills and capacity to provide environmentally sustainable services through health professional education, thus working to decrease the enormous environmental impact of the healthcare industry. Planetary Health Education is an integral part of this education rather than an end in itself. This is because knowledge on Planetary Health is required to be able to fully understand the necessity of sustainable healthcare as well as being part of the broader knowledge needed to fully protect and promote health. In summary, ESH is covered by the three Priority Learning Outcomes of the Centre of Sustainable Healthcare below, and Planetary Health Education is embraced in the first learning objective and is a fundamental requirement to achieve learning outcomes 2 and 3:

    1. Describe how the environment and human health interact at different levels.
    2. Demonstrate the knowledge and skills needed to improve the environmental sustainability of health systems.
    3. Discuss how the duty of a doctor to protect and promote health is shaped by the dependence of human health on the local and global environment.

- **Medical School/Department vs. Institution:** When "Medical school" is specified in the report card, this only refers to curriculum and resources offered by the School/department of Medicine and does not include offerings from other parts of the university (e.g. undergraduate departments (USA), other related departments (e.g. Public Health, Population Health departments). In contrast, when "institution" is specified in the report card, we are referring to the university more broadly including all of its campuses. Any resource reasonably accessible by medical students, no matter where in the institution the resource comes from or if it is

specifically targeted for medical students, can meet this metric.

- **Environmental history (Metric #19 in Curriculum Section):** This is a series of questions students are taught to ask during medical encounters that elicits patients' exposures and environmental risk factors. Historically, this has included consideration of exposures like pesticides, asbestos, and lead, though in the modern era shaped by climate change, it can be expanded to include things like wildfire smoke exposure, air pollution and mould after flooding. Key components include place of residence over the lifecourse, occupational history, food and water sources (e.g. meat from industrial feeding operations, regular fishing in contaminated water, access to clean drinking water), and exposure to air pollution. Please be as specific as possible when providing evidence for this metric.

- **Elective:** The word "elective" refers to an optional course or lecture series that a medical student can opt to take part in but is not a requirement in the core curriculum. Generally, these elective courses take place in the preclinical curriculum but vary by school.

- **Core Curriculum:** This refers to taught material that is delivered to the entire cohort of students in one year.

- **Clerkship / Outreach:** This is a term used in the USA to refer to placements that medical students go on e.g. Pediatrics, General medicine, Psychiatry. In the UK these are referred to as rotations, outreach or placements. This is a relatively short (approximately 4-8 weeks) period of study and patient-centred clinical experience that takes place as part of the undergraduate programme.

- **Clinical rotation:** This is a term used to refer to placements that students go on (e.g., ophthalmology, surgery, cardiology).

- **Physiotherapy vs Physical Therapy:** For the purposes of this report card these terms are considered interchangeable. However, physiotherapy will be used primarily.

- **Community organisations:** For most institutions, there are existing groups that are not directly affiliated with the university and exist as a product of what the community the institution exists in cares about or needs. These specific community organisations relevant to this report include those that are focused around some aspect of climate and health preservation. These community organisations can include but are not limited to local mutual aid initiatives, underserved-resource distribution groups, clean-up and nature conservation groups, community gardeners, and other environmental-related organisations. If your institution does not have access to local volunteerships with community groups, please report any community organisations your institution or school has collaborated with.

- **Climate justice:** The idea that certain population groups and geographical locations which are disproportionately more impacted by climate change are already economically and socially disadvantaged. This double vulnerability sits alongside pre-existing social justice concerns and should therefore shift policy and practice to mitigate the inequitable effects of the climate crisis.

- **Extractivisim:** The removal of natural resources typically in large quantities. Within anthropology this term is often used in the context of colonialism to refer to

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

- **Global South:** Nations that often have less economic and industrial development and are typically in the southern hemisphere. These nations have been found to be disproportionately impacted by the climate crisis.

- **Low socioeconomic status (SES):** An individual or geographical area that across a variety of socioeconomic factors (e.g., income, education, race/ethnicity) is considered vulnerable. This vulnerability has been correlated to more adverse health outcomes often as a consequence of encountering more barriers in accessing and receiving healthcare.

- **Low and Middle-Income Countries (LMIC):** Countries that have lower degrees of economic affluence.

- **Anthropogenic:** Created through human activity

- **Marginalized communities:** Groups excluded from mainstream economic, educational, social, and/or cultural experiences due to race, gender identity, sexual orientation, age, physical ability, language, and/or immigration status (Sevelius et al., 2020).

Other considerations:

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

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

Planetary Health Curriculum

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 medical school offer elective courses (student selected modules) to engage students in Education for Sustainable Healthcare or Planetary Health in the last year?	
Yes, the medical school has offered **more than one** elective whose primary focus is ESH/planetary health in the past year. (3 points)	
Yes, the medical school has offered **one** elective whose primary focus is ESH/planetary health in the past year. (2 points)	
The medical school does **not** have any electives whose primary focus is ESH/planetary health, but there are one or more electives that include a **lecture** on planetary health. (1 points)	
No, the medical school has **not** offered any electives on planetary health or electives that include ESH/planetary health topics in the past year. (0 points)	
Score Assigned:	0
Score explanation: There are no electives currently offered on planetary health or related topics. A new elective, "Climate Change, Planetary Health, Impact on Healthcare," is currently being developed and will provide a broad overview of how climate change transforms individual health, disease patterns, and healthcare operation. It will highlight UCSD's ongoing initiatives in planetary health and sustainability through lectures and literature discussions.	

Curriculum: Health Effects of Climate Change

1.2. Does your medical school curriculum address the relationship between extreme heat, health risks, and climate change?
This topic was explored **in depth** by the **core** curriculum. (3 points)
This topic was **briefly** covered in the **core** curriculum. (2 points)
This topic was covered in **elective** coursework. (1 point)
This topic was **not** covered. (0 points)

Score Assigned:	3
Score explanation: In the second-year core curriculum class SOM240: Multi-Organ System Disorders, there is a lecture on environmental injury that includes 1-2 slides about extreme heat due to climate change and increased risk of heat stroke. Additionally, in the Residency Transitions course in the clinical clerkship curriculum, there is an optional Wilderness Medicine session with a mass casualty drill that explores topics in extreme heat, weather events, and health. Lastly, the Equity in Systems Science course in the core MS2 curriculum includes a case on rural health that describes the impacts of heat on rural workers.	

1.3. Does your medical school curriculum address the impacts of extreme weather events on individual health and/or on healthcare systems?	
This topic was explored **in depth** by the **core** curriculum. (3 points)	
This topic was **briefly** covered in the **core** curriculum. (2 points)	
This topic was covered in **elective** coursework. (1 point)	
This topic was **not** covered. (0 points)	
Score Assigned:	3
Score explanation: In the Residency Transitions course in the clinical clerkship curriculum, there is an optional Wilderness Medicine session with a mass casualty drill that explores topics in extreme heat, weather events, and health. Additionally, the Equity in Systems Science course in the core MS2 curriculum includes a case on planetary health that outlines how to apply a planetary health lens to a local context, describes the role of health care providers in post-disaster planning, and emphasizes the importance of learning from communities about climate justice and resilience.	

