



Planetary Health Report Card:

David Geffen School of Medicine at UCLA



2020-2021 Contributing Team:

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Summary of Findings

Curriculum	
<ul style="list-style-type: none"> ● Strengths: Within the preclinical curriculum, Blocks 2 and 6 meaningfully discuss intersections between climate change, environmental sustainability, and the health of patients and communities. There are also multiple sessions touching on how and why to take an environmental history during patient care. ● Opportunities: Broadly, there is limited place-based education highlighting the particular environmental precarity of Los Angeles and southern California as it relates to climate, pollutant, and heat exposures, and the health impacts that these incur on patients in our community - particular patients from Black, Latinx, and indigenous communities. There is a paucity of elective opportunities to explore these themes further. ● Recommendations: Longitudinal discussions that link the health impacts of climate change and environmental injustice to the block material would be useful in demonstrating that these themes have relevance across specialties, as would the inclusion of skills-based sessions around how to discuss climate change with patients. Additional climate electives or other opportunities for students with particular interest could be made available. 	
Interdisciplinary Research	
<ul style="list-style-type: none"> ● Strengths: DGSOM is part of the Global Consortium on Climate & Health Education, and within the broader institution, there are many other schools and departments deeply engaged in climate research. ● Opportunities: There are few faculty members within DGSOM who have a primary research or clinical interest in climate and health, and those that do are not collated in an accessible way. There is not a mechanism as it stands for frontline community groups to advocate for inclusion of climate issues on the research agenda. ● Recommendations: A clear institutional home for DGSOM faculty invested in activities around climate and health (as proposed in the Global Health Program’s new structure, for example) that has mechanisms that engage community organizations invested in climate justice would improve interdisciplinary research. 	
Community Outreach and Advocacy	
<ul style="list-style-type: none"> ● Strengths: Academic-community partnerships seem to be growing around climate change. ● Opportunities: There are limited patient-and provider-centered educational resources about climate and health, and more deliberate student engagement about climate-focused community partnerships could be provided. ● Recommendations: More community-facing events, resources, and direct partnerships would better situate DGSOM to uplift community experiences and stand in solidarity against climate inequities in Los Angeles. 	
Support for Student-Led Initiatives	
<ul style="list-style-type: none"> ● Strengths: Multiple funding streams exist to support student research and initiatives around climate change. ● Opportunities: There is limited student representation concerning decisions about sustainability. ● Recommendations: Better organized, explicit material about support for student initiatives related to climate change and sustainability may help increase student engagement around these issues. 	
Sustainability	
<ul style="list-style-type: none"> ● Strengths: There are a number of promising initiatives within UCLA Health and the broader UCLA campus. ● Opportunities: Procurement practices and medical school building energy practices could be improved. ● Recommendations: More messaging about the exciting successes within UCLA could be communicated to students, and DGSOM could continue to learn from UCLA Health’s example around renewable energy usage. 	

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: “Zoobiquity: the Animal Nature of Human Medicine” is a new selective course offered in Spring 2021 by Dr. Natterson-Horowitz, and the course’s central premise is that climate change, ecological degradation, habitat destruction and other anthropogenic effects are erasing the lines that once demarcated human and animal environments. Consequently multiple nonhuman animal species with vulnerability to 'human' illness are now exposed to comparable environmental effects.. Per the course chair of a MS1/MS2 Selective titled “Sugar, Stress, and Society: The Determinants of Children’s Health,” the selective includes a lecture about children and the environment.

However, there was also no specific clinical elective course focused on ESH or planetary health. Per student polling and with confirmation from the course chair, the clinical Preventive Medicine elective also covered planetary health topics such as the outsized impact on marginalized populations, health benefits of a plant-based diet, changing patterns of infectious diseases, and waste generated by the healthcare system.

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.
<p><i>Score explanation: DGSOM's preclinical Block 2 is titled "Cardiovascular, Renal, and Respiratory Medicine." Dr. Holly Middlekauff teaches about acute heat stress physiology during this block, introducing the topic with mention of an athlete who developed heat illness. This year, Dr. Middlekauff incorporated case discussions around heat illness in farmworkers in the California Central Valley, including mention of disproportionate heat exposure. Heat illness is mentioned elsewhere in the curriculum, however it is not specifically linked to climate change or with broader focus on socioeconomic/racial disparities.</i></p>	