1.4. Does your medical school curriculum address the impact of climate change on the changing patterns of infectious diseases?	
This topic was explored **in depth** by the **core** curriculum. (3 points)	
This topic was **briefly** covered in the **core** curriculum. (2 points)	
This topic was covered in **elective** coursework. (1 point)	
This topic was **not** covered. (0 points)	
Score Assigned:	2
Score explanation: I*n the second-year core curriculum class, SOM240: Multi-Organ System Disorders, there is a lecture on zoonotic infections that includes a slide addressing the topic of lyme disease and climate change.*	

1.5. Does your medical school curriculum address the respiratory health effects of climate change and air pollution?	
This topic was explored **in depth** by the **core** curriculum.	
This topic was **briefly** covered in the **core** curriculum.	
This topic was covered in **elective** coursework.	
This topic was **not** covered.	
Score Assigned:	3
Score explanation: The Equity in Systems Science course in the core MS1 curriculum offers a clinical case study focused on the effects of air pollution on respiratory disease rates with a specific focus on environmental racism in the Barrio Logan neighborhood of San Diego, which is a historically Latinx/Chicano neighborhood with one of the highest rates of childhood asthma in the state due to industrial zoning and naval shipyard pollution. The case includes a 2-hour clinical case report, a 2-hour expert panel with local physicians working with impacted communities, and a 2-hour team-based learning activity in political activism for environmental health for a total of 6 hours of focused required learning.	

1.6. Does your medical school curriculum address the cardiovascular health effects of climate change, including increased heat	
This topic was explored **in depth** by the **core** curriculum.	
This topic was **briefly** covered in the **core** curriculum.	
This topic was covered in **elective** coursework.	
This topic was **not** covered.	
Score Assigned:	0
Score explanation: A new elective, "Climate Change, Planetary Health, Impact on Healthcare," is currently being developed that will explore how heat stress impacts the cardiovascular system.	

1.7. Does your medical school curriculum address the mental health and neuropsychological effects of environmental degradation and climate change?
This topic was explored **in depth** by the **core** curriculum.
This topic was **briefly** covered in the **core** curriculum.

This topic was covered in **elective** coursework.	
This topic was **not** covered.	
Score Assigned:	3
Score explanation: The elective "Climate Change, Planetary Health, Impact on Healthcare" will explore how climate change and lack of access to green spaces impact psychological health. The elective will also cover heat-related illnesses during antipsychotic treatment. Additionally, the Equity in Systems Science course in the core MS2 curriculum includes a case on planetary health that outlines the mental and neuropsychological effects of environmental degradation.	

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?	
This topic was explored **in depth** by the **core** curriculum.	
This topic was **briefly** covered in the **core** curriculum.	
This topic was covered in **elective** coursework.	
This topic was **not** covered.	
Score Assigned:	3
Score explanation: The ESS course addresses issues relating to housing and food insecurity in San Diego communities facing greater environmental stress related to pollution and historical redlining/zoning that have created industrial areas in once-green neighborhoods. Additionally, the Equity in Systems Science course in the core MS2 curriculum includes a case on planetary health that outlines water cycles and their importance to health.	

1.9. Does your <u>medical school</u> curriculum address the outsized impact of climate change on marginalised populations such as those with low SES, women, communities of colour, Indigenous communities, children, homeless populations, and older adults?	
This topic was explored **in depth** by the **core** curriculum.	
This topic was **briefly** covered in the **core** curriculum.	
This topic was covered in **elective** coursework.	
This topic was **not** covered.	
Score Assigned:	3
Score explanation: In the Equity and Systems Science (ESS) course of the Core Curriculum for MS1s and MS2s, there are 2 clinical cases that explore planetary health and disproportionate negative health effects in marginalized communities in San Diego. Each case comprises 4 hours of	

student-led team-based learning as well as a 2-hour expert panel discussion for a total of 12 hours of instructional time spent on the intersections of planetary health and health equity.

1.10. Does your <u>medical school</u> curriculum address the unequal regional health impacts of climate change globally?	
This topic was explored **in depth** by the **core** curriculum.	
This topic was **briefly** covered in the **core** curriculum.	
This topic was covered in **elective** coursework.	
This topic was **not** covered.	
Score Assigned:	3
Score explanation: The Equity in Systems Science course in the core MS2 curriculum includes a case on planetary health that addresses the unequal regional health impacts of climate change globally by outlining how to apply a planetary health lens to a local context, describing how to work with local communities and media to ensure equitable outcomes, and emphasizes learning from communities about climate justice and resilience.	

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

1.11. Does your <u>medical school</u> curriculum address the reproductive health effects of industry-related environmental toxins (e.g. air pollution, pesticides)?	
This topic was explored **in depth** by the **core** curriculum.	
This topic was **briefly** covered in the **core** curriculum.	
This topic was covered in **elective** coursework.	
This topic was **not** covered.	
Score Assigned:	0
Score explanation: The elective "Climate Change, Planetary Health, Impact on Healthcare" will address the impact of microplastics on endocrine health.	

1.12. Does your <u>medical school</u> curriculum address important human-caused environmental threats that are relevant to the university's surrounding community?
This topic was explored **in depth** by the **core** curriculum.
This topic was **briefly** covered in the **core** curriculum.
This topic was covered in **elective** coursework.

This topic was **not** covered.	
Score Assigned:	3
Score explanation: The ESS course educates students on environmental health threats in the San Diego community with a focus on environmental racism, particularly in the Barrio Logan community, which experiences the highest rate of childhood asthma in the city and is located near the naval shipyard, several major interstate freeways, and the San Diego airport.	

1.13. To what extent does your <u>medical school</u> emphasise the importance of Indigenous knowledge and value systems as essential components of planetary health solutions?	
This topic was explored **in depth** by the **core** curriculum.	
This topic was **briefly** covered in the **core** curriculum.	
This topic was covered in **elective** coursework.	
This topic was **not** covered.	
Score Assigned:	2
Score explanation: The SOM offers an elective, MED235: Tribal Ambulatory Healthcare Experience, which focuses on Indigenous health, clinical practice, and health systems in San Diego. Additionally, the Equity in Systems Science course in the core MS2 curriculum includes a case on planetary health that includes supplemental resources outlining Indigenous knowledge.	

1.14. Does your <u>medical school</u> curriculum address the outsized impact of anthropogenic environmental toxins on marginalised populations such as those with low SES, women, communities of colour, children, homeless populations, Indigenous populations, and older adults?	
This topic was explored **in depth** by the **core** curriculum.	
This topic was **briefly** covered in the **core** curriculum.	
This topic was covered in **elective** coursework.	
This topic was **not** covered.	
Score Assigned:	3
Score explanation: The ESS course (required MS1/MS2 core curriculum) touches upon a variety of topics in environmental racism and anthropogenic pollutants. In particular, there is an emphasis discussing the outsized impact of environmental toxins on populations of lower SES and communities of color in San Diego during a case study in MS1. This case study focuses on the community of Barrio Logan, a historically Latinx/Chicano neighborhood with one of the highest rates of childhood asthma in the state due to industrial zoning and naval shipyard pollution.	

Curriculum: Sustainability

1.15. Does your <u>medical school</u> curriculum address the environmental and health co-benefits of a plant-based diet?	
This topic was explored **in depth** by the **core** curriculum.	
This topic was **briefly** covered in the **core** curriculum.	
This topic was covered in **elective** coursework.	
This topic was **not** covered.	
Score Assigned:	2
Score explanation: The benefits of a plant-based diet are briefly covered in 1-2 slides in the MS1 curriculum in the Gastrointestinal System and Nutrition core course and there are a few slides in the Integrative Medicine lecture within the MS2 Arthritis, Rheumatology, and Dermatology core course. However, these lectures largely focus on the health benefits of a plant-based diet rather than focusing on the co-benefits of plant-based diets from an environmental and climate perspective.	

1.16. Does your <u>medical school</u> curriculum address the carbon footprint of healthcare systems?	
This topic was explored **in depth** by the **core** curriculum.	
This topic was **briefly** covered in the **core** curriculum.	
This topic was covered in **elective** coursework.	
This topic was **not** covered.	
Score Assigned:	2
Score explanation: The MS2 core course, Clinical Decision Making, has one mandatory 4-hour session on Value Based Medicine which includes a brief discussion of the environmental and financial impacts of specific elements of the healthcare system. Additionally, lectures on this topic are offered by the UCSD Health Office of Sustainability for MS3 and MS4 students during their clerkships.	

1.17. Does your <u>medical school</u> curriculum cover these components of sustainable clinical practice in the <u>core</u> curriculum? (points for each)	**Score**
The health **and** environmental **co-benefits** of **avoiding** over-medicalisation, over-investigation and/or over-treatment (2 points)	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 fulfil this metric. (2 points) .	0
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 point)	1
Environmental impact of **surgical** healthcare on planetary health and the climate crisis, and how can it be mitigated. (1 point)	1
The impact of **anaesthetic** gases on the healthcare carbon footprint and ways to reduce anaestheisa's environmental impacts, such as total intravenous anaesthesia or choosing less environmentally harmful anaesthetic gas options with reduced greenhouse gas emissions. (1 point)	1
The impact of **inhalers** on the healthcare carbon footprint and the environmental benefit of dry powdered inhalers over metered dose inhalers. (1 point)	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) (1 point)	1
Score explanation: The core clerkships (MS3/MS4 curriculum) all cover topics in value-based medicine and sustainable health care as they are relevant to clinical cases. There is no standardized curriculum, but the financial, health, and environmental benefits of avoiding over-medicalization are discussed during clerkships. There is a new core course for MS2s, Clinical Decision Making, which has a 4-hour lecture and discussion on value based medicine and reducing costs and environmental impact in the healthcare system. Additionally, UCSD SOM offers a Value-Based Medicine elective for MS1 and MS2s that details this topic. UCSD SOM clinical clerkship directors, residency directors, and Campus Sustainability staff collaborate to host training sessions for students and staff on waste production and streamlining gas use, particularly for anesthesia. In addition, the elective "Climate Change, Planetary Health, Impact on Healthcare" will address the use of dry powdered inhalers as a means to lower the carbon footprint caused by the propellant in metered dose inhalers.	

Curriculum: Clinical Applications

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

Score explanation: In the Equity and Systems Science course, students learn how to take an occupational and environmental exposure history as well as discuss the effects of airborne contaminants and pollutants with patients experiencing environmentally-acquired asthma or chronic cough. The team-based learning activity for the clinical case on environmentally-acquired asthma educates students on how to advocate for patients as physicians on a public and political advocacy level. There is also training in how to discuss community-based and individual solutions with patients, including recommendations on installing in-home HEPA filters, wearing masks in areas with high PM2.5 exposure risks, and advocating for policy changes in local government to protect community health interests over those of industry.

1.19. In training for patient encounters, does your <u>medical school's</u> curriculum introduce strategies for taking an environmental history or exposure history?	
Yes, the **core** curriculum includes strategies for taking an environmental history. (2 points)	
Only **elective** coursework includes strategies for taking an environmental history. (1 point)	
No, the curriculum does **not** include strategies for taking an environmental history. (0 points)	
Score Assigned:	2
Score explanation: The medical history in the core curriculum course, Practice of Medicine, includes information on occupational health and environmental exposures patients may encounter (Dr. Allison, POM Course Head). Additionally, the ESS course educates students on taking an environmental exposure history with a focus on environmentally-acquired asthma.	

Curriculum: Administrative Support for Planetary Health

1.20. Is your <u>medical school</u> currently in the process of implementing or improving Education for Sustainable Healthcare (ESH)/planetary health education?	
Yes, the medical school is currently in the process of making **major** improvements to ESH/planetary health education. (4 points)	
Yes, the medical school is currently in the process of making **minor** improvements to ESH/planetary health education. (2 points)	
No, there are **no** improvements to planetary health education in progress. (0 points)	
Score Assigned:	4
Score explanation: There is an elective course on planetary health in development as well as additions to the Equity and Systems Science core curriculum course involving more cases and panels on planetary health.	

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

Healthcare topics integrated longitudinally into the <u>core</u> curriculum?	
Planetary health/ESH topics are **well integrated** into the core medical school curriculum. (6 points)	
Some planetary health/ESH topics are appropriately integrated into the core medical student curriculum. (4 points)	
Planetary health/ESH is not integrated and is primarily addressed in **(a) standalone lecture(s).** (2 points)	
There is **minimal/no** education for sustainable healthcare. (0 points)	
Score Assigned:	4
Score explanation: The Equity and Systems Science course provides 12 hours of longitudinal planetary health and health equity training across the first two years of preclinical education. There are a few preclinical blocks that mention the effects of climate/heat on health briefly. The clinical clerkship curriculum offers optional disaster medicine and training in planetary health when clinically relevant. Altogether, there is good integration of planetary health topics in the core curriculum, particularly regarding environmentally-acquired asthma, pollution, and environmental racism in San Diego. There is not specific education on climate change and its broad public health impacts on the San Diego community and globally.	