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.
<p><i>Score explanation: The Doctoring 1 course features many clinical scenarios with standardized patients. One of these scenarios includes an unhoused patient. The curriculum includes discussion around patients' ability to seek shelter during various weather conditions, however not specifically extreme weather conditions. Within Block 6, one slide within a lecture delivered by Dr. Vijayan discusses natural disasters and their effects, particularly with regard to infectious disease spread and as evident through the example of Hurricane Katrina in New Orleans.</i></p> <p><i>Impact of extreme weather on healthcare systems however, was not covered in the core curriculum or elective coursework.</i></p>	

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.
<p><i>Score explanation: Preclinical Block 6, also known as “Foundations of Medicine II,” discusses social determinants of health, including a section of a lecture on “Neighborhood and Built Environment” in relation to infectious disease patterns. Our need to prepare for epidemics on a changing planet is addressed - climate change is included on a slide listing the most urgent health changes in the coming decade. However, there is no specific lecture dedicated to this and no other Block Chairs or Clerkship chairs contacted were aware of any formal teaching on this matter. The topic is briefly touched upon in the Preventive Medicine clinical elective for senior students.</i></p>	

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.
<p><i>Score explanation: In pre-clinical Block 2, students are taught about air pollution in relation to chronic obstructive pulmonary disease (COPD). The topic is re-visited again in pre-clinical Block 9 as part of a discussion about the indoor and outdoor effects of air pollution. Ultimately, the effects of air pollution are taught in depth, however piece-meal, despite no direct discussion of climate change in relation to cardiorespiratory health.</i></p> <p><i>In Clinical Skills for MS1s case stems are often used to set the scene for teaching the physical exam. One of the cases used is an asthma exacerbation incited by recent wildfires. No direct link to climate change is made. There is also mention of environmental toxins as a risk factor for neurological disease as part of the MS3 Neurology Clerkship but no direct link to climate change is made.</i></p>	

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.
<p><i>Score explanation: The mental health and neuropsychological effects of environmental degradation and climate change are not explored in depth in our pre-clinical Neurology or Psychiatry blocks or the corresponding Neurology and Psychiatry clerkships. There is mention of exposure to pesticides as a</i></p>	

risk factor for development of Parkinson's Disease in the MS3 Neurology clerkship, however there is no explicit discussion of its link to climate change and broader environmental degradation.

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: While patient food and water insecurity often comes up in the clinical setting, there is no formal teaching on this topic linking it to ecosystem health and climate change in the curriculum that we could find after a thorough search of the pre-clinical and clinical year curricula. The Foundations to Medicine and Endocrine Curricular Leads, in addition to Internal and Family Medicine Clerkship Chairs, were contacted and agreed that the relationship between these factors was not addressed in any formal teaching. Within the Doctoring I curriculum in the MS1 year, the chairs acknowledged that they do discuss relationships between health, individual food and water security, but not as embedded within the larger context of ecosystem health and climate change.

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: While social determinants of health is addressed in many pre-clinical and clinical year didactic sessions, no explicit mention of the disproportionate burden of climate change on the mentioned populations is made. Within the aforementioned Block 6 lecture, though extreme weather events are connected to the rise of disproportionate infectious disease for refugee and IDP communities, the increase in weather events of these types is not linked to climate change. Within the Doctoring I curriculum, during the "Clinical Basics for the unhoused patient" session, attention is paid to patients' ability to seek shelter during various weather conditions, but this ability is not situated within a broader context of climate change and its disproportionate impact on such patients. Within the Mobile Clinic selective, didactics do not explicitly link the vulnerability of unhoused individuals to climate change.

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: All preclinical block chairs, clerkship chairs, and longitudinal course chairs were contacted about this question. Those who responded agreed that this was not covered in their portion of the core curriculum. The global health selective leadership was contacted and explained that incorporating climate change and its unequal health impacts into the curriculum is in the works for the upcoming years, however has not yet been achieved. However, within the global health program's Global Health & Social Medicine Rounds series, one speaker - Dr. Stephanie Pincetl - addressed humanity's dependence on oil and its by-products, including how it has transformed human existence.

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 Endocrine/Reproductive pre-clinical block chairs, the OB/GYN clinical clerkship, and Women's Health selective course chairs were contacted in regards to this question. All agreed that the reproductive health effects of industry-related environmental toxins were not specifically covered. Per Dr. Janet Pregler, chair of the selective titled "Perspectives in Women's Health," this elective course touches briefly on disparate exposure to environmental toxins as a factor contributing to racial disparities in maternal mortality.