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?	
Yes, the **medical school** has a specific faculty/staff member responsible for overseeing curricular integration of planetary health and sustainable healthcare. (1 point)	
No, the **medical school** does **not** have a specific faculty/staff member responsible for overseeing curricular integration of planetary health and sustainable healthcare. (0 points)	
Score Assigned:	1
Score explanation: Dr. Weena Joshi and Dr. Audrey Meadows are the Course Directors for Equity and Systems Science and specifically oversee and curate didactic education, clinical cases, and team based learning activities designed for MS1 and MS2s in planetary health and sustainability.	

Section Total (55 out of 72)	**76.4%**

Interdisciplinary Research

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

2.1. Are there researchers engaged in planetary health research and healthcare sustainability research at your institution?	
Yes, there are faculty members at the **institution** who have a **primary** research focus in planetary health **or** sustainable healthcare/vetcare. (3 points)	
Yes, there are individual faculty members at the **institution** who are conducting research **related** to planetary health or healthcare sustainability, OR are part of a national/international sustainability working group, but it is not their primary research focus. (2 points)	
There are sustainability researchers at the **institution**, but not specifically associated with healthcare/vetcare. (1 point)	
No, there are **no** planetary health and/or sustainability researchers at the **institution** at this time. (0 points)	
Score Assigned:	3

Score explanation: There are several faculty members at the UCSD School of Medicine who have a primary research focus in planetary health or healthcare sustainability. Below is information about some of these faculty members and their research:

- *Shira Abeles, MD is an Associate Professor of Medicine, as well as the Medical Director of Sustainability at UCSD Health. Her research focuses on reducing the use of unnecessary antibiotics.*
- *Wael Al-Delaimy, MD, PhD is a Professor in the Department of Family Medicine, UC San Diego School of Medicine and Professor in the School of Public Health. His focus is on climate change health impacts; he leads two NIH centers on this topic that includes medical students, is a regular speaker nationally for physicians and hospitals on this topic as a CME activity, conducts research on the role of health care providers in climate change advocacy, and is a consultant for the WHO, UNEP and UNDP on this topic. He is a co-author and lead co-editor of a book on planetary health: Health of People, Health of Planet and Our Responsibility.*
- *Tarik Benmarhnia, PhD is a Professor at the Scripps Institution of Oceanography (SIO) whose interdisciplinary lab investigates the impact of the environment and severe weather events on population health and environmental justice. His lab, along with the Climate Epidemiology Lab and the Planetary Health Interest Group at UC San Diego School of Medicine collaborated to organize an event,* SOM Meets SIO: Bridging Climate and Health*, in Fall 2024 that bridged a partnership between the SOM and SIO.*

- *Abhinav Gupta, MD is a Pain Medicine Fellow within the department of Anesthesiology. His work focuses on reducing procedural and operating room waste at UCSD Health.*
- *Jack Gilbert, PhD is a Professor in the Department of Pediatrics whose lab focuses on interdisciplinary research in medical and environmental microbiology. His work uses marine model organisms and ecosystems to guide studies in infectious disease, diet, and various aspects of health, such as cardiometabolic, immune, and mental health.*
- *Jyoti Mishra, PhD MBA is an Associate Professor in the Department of Psychiatry whose work involves applying machine learning methods to mental healthcare and climate change adaptation efforts. In 2021, she published a few articles on climate change trauma and the relationship between planetary health and mental health.*

2.2. Is there a dedicated department or institute for interdisciplinary planetary health research at your institution?	
There is **at least one** dedicated department or institute for interdisciplinary planetary health research. (3 points)	
There is **not currently** a department or institute for interdisciplinary planetary health research, but there are **plans** to open one in the next 3 years. (2 points)	
There is an **Occupational and Environmental Health department**, but no interdisciplinary department or institute for planetary health research. (1 points)	
There is **no** dedicated department or institute. (0 points)	
Score Assigned:	3
Score explanation: UC San Diego is home to several centers that are dedicated to interdisciplinary planetary health research. The Scripps Institution of Oceanography has the Center for Climate Change Impacts and Adaptation, which works with the Climate Change Epidemiology Lab and the Weather Extremes, Climate, and Impacts Analytics group to study the impacts on climate on human health and public health. The Herbert Wertheim School of Public Health and Human Longevity Science also has a Climate and Environmental Health division that focuses on the relationship between environmental/climate risk factors and human health conditions.	

2.3. Is there a process by which communities disproportionately impacted by climate change and environmental injustice give input or make decisions about the research agenda at your institution?
Yes, there is a process in which community members impacted by climate and environmental injustice have **decision-making power** in the climate + environmental research agenda. (3 points)
Yes, there is a process in which community members impacted by climate and environmental injustice **advise** the climate + environmental research agenda. (2 points)
No, but there are **current efforts** to establish a process for community members to advise or make decisions on the research agenda. (1 points)

There is **no** process, and **no** efforts to create such a process. (0 points)	
Score Assigned:	2
Score explanation: The UCSD Center for Community Health established the San Diego Urban Growers' Collaborative Project, which investigates the barriers impeding local urban growers and possible solutions. This project collaborates directly with local growers and is focused on supporting low-income urban residents and communities of color, both significantly impacted by climate and environmental injustice. However, the scope of this research is limited and does not provide community members with decision-making power.	

2.4. Does your institution have a planetary health website that centralises ongoing and past research related to health and the environment?	
There is an **easy-to-use, adequately comprehensive** website that **centralises** various campus resources related to health and the environment including all of the following: upcoming events, leaders in planetary health at your institution, and relevant funding opportunities. (3 points)	
There is a website that **attempts to centralise** various campus resources related to health and the environment, but it is hard-to-use, not updated, or not adequately comprehensive. (2 points)	
The **institution** has an **Office of Sustainability website** that includes **some** resources related to health and the environment. (1 point)	
There is **no** website. (0 points)	
Score Assigned:	2
Score explanation: The Scripps Institution of Oceanography has a Climate Change and Health website with information about academic leaders in planetary health and various centers, programs, and labs that focus on climate change impacts. UCSD also has a new Climate Change website that highlights labs, initiatives, and programs focused on climate change, climate justice, and public health. Neither website includes upcoming events, so they are not totally comprehensive.	