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.
<p><i>Score explanation: All preclinical block chairs, clerkship chairs, and numerous elective and curricular thread chairs were contacted about this question. All who responded agreed there is no mention of the impact of environmental threats specifically on UCLA's surrounding communities in their respective portions of the curriculum, save for one brief mention on a slide in Block 6 linking air pollution to living near freeways. This includes the highly polluted South Bay, surrounding one of DGSOM's main clinical sites (Harbor-UCLA).</i></p>	

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.
<p><i>Score explanation: There is no mention specifically about the unique impact of climate and environmental health challenges on Indigenous communities.</i></p>	

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.
<p><i>Score explanation: In the Neurology clerkship, MS3 students learn about pesticide exposure and its effects on development of Parkinson's Disease. There is discussion about ongoing UCLA research efforts to quantify this risk in California's Central Valley. Explicit, in-depth teaching around the outsized impact of such toxins on multiple marginalized populations is lacking.</i></p>	

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: Per student polling, this topic was briefly covered in a lecture on Diet during pre-clinical years. Another student commented that the health benefits but not environmental benefits were touched upon during a clinical clerkship. The Preventive Medicine elective also touches on this topic briefly.

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: UCLA medical students complete a “Transition to Clerkships” course at the start of their third year clinical duties. The chairs of “Transition to Clerkships” confirmed that waste generated by the healthcare system is not covered in this course, nor ways to advocate for sustainable best practices. The chair of the MS3 longitudinal Systems Based Health Care unfortunately did not reply to our inquiry, however consensus among several students who completed the course within the past year is that this topic was not covered.

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
<p><i>Score explanation: Strategies for conversing with patients are primarily covered in Doctoring 1 and 2, taken by MS1 and MS2 students, respectively. The course chairs for each of these courses confirmed that climate change is not directly discussed in these courses, although both were very open to incorporating climate change through DGSOM's upcoming curricular redesign.</i></p>	

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.
<p><i>Score explanation: Per Doctoring 1 and 2 course chairs and student polling, the exposure history taught to students is primarily limited to infectious contacts, animal exposure, sexual behaviors, and substance use, though there are discrete cases highlighting the importance of accounting for exposures in the home (mold ↔ asthma in doctoring 1) and broader exposures in the environment (wildfires ← → asthma exacerbations in Clinical Skills). Though these bright spots are encouraging, their limited nature speaks to the broader absence of a general strategy to taking an exposure history - there is still no mention of exposure to oil drilling, unsafe water sources, or air pollution in the context of taking an exposure history.</i></p>	

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.
<p><i>Score explanation: While we unfortunately did not hear back from our curricular deans in time to include their thoughts, our overall gestalt from talking to many faculty involved in the curriculum is that there is a great desire to incorporate ESH/planetary health. The Global Health Program is redesigning their curriculum to include climate change as a key thematic area, for example.</i></p>	

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: The DGSOM Curriculum includes Phase 1 “Human Biology and Disease,” Phase 2 “Core Clinical Clerkships,” and Phase 3 “4th Year Colleges.” Phase 1 includes nine curricular threads, intended to be the longitudinal portions of our curriculum. These include anatomy/histopathology/embryology, biochemistry, clinical reasoning, clinical skills, genetics, ophthalmology, pharmacology, and preceptorship. There is no curricular thread that focuses on planetary health or ESH. There is also no longitudinal teaching around planetary health/ESH in Phase 2 or 3.

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: There is no such program to incentivize faculty/departments to develop new planetary health/ESH courses or to incorporate these topics.

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.
<p><i>Score explanation: While the UCLA institution includes numerous researchers investigating planetary health and sustainability, our search yielded few specifically working within the David Geffen School of Medicine. On the DGSOM website, there is a page titled "Research Overview," from here one can select "Researcher Resources" and then "Faculty Profiles." A search for the keywords "planetary health" yields no hits, while a search for "sustainability" yields Dr. Richard Jackson, an affiliate of the UCLA Fielding School of Public Health. Dr. Priyanka Fernandes is also engaged in climate change related work, and is housed within the UCLA Preventive Medicine and Pediatrics Departments, though climate change is <u>not listed among her primary research interests</u>. Of note, there are 7 unified research themes listed on the DGSOM website which make no mention of planetary health or sustainability.</i></p>	

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.
<i>Score explanation: The UCLA Institute of the Environment and Sustainability (IOES) is dedicated to environmental research and teaching. The IOES partners with the UCLA Emmett Institute on Climate Change, the Luskin Center for Public Policy and the Graduate School of Education.</i>	