2.5. Has your institution recently hosted a conference or symposium on topics related to planetary health?
Yes, the **institution** has hosted at least one conference or symposium on topics related to planetary health in the past year. (4 points)
Yes, the **institution** has hosted at least one conference or symposium on topics related to sustainable healthcare/vetcare in the past year. (3 points)
Yes, the **institution** has hosted a conference on topics related to planetary health / sustainable healthcare/vetcare in the past three years. (2 points)
The **institution** has not hosted any conferences directly, but they have provided financial support for a local planetary health event. (1 point)

No, the **institution** has not hosted a conference on topics related to planetary health in the past three years. (0 points)	
Score Assigned:	4
Score explanation: In the past year, UCSD School of Medicine hosted the following two events on topics related to planetary health: ● *In August 2024, UCSD School of Medicine co-hosted the Second Annual Heat and Human Health Summit (H3SD 2024) in collaboration with Kaiser Permanente. The summit focused on the impacts of rising global temperatures on human health and featured a poster session for researchers to present their work, breakout sessions, and talks addressing topics such as climate change's effects on health and strategies for effective heat response.* ● *In October 2024, UCSD School of Medicine's Planetary Health Student Interest Group co-hosted its first Climate and Health Day in collaboration with the Scripps Institute of Oceanography. The event featured presentations, group discussions, and problem-solving think tank groups covering recent projects and various topics on the human health impacts of climate change and the environment.*	

2.6. Is your <u>institution</u> a member of a national or international planetary health or ESH/ESV organisation?	
Yes, the institution is a member of a national or international planetary health **or** ESH/ESV organisation. (1 points)	
No, the institution is **not** a member of such an organisation. (0 points)	
Score Assigned:	1
Score explanation: As of January 2025, the UCSD School of Medicine is a member of the Global Consortium on Climate and Health Education (GCCHE) housed at Columbia University.	

Section Total (15 out of 17)	**88%**

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Community Outreach and Advocacy

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

3.1. Does your institution partner with community organisations to promote planetary health?	
Yes, the **institution** meaningfully partners with **multiple** community organisations to promote planetary and environmental health. (3 points)	
Yes, the **institution** meaningfully partners with **one** community organisation to promote planetary and environmental health. (2 points)	
The **institution** does not partner with community organisations, but has participated in community focused events relating to planetary health. (1 point)	
No, there is **no** such meaningful community partnership. (0 points)	
Score Assigned:	3
Score explanation: UC San Diego School of Medicine formally interfaces with one or more community organizations to promote planetary and environmental health. Scripps Institute of Oceanography Center for Climate Change Impacts and Adaptation focuses on building capacity by "partnering with science-outreach organizations to develop science dissemination tools, conduct outreach, and identify applied research needs, providing science advisory services to communities at risk, serving as a hub for convenings and trainings, and hosting funds, fellowships and internships to support next generation climate leaders." Currently, they have an ongoing NSF project which dedicates efforts for outreach with the Birch Aquarium. Additionally, UC San Diego's Herbert Wertheim School of Public Health emphasizes research in areas such as climate and environmental health, health equity, and global health, "collaborating with diverse partners to develop community-led health solutions." These research efforts aim to address the health impacts of environmental changes and promote sustainable health practices. Medical students can enroll in such courses and even pursue a joint master's degree in this program. Lastly, UC San Diego students in the Sustainability and Planetary Health SIG are partnering with additional community organizations to organize a community health forum addressing Hydrogen Sulfide exposure in San Diego's South Bay communities.	

3.2. Does your institution offer community-facing courses or events regarding planetary health?

The **institution** offers community-facing courses or events at least once every year. (3 points)
The **institution** offers courses or events open to the community at least once per year, but they are not primarily created for a community audience. (2 points)
The **institution** has promoted community-facing courses or events, but was not involved in planning those courses or events. (1 point)
The **institution/medical school** have not offered such community-facing courses or events. (0 points)

Score Assigned:	3

Score explanation: In 2024 UC San Diego hosted the second annual Heat and Human Health Summit (H3SD). This is an event which is open to the public with recordings accessible on YouTube. The goal of the event is to bring major healthcare organizations and public health officials to better educate the community and build climate resilience.

3.3. Does your institution have regular coverage of issues related to planetary health and/or sustainable healthcare in university update communications?
Yes, all students **regularly** receive communication updates dedicated to planetary health and/or sustainable healthcare. (2 points)
Yes, planetary health and/or sustainable healthcare topics are regularly included in communication updates to **some courses**. (1 point)
Students **do not** receive communications about planetary health or sustainable healthcare. (0 points)

Score Assigned:	2

Score explanation: UC San Diego Sustainability regularly sends out email communications and newsletters, but students have to subscribe to the mailing list to receive the communications. The Sustainability and Planetary Health student interest group has an emailing list for medical students who have joined the group. UCSD Physician Updates often highlights various sustainability initiatives done by the institution and students.

3.4. Does the institution or main affiliated hospital trust engage in professional education activities targeting individuals post graduation with the aim of ensuring their knowledge and skills in planetary health and sustainable healthcare remain up to date during their professional career?
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. (2 points)
Yes, the **institution** or **main affiliated hospital trust** offers one course relating to planetary health and/or sustainable healthcare for post-graduate provider. (1 point)

There are **no** such accessible courses for post-graduate providers. (0 points)	
Score Assigned:	2
Score explanation: UC San Diego offers a Green Labs program which educates and assists in the implementation of sustainable practices in campus research laboratories. UC San Diego Health also offers "Green Clinic" and office certifications in which providers, clinics, and units can join a certification program focused on sustainable practices and carbon neutrality.	

3.5. Does your institution or its affiliated teaching hospitals have accessible educational materials for patients about environmental health exposures?	
Yes, the **medical school** or **all affiliated hospitals** have accessible educational materials for patients. (2 points)	
Some affiliated hospitals have accessible educational materials for patients. (1 point)	
No affiliated medical centres have accessible educational materials for patients. (0 points)	
Score Assigned:	2
Score explanation: UC San Diego's Center for Better Beginnings Director, Dr. Kenneth Lyons Jones, started MotherToBaby California, whose team "speaks directly to concerned individuals about environmental exposures and provides monitoring, surveillance and tracking of potential risks that people who are pregnant and their babies have been exposed to during pregnancy and while chestfeeding." The Mother ToBaby website offers fact sheets and useful information for patients to learn about environmental exposures. In addition, UC San Diego Health has resources for environmental health exposures like wildfire smoke. In the event of a wildfire emergency, these resources will go to all UC San Diego Health physicians, who can use the educational, patient-focused flyers drawn from the University of California website to educate patients. Similar to the impacts of wildfire smoke on health, under development are other resources for the impact of heat waves, algal blooms, droughts, and floods.	

3.6. Does your institution or its affiliated teaching hospitals have accessible educational materials for patients about the health impacts of climate change?	
Yes, the **medical school** or **all affiliated hospitals** have accessible educational materials for patients. (2 points)	
Some affiliated hospitals have accessible educational materials for patients. (1 point)	
No affiliated hospitals have accessible educational materials for patients. (0 points)	
Score Assigned:	2
Score explanation: UC San Diego Health has resources available for dissemination in the event of wildfire emergencies. These resources will go to all UC San Diego Health physicians, who can use the educational, patient-focused flyers drawn from the University of California website to educate	

patients. Similar to the impacts of wildfire smoke on health, under development are other resources for the impact of heat waves, algal blooms, droughts, and floods. In addition, medical students in the Equity and Advocacy Concentration at UC San Diego were offered ClimateRx badges (https://www.climaterx.org/). These badges have OR codes patients can scan to learn about the impacts of climate change on health.

Section Total (14 out of 14)	**100%**

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Support for Student-Led Planetary Health Initiatives

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

4.1. Does your institution offer support for students interested in enacting a sustainability initiative/QI project?	
Yes, the **institution** *either* offers grants for students to enact sustainability initiatives/QI projects *or* sustainability QI projects are part of the core curriculum. (2 points)	
The **institution** encourages sustainability QI projects (to fulfil clerkship or longitudinal requirements) and offers resources to help students succeed in these projects, **but** there is no student funding available and there is no requirement to participate. (1 point)	
No, **neither** the medical school or the institution offer opportunities or support for sustainability initiatives or QI projects. (0 points)	
Score Assigned:	2
Score explanation: UC San Diego SOM is part of the UC System which boasts the UC Carbon Neutrality Initiative Student Fellowship Program which also includes the UC President Bonnie Reiss Climate Action Fellowship. Launched in 2013 and 2015 respectively, both programs aim to solidify the UC's leadership in sustainability and accelerate the path to carbon neutrality. A core component of both programs include funding for student-led research projects on climate change and sustainability. In addition to this, UC San Diego has a new initiative known as Climate Action, Resilience, and Environmental Sustainability (CA CARES) to inspire and empower researchers, students, faculty, and community members to lead the charge in combating climate change through technology innovation, impactful research, and outcomes-driven policy.	

4.2. Does your institution offer opportunities for students to do research related to planetary health and/or sustainable healthcare/vetcare?	
The **institution** has a **specific** research program or fellowship for students interested in doing planetary health/sustainable healthcare/vetcare research. (2 points)	
There are research opportunities for students to perform research related to planetary health/sustainable healthcare, but these **require student initiative** to seek these out and carry them out in their spare time. (1 point)	
There are **no opportunities** for students to engage in planetary health/sustainable healthcare research. (0 points)	
Score Assigned:	1

Score explanation: UCSD offers many opportunities for students to do research related to planetary health. For example, some of these opportunities are through the Herbert Wertheim School of Public Health and Human Longevity Science's Department of Climate and Environmental Health, the Department of Pediatrics Division of Environmental Science and Health, and the Scripps Institution of Oceanography. Additionally, UCSD now hosts a database of climate change research occurring across campus. Within the School of Medicine specifically, students within the Global Health Academic Concentration are given the opportunity to conduct global health research covering topics that may be related to planetary health. However, there is no formal program dedicated for climate research for medical students at this time.

4.3. Does the institution have a webpage where students can find specific information related to planetary health and/or sustainable healthcare/vetcare activities and mentors within the institution? For example, projects achieved, current initiatives underway at the medical school and/or contact of information of potential mentors.	
The institution has a webpage with specific information related to planetary health or sustainable healthcare/vetcare that includes up-to-date information on relevant initiatives and contact information of potential mentors. (2 points)	
There is an institution webpage that features some information on projects and mentors within planetary health and sustainable healthcare within the medical school, but it lacks key information. (1 point)	
There is **no institution** specific webpage for locating planetary health and/or sustainable healthcare projects or mentors. (0 points)	
Score Assigned:	0
Score explanation: While both UC San Diego Health and UC San Diego have sections dedicated to climate change and sustainable healthcare initiatives, UC San Diego SOM does not have a dedicated webpage that consolidates information on planetary health, sustainable healthcare activities, or mentors within the medical school. In order for medical students to seek mentorship or involvement in sustainability and planetary health projects, they must go through the aforementioned channels.	

4.4. Does your institution have registered student groups dedicated towards fostering a culture of planetary health engagement, scholarship, and advocacy on campus, supported by faculty advisors?
Yes, there is a student organisation **with faculty support** at my medical school dedicated to planetary health or sustainability in healthcare. (2 points)
Yes, there is a student organisation at my medical school dedicated to planetary health or sustainability in healthcare but it **lacks faculty support.** (1 point)
No, there is **not** a student organisation at my institution dedicated to planetary health or sustainability in healthcare. (0 points)

Score Assigned:	2
Score explanation: There is a Planetary Health Student Interest Group in addition to a Global Health in Medicine Student Interest Group both exist in the Office of Student Affairs with their respective faculty advisors. While with differing mission statements, both organizations strive to explore sustainability measures while advocating for and increasing awareness of the need to address planetary health issues.	

4.5. Is there a student liaison representing sustainability interests who serves on a department or institutional decision-making council to advocate for curriculum reform and/or sustainability best practices?	
Yes, there is a student representative that serves on a department or institutional decision-making council/committee. (1 points)	
No, there is no such student representative. (0 points)	
Score Assigned:	1
Score explanation: Within Student Government, there is a Director of Academic Interests with their Committee on Education Policy as well as a Core Curriculum Committee representative and other student innovation groups. These entities work with the leadership-at-large at UC San Diego School of Medicine to work on curriculum reform and changes.	

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)	**Score**
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.	0
Cultural arts events, installations or performances related to planetary health that have students as an intended audience.	0
Local volunteer opportunities related to building community resilience to anthropogenic environmental impacts.	1
Wilderness or outdoors programs (e.g., that organise hiking, backpacking, kayaking, or other outings for students)	1

Score explanation:

1. *There are multiple community gardens across the UCSD campus with the mission to promote learning about agriculture, organic gardening and sustainability. One also provides fresh seasonal fruits and vegetables to students in need through the Triton Food Pantry.*
2. *UCSD School of Medicine co-hosted the 2024 Heat and Human Health Summit where students, health professionals, and community members learned about climate change and environment health and justice through presentations, research posters, and breakout sessions.*
3. *Local organizations such as I Love a Clean San Diego and The Surfrider Foundation host several volunteer events focused around planetary health, such as beach and park clean ups and habitat restoration.*
4. *At UCSD, all first year medical students are invited to go on an outdoor camping and hiking trip at Laguna Mountain and several similar opportunities are available to all students through UCSD Recreation. Medical students can also join the Wilderness Medicine Student Interest Group, which hosts events such as hikes and other outdoor activities.*

Section Total (10 out of 15)	**66.7%**

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Campus Sustainability

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

5.1. Does your institution have an Office of Sustainability?	
Yes, there is an Office of Sustainability with multiple full-time staff dedicated to campus sustainability. If the Office of Sustainability serves the entire campus, there is **at least one designated staff member** for sustainability at the hospital. (3 points)	
There is an Office of Sustainability with one or more full-time staff dedicated to campus sustainability, but **no specific staff member** in charge of hospital sustainability. (2 points)	
There are **no salaried sustainability staff,** but there is a sustainability task force or committee. (1 point)	
There are **no** staff members **or** task force responsible for overseeing campus sustainability. (0 points)	
Score Assigned:	3

Score explanation:
Both UCSD Campus and UCSD Health have an Office of Sustainability with full-time staff. The UCSD Health Office of Sustainability includes a dedicated Medical Director of Sustainability. The Office aims to work collaboratively between five medical centers and ten academic campuses to advance sustainable policies and procedures. In 2024, UC San Diego Health received multiple Practice Greenhealth awards, including the Greenhealth Emerald Award, Greening the Operating Room Recognition Award, and Circle of Excellence awards for green building, food, leadership, sustainable procurement and transportation.