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.
<i>Score explanation: Per communication with the Institute of the Environment and Sustainability at UCLA, there was no knowledge of an effort to take input from disproportionately impacted communities.</i>	

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.
<i>Score explanation: The UCLA Sustainability website (https://www.sustain.ucla.edu/) includes resources regarding sustainability-related student organizations, research opportunities, and campus</i>	

initiatives. The site reflects a comprehensive approach to building a sustainable campus, including housing, water, landscape, and transportation initiatives. Multiple research centers and projects are referenced. Despite this, the academics and research section could be improved by listing faculty names and contact information directly on the site, rather than including links to a separate website. A calendar of upcoming events and timely report of funding opportunities are also missing.

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: Within the past year (March 2020-March 2021) UCLA has hosted multiple symposiums on topics related to planetary health. UCLA Law hosted a symposium titled “Human Rights and the Climate Crisis Symposium” on February 28, 2020. The UCLA Luskin Center for Innovation hosted a symposium titled “Climate Adaptation Symposium 2020: Measuring and Addressing Societal Impacts” on September 21, 2020.

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 David Geffen School of Medicine is a member of the Global Consortium on Climate and Health Education, but not the Planetary Health Alliance. The Fielding School of Public Health at UCLA has signed on to both the Global Consortium and the Planetary Health Alliance.

Section Total (x out of 19)	13
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Are there additional research resources offered at your medical school or institution not yet asked about that you would like to describe? If so, please do so below.

Community Outreach and Advocacy

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

1. Does your medical school partner with community organizations to promote planetary and environmental health?	
3	Yes, the medical school meaningfully partners with multiple community organizations to promote planetary and environmental health.
2	Yes, the medical school meaningfully partners with one community organization to promote planetary and environmental health.
1	The institution partners with community organizations, but the medical school is not part of that partnership.
0	No, there is no such meaningful community partnership.
<p><i>Score explanation: The UCLA Clinical and Translational Social Institute (CSTI), which works with the medical school to provide a summer program in health disparities to rising MS2 students, has a partnership with Watts Rising in South LA - a community organization comprised of Watts residents and other partners that seeks to expand urban agriculture and access to healthy organic produce, provide more affordable and sustainable housing, increase low- and no- carbon transportation options, increase community green space, expand our tree canopy, and make our streets safer for walking and biking. Medical faculty (Dr. Keith Norris, etc) are involved in this partnership and students have the ability to become engaged via the CSTI summer program, though there is no explicit particular recruitment about this opportunity from an environmental/planetary health lens.</i></p> <p><i>Healers for Climate Justice, the recently formed medical student group, has connected STAND-LA - a coalition of frontline communities and other organizations in Los Angeles organizing neighborhood drilling in the city from an overt environmental justice lens - to begin to amplify their efforts and engage medical students in these efforts, but this relationship is just initiating and would not yet constitute a meaningful partnership.</i></p>	

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.
<p><i>Score explanation:</i> <i>The UCLA medical school co-hosts the Los Angeles Global Health Conference each year, which seeks to educate and connect with members of the Los Angeles communities about the varying health disparities both in our backyards and around the world. For the past 3 conferences, there have been either panels, threads, or keynote speakers organized specifically under the umbrella of climate and planetary health. However, the audience of this conference tends to be more academic - students, faculty etc - than patient or community focused, and for this reason, it does not fully merit the full points.</i></p>	

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.
<p><i>Score explanation: UCLA Health & DGSOM send out a weekly "Wellness Wednesday" digest, which sometimes includes brief information touching on sustainability themes (Spring Cleaning & Using Sustainable Products, for example), but there is not a stand-alone regular update on sustainability activities within the medical school. Recent DGSOM Weekly Digest, the Dean's Biweekly Report, and DGSOM UME updates were all reviewed and not found to contain regular coverage of issues related to planetary health or sustainable healthcare.</i></p>	

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: In doing a review of the CME opportunities available (as listed in the weekly digest or by searching the CME California website with keywords “Climate,” “environment,” and “planetary”) only one online CME opportunity appeared that is available via DGSOM: a 1 credit session called “Clinician Climate & Health Training” that was originally prepared by the San Francisco Department of Health.

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: There is a video on Environmental Medicine within UCLA Health’s Adult Health Library, which provides free informational health videos for patients. This session touches on topics like molds in the environment, air pollution, and lead poisoning

There were no equivalent resources on either the West-LA VA website; the Cedars Sinai website; or the Olive View or Harbor DHS websites.

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: There were no patient-oriented educational materials available about climate change and health impacts at any affiliated hospital from a review of their online patient video libraries and health educational resources. For example, a review of Vital Signs, a quarterly publication from UCLA Health that provides patients and consumers with health news they can use, from 2016-2021 demonstrates no instances of articles covering climate change and its health impacts.

Section Total (x out of 14)	7
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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.

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.
<p><i>Score explanation: In 2008 the UCLA undergraduate student body voted for a \$4 per quarter student fee to fund projects that promote sustainability at UCLA through The Green Initiative Fund (TGIF). UCLA students, faculty, and staff members are eligible to apply for funding.</i></p>	

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.
<p><i>Score explanation: Medical students are encouraged to participate in research after the first year. Multiple funding opportunities including the Short Term Training Program and Global Short Term Training Program exist. Through this, a student could receive funding for a planetary health or sustainable healthcare-related project. However, there is no explicit fellowship for planetary health or sustainable healthcare research.</i></p>	

3. Does the medical school have a webpage where medical students can find specific information related to planetary health and/or sustainable healthcare activities and mentors within the

medical school? For example, projects achieved, current initiatives underway at the medical school and/or contact of information of potential mentors.	
2	The medical school has a webpage with specific information related to planetary health or sustainable healthcare that includes up-to-date information on relevant initiatives and contact information of potential mentors.
1	There is a medical school webpage that features some information on projects and mentors within planetary health and sustainable healthcare within the medical school, but it lacks key information.
0	There is no medical-school specific webpage for locating planetary health and/or sustainable healthcare projects or mentors.
<p><i>Score explanation: Students can find information on research opportunities by going to the DGSOM Research Overview page and selecting “Departments, Institutes, and Centers.” In addition to internal departments, which unfortunately does not include any specifically dedicated to planetary health, there is a list of UCLA research institutes. This list includes UCLA-DOE, which focuses on fundamental research into biofuels and green chemistry. However, the list does not include the UCLA Institute of the Environment and Sustainability.</i></p>	

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.
<p><i>Score explanation: This year, a group called Healers for Climate Justice was formed by a group of Ms1 through MS4 students. Our group does not have funding because we did not register as a formal student organization this year. Our plan is to do so in the coming year, and we expect full support from our medical school in this regard, yielding full points for this question. We have two UCLA faculty advisors Dr. Gregory Dann and Dr. Priyanka Fernandes.</i></p>	

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: The DGSOM Medical Student Council does not include a position focused on sustainability. There is also no formal sustainability liaison position to a larger 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:

UCLA offers an Urban Gardening Certificate Program, a free, quarter-long course involving engagement in workshops on growing methods, pest management, orchard culture, soil health, and processing.

Within the past year (March 2020-March 2021) UCLA has hosted multiple symposiums on topics related to planetary health. UCLA Law hosted a symposium titled “Human Rights and the Climate Crisis Symposium” on February 28, 2020. The UCLA Luskin Center for Innovation hosted a symposium titled “Climate Adaptation Symposium 2020: Measuring and Addressing Societal Impacts” on September 21, 2020.

There are multiple student organizations dedicated to the wilderness/outdoor engagement. The UCLA Backpacking Club encourages safe and responsible outdoor activities.

Section Total (x out of 15)

10

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
<p><i>Score explanation: UCLA does have a Sustainability Committee with multiple full-time staff dedicated to campus sustainability. There is one full-time staff member dedicated to sustainability for the health system.</i></p>	

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.
<p><i>Score explanation: UCLA has joined the Sustainable LA Grand Challenge, which is a UCLA-wide initiative to transform Los Angeles into a sustainable megacity by 2050. Goals include: 1) expanding renewable energy from 22% in 2015 to 100% by 2050, 2) decreasing water consumption and locally</i></p>	

sourcing 100% of its water needs, and 3) enhancing ecosystem health and biodiversity. UCLA has developed a 5-year work plan (<https://escholarship.org/uc/item/7v39j2xt>) with specific objectives and recommendations from 2015-2020 as part of this process.