UCSD Health Sustainability initiatives here:
https://health.ucsd.edu/vendors/sustainability-practices/

UCSD Campus sustainability initiatives here:
https://sustain.ucsd.edu/focus/index.html

UCSD Practice GreenHealth awards here:
https://practicegreenhealth.org/membership/awards/2024-practice-greenhealth-awards-winners

5.2. How ambitious is your institution's plan to reduce its own carbon footprint?

The institution has a **written and approved plan** to achieve carbon neutrality by **2030** (5 points)
The institution has a **written and approved plan** to achieve carbon neutrality by **2040** (3 points)
The institution has a stated goal of carbon neutrality by **2040** but has **not created a plan** to reach that goal or the **plan is inadequate** (1 point)
The institution/medical school does **not** meet any of the requirements listed above (0 points)

Score Assigned:	5

Score explanation:
UCSD is now focusing more on decarbonization vs. net neutrality, with the following goal timeline:

- *Achieve 100% clean electricity by 2025*
- *Reduce emissions by 50% by 2030*
- *Decarbonize 90% by 2040*

The UC Climate Action Goals can be found here: https://sustain.ucsd.edu/focus/climate.html

The UCSD Decarbonization study can be found here (UCSD Health falls under this umbrella): https://app.box.com/s/1h8fkg9zsol1sd765f3vok8a238hrv3r

5.3. Do buildings/infrastructure used by the institution for teaching (not including the hospital) utilize renewable energy?
Yes institution buildings are **100%** powered by renewable energy. (3 points)
Institution buildings source **>80%** of energy needs from off-site and/or on-site renewable energy. (2 points)
Institution buildings source **>20%** of energy needs from off-site and/or on-site renewable energy. (1 point)
Institution buildings source **<20%** of energy needs from off-site and/or on-site renewable energy. (0 points)

Score Assigned:	1

Score explanation:
UCSD uses a microgrid as a way to securely distribute clean and reliable energy to power approximately 85% of the electricity used on campus. The microgrid utilizes a 30-megawatt cogeneration plant, 2.8-megawatt energy fuel cell and 2.4 megawatts of solar arrays. ***The campus still utilizes natural gas as the single fuel source in the cogeneration plant to produce both electricity and heat.*** *The system's gas turbines, which are equipped with pollution controls, are 45-50% more efficient than conventional natural gas power plants and produce 75% fewer emissions.*

Energy mix by UCSD entity:

UCSD Campus: powered by the cogeneration plant onsite

UCSD Health:

- *The La Jolla campus acquires ~ 70% of its energy via purchase from the cogeneration plant on UCSD's campus, which burns natural gas.*
- *The Hillcrest campus (located offsite) uses 100% renewable energy as a part of the UC Clean Power Plan, which supplies approximately 40% of the University's purchased electricity and facilitates the use of carbon-free or renewable resources*

UCSD School of Medicine: the medical school uses the following energy mix from the cogeneration plant located on UCSD campus.

- *68% Cogen = Cogeneration plant on UCSD Campus (powered by natural gas)*
- *31% Imports = UC Clean power program (100% renewable)*
- *1% PV = on-site solar plant at UCSD Campus*

5.4. Are sustainable building practices utilised for new and old buildings on the institution's campus, with design and construction of new buildings and remodelling of old buildings conforming to a published sustainability rating system or building code/guideline?	
Yes, sustainable building practices are utilised for new buildings on the institution's campus and the **majority** of old buildings **have been retrofitted** to be more sustainable. (3 points)	
Sustainable building practices are utilised for new buildings on the institution's campus, but most old buildings have **not been retrofitted.** (2 points)	
Sustainable building practices are **inadequately or incompletely** implemented for new buildings. (1 point)	
Sustainability is **not considered** in the construction of new buildings. (0 points)	
Score Assigned:	2

Score explanation:
The UC Sustainable Building Practices policy outlines requirements for new buildings, including all campuses and health systems. The following highlights are applicable to new construction projects under UCSD Health as well:

- *All new buildings will at a minimum achieve a USGBC LEED "Gold"*
- *No new buildings shall use fossil fuels for space & water heating*
- *Parksmart "Silver" certification*
- *Design, construction, and commission acute care/hospital facilities & medical office buildings that outperform CBC energy efficiency standards by at least 30% or meet designated EUI targets*

See the "Green Building Design" policy outlined by the University of California here:
https://policy.ucop.edu/doc/3100155/SustainablePractices

Older buildings utilized by the School of Medicine and medical campus are not fully retrofitted but are adapted as best possible to promote greener spaces and reduced energy consumption.

5.5. Has the institution implemented strategies to encourage and provide environmentally-friendly transportation options for students and reduce the environmental impact of commuting?	
Yes, the institution has implemented strategies to encourage and provide **environmentally-friendly transportation options** such as safe active transport, public transport, or carpooling and these options are well-utilised by students. Alternatively, the campus location is not amenable to unsustainable forms of transportation by default. (2 points)	
The institution has implemented **some** strategies to provide environmentally-friendly transportation options, but the options are **unsatisfactorily** accessible or advertised. (1 point)	
The institution has **not** implemented strategies to encourage and provide environmentally-friendly transportation options. (0 points)	
Score Assigned:	2
Score explanation: *UCSD has been involved in a major trolley extension that opened in 2022, with several stops along academic and medical center campuses. Matriculated UCSD students receive a free MTS trolley pass. UCSD Health employes receive a free three month pass, and a heavily discounted pass thereafter.* *UCSD's new graduate housing complex which opened in 2020 includes a 10-foot-wide cycle track and a separate 6-foot-wide pedestrian walkay connecting graduate students to the campus and medical facilities housed in La Jolla. UCSD campus has also implemented a shared bike and scooter program for onsite commuting around campus.* *It is worth noting that UCSD Health hospital campuses are spread apart around San Diego, while the medical school campus is located in La Jolla. As a result, commuting is often necessary and most students and healthcare workers employed must utilize personal transportation.*	