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: Medical school buildings like Geffen Hall & the Center for Community Health Sciences do not source the majority of their energy from renewable energy. UCLA has a number of unique challenges due to the main campus being served by a municipal utility, The Los Angeles Department of Water and Power (LADWP) which is a monopoly power provider under the Charter of the City of Los Angeles. Because of the regulatory structure of LADWP, the main financing mechanism for on-site solar utilized by the majority of higher education campuses- a Power Purchase Agreement (PPA)- has been unavailable to UCLA. In addition, LADWP is not part of the CAISO (main California Grid) which means that the large scale renewables purchased by UCOP as a wholesale electricity provider are not available to the UCLA campus. However, including the hospitals, there are promising initiatives - for example, 2019 the UCLA Santa Monica Medical Center transitioned to 100% renewable electricity through the Clean Power Alliance.

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: Geffen Hall, the primary medical education building for UCLA's David Geffen School of Medicine, opened in 2017 and was awarded the LEED Platinum certification. Its design

features sustainable strategies such as public transportation access, bicycle storage, EV charging stations, open air circulation to reduce energy consumption, water efficient fixtures, and a rainwater collection system.

The south towers of the Community Health Sciences building, where medical students also have coursework, were also LEED Platinum certified in 2016 and 2017, respectively.

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: Medical students are encouraged to utilize environmentally-friendly transportation options to travel to campus, and sustainable alternatives are listed on UCLA transportation websites and in the medical student handbook. Many students self-organize carpooling with classmates, and Geffen Hall features bike racks to safely store bicycles during lab or class. In addition, a bus stop is located in front of Geffen Hall for students using public transportation. Each semester, students are provided with a bus pass to navigate and utilize public transportation near and around Westwood.

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: UCLA's medical school buildings all have multiple waste bins located around campus for trash, recycling, and composting. These buildings are accessed by students and faculty, and the 3-in-1 waste bins are placed near dining tables, in hallways outside of labs, and near main entrances to the buildings.

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.
<p><i>Score explanation: The UCLA Health Director of Nutrition has been recognized for excellence within the food service operations in healthcare industry. Locally grown or organic produce now make up at least 65% of the produce purchased, with 25% of the food purchased being sustainable (defined as meeting one or more of the following criteria: locally grown, fair-trade certified and USDA organic food). Approximately 75% of beef and poultry that is purchased has been raised without antibiotics. Also, every Monday is Meatless Monday in the Dining Commons at Ronald Reagan UCLA Medical Center and the Cafeteria at UCLA Santa Monica Medical Center.</i></p>	

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.
<p><i>Score explanation: The UCLA Health Sustainability team has been pushing toward more “Responsible Procurement” initiatives and has identified this area as a key priority within its Sustainability Impact Categories.</i></p>	

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.
<p><i>Score explanation: The “<u>Green Event Certification</u>” program on the main campus exists to provide sustainability guidelines for any planned events, and medical school events would be eligible toward this certification. Green Events indicate that the group hosting is committed to the environment by hosting an event that is eco-friendly, sustainable, and creates minimal waste. As of now, medical school students are not required to abide by this criteria.</i></p>	

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.
<p><i>Score explanation: The UCLA Health sustainability team had initiated a Greening the Labs program right before the COVID pandemic, but due to the large demands placed on the lab by the pandemic, it was halted. The work will be initiated once the situation has normalized. The UCLA campus as an institution does have a FTE staff member devoted to their lab spaces.</i></p>	

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.
<p><i>Score explanation: The University of California (UC) Board of Regents eliminated all fossil-fuel investments in May 2020 for all 10 UC campuses. UC is now recognized as a fully divested educational institution. UC’s new energy investments have developed and accelerated wind and solar capacity, and the UC Investments team is committed to future investments in clean energy, renewable energy, waste conversion, sustainable agriculture and supply chains, and related technology. .</i></p>	

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.

The “Greening the OR” program implemented in partnership between the UCLA Anesthesiology Department and the UCLA Health Sustainability Officer have been working to spread awareness about the disproportionate impact of desflurane use. Initiatives include developing documents within ORs that demonstrate the carbon impacts of different gases, a grand rounds lecture highlighting the climate impact of desflurane, and trying to get desflurane vaporizers removed from default anesthesia devices so that the gas is only available on request.

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 David Geffen School of Medicine at UCLA

The following table presents the individual section grades and overall institutional grade for the David Geffen School of Medicine at UCLA 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%)	12 / 19 = 68%	B
Community Outreach and Advocacy (17.5%)	7 / 14 = 50%	C
Support for Student-led Planetary Health Initiatives (17.5%)	10 / 15 = 67%	B
Campus Sustainability (17.5%)	24 / 29 = 83%	A-
Institutional Grade	59%	C+