5.6. Does your institution have an organics recycling program (compost) and a conventional recycling program (aluminium/paper/plastic/glass)?	
Yes, the institution has **both** compost **and** recycling programs accessible to students and faculty. (2 points)	
The institution has **either** recycling **or** compost programs accessible to students and faculty, but not both. (1 point)	
There is **no** compost or recycling program at the medical school. (0 points)	
Score Assigned:	2
Score explanation: *UCSD Campus has implemented compost and recycling programs with appropriate bins available to students and staff. Compost/organics waste bins and separated recycling bins can be found only in Club Med, the primary dining choice available near medical school buildings, which is open until 2-3 pm weekdays. Otherwise, recycling bins can be found near the entrance to each of 4 levels of the Medical Education and Telemedicine building, available to medical students 24/7. Recycling*	

bins can be inconsistently found in common areas (student lounge, academic community rooms, conference rooms). *UCSD Health kitchens have implemented "back of the house" composting programs to recycle excess food that is not suitable for donation instead of sending it to landfill. UCSD Health partners with a vendor named Denali, which has an Organix Recycling Program that returns these food scraps back to the food chain by turning them into animal feed. Of note, efforts are underway to start working on the "front of house" composting so that cafeteria patrons can also participate in composting (right now, they can only recycle).*

5.7. Does the institution apply sustainability criteria when making decisions about the campus food and beverage selections (e.g. local sourcing, reduced meat, decreased plastic packaging)?	
Yes, the institution has a**dequate s**ustainability requirements for food and beverages, including meat-free days or no red-meat, and **is engaged** in efforts to increase food and beverage sustainability. (3 points)	
There are sustainability guidelines for food and beverages, but they are **insufficient or optional**. The institution **is engaged** in efforts to increase food and beverage sustainability. (2 points)	
There are sustainability guidelines for food and beverages, but they are **insufficient or optional.** The institution is **not** engaged in efforts to increase food and beverage sustainability. (1 point)	
There are **no** sustainability guidelines for food and beverages. (0 points)	
Score Assigned:	3
Score explanation: *UCSD Health joined the Coolfood Pledge, with a commitment to reduce GHG emissions associated with the food we serve by 25% by 2030. In order to achieve this goal, efforts include providing more plant-based meal options in hospital food menus, building relatinships with food suppliers, increasing access to sustainabily produced meat and poultry, and education. More information on the pledge can be found at this link: https://healthcareclimateaction.org/CLI_UC_SanDiegoHealth* *In 2024, UCSD Health Nutrition received a Practice Greenhealth Circle of Excellence award for the kitchen's efforts to incorporate sustainable practices.*	

5.8. Does the institution apply sustainability criteria when making decisions about supply procurement?
Yes, the institution has **adequate** sustainability requirements for supply procurement **and** is **engaged** in efforts to increase sustainability of procurement. (3 points)
There are sustainability guidelines for supply procurement, but they are **insufficient or optional.** The institution is **engaged** in efforts to increase sustainability of procurement. (2 points)
There are sustainability guidelines for supply procurement, but they are **insufficient or optional.** The institution is **not engaged** in efforts to increase sustainability of procurement. (1 point)

There are **no** sustainability guidelines for supply procurement. (0 points)	
Score Assigned:	3
Score explanation: *UCSD Health and medical school are bound by the procurement policies outlined by the UC System wide procurement policy:* *https://www.ucop.edu/procurement-services/for-ucstaff/sustainable-procurement/index.html* *https://procurement.ucop.edu/sites/default/files/2023-09/sustainableprocurementguidelines.pdf* *Additionally, the UCSD Health Sustainability Team works actively with Supply Chain and the Planning Teams to implement more sustainable procurements.*	

5.9. Are there sustainability requirements or guidelines for events hosted at the institution?	
Every event hosted at the institution **must** abide by sustainability criteria. (2 points)	
The institution **strongly recommends or incentivizes** sustainability measures, but they are **not required.** (1 point)	
There are **no** sustainability guidelines for institution events. (0 points)	
Score Assigned:	1
Score explanation: *The UCSD undergraduate campus sustainability team has published helpful tips on hosting a green event that can be found here: https://sustain.ucsd.edu/involve/green-events.html#Food-Service* *However, there are no specific sustainability guidelines or requirements for events, including those hosted at UCSD health or the medical school campus. While the medicine campus has no formal guidelines or protocols regarding sustainable events, staff guidelines follow recycling and trash protocol following all types of events (professional conferences, student interest group meetings, academic community contests).*	

5.10. Does your institution have programs and initiatives to assist with making lab spaces more environmentally sustainable?	
Yes, the institution has **programs** and **initiatives** to assist with making lab spaces more environmentally sustainable. (2 points)	
There are **guidelines** on how to make lab spaces more environmentally sustainable, but not programs or initiatives. (1 point)	
There are **no** efforts at the institution to make lab spaces more sustainable. (0 points)	
Score Assigned:	2
Score explanation:	

UC San Diego's Green Labs program was formed in 2013 and its efforts engage laboratory faculty, staff and students in performing assessments, reducing waste and improving recycling, replacing inefficient equipment and transitioning to best practices. UC San Diego has certified 108 labs. More information on the Green Labs Program can be found here: https://sustain.ucsd.edu/involve/green-labs.html

5.11. Does your institution's endowment portfolio investments include fossil-fuel companies?	
The institution is **entirely divested** from fossil fuels **and** has made a **commitment to reinvest divested funds** into renewable energy companies or renewable energy campus initiatives. (4 points)	
The institution is **entirely divested** from fossil fuels. (3 points)	
The institution has **partially divested** from fossil fuel companies **or** has made a **commitment to fully divest**, but **currently** still has fossil fuel investments. (2 points)	
The institution has **not divested** from fossil-fuel companies, but faculty and/or students are **conducting organised advocacy** for divestment. (1 point)	
Yes, the institution has investments with fossil-fuel companies and there have been **no efforts** to change that. (0 points)	
Score Assigned:	4
Score explanation: *The UC System, including UCSD, is fully divested from coal, tar sands, and fossil fuels. More information can be found at the press releases from the articles below:* *The University of California has fully divested from fossil fuels. It's the largest school in the US to do it | CNN* *UC's investment portfolios fossil free; clean energy investments top $1 billion | University of California*	

Section Total (28 out of 32)	**87.5%**

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Grading

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

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

**Within each grade bracket, a score in the top 5% (_5 to_9%), receives a "+", and a score in the bottom 5% (_0-_4%) receives a "--". For example, a percentage score of 78% would be a B+.*

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

Section	Raw Score %	Letter Grade
Planetary Health Curriculum (30%)	(55/72) x 100 = 76.4%	B+
Interdisciplinary Research (17.5%)	(15/17) x 100 = 88%	A
Community Outreach and Advocacy (17.5%)	(14/14) x 100 = 100%	A+
Support for Student-led Planetary Health Initiatives (17.5%)	(10/15) x 100= 66.67%	B
Campus Sustainability (17.5%)	(28/32) x 100 = 87.5%	A
Institutional Grade	**(Ax0.3 + Bx0.175 + Cx0.175 + Dx0.175 + Ex0.175) = 82.80%**	**A-**

Report Card Trends

Section Overview
This graph demonstrates trends in overall and section grades for the years in which UC San Diego has participated in the Planetary Health Report Card initiative.