

# Planetary Health Report Card (Medicine)

UC San Diego



#### 2023-2024 Contributing Team:

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### **Summary of Findings**

# Overall B

#### <u>Curriculum</u> C

UCSD SOM's core curriculum includes discussions on the intersections of planetary health, environmental racism, and social determinants of health in the required 2-year course, Equity in Systems Science (ESS). Planetary health topics are covered in 2 clinical cases for a total of 12 hours of planetary health-focused class time in the preclinical curriculum. Of note in the clinical curriculum: the Transition to Residency course offers an optional mass casualty simulation run by the Wilderness Medicine team that includes education in planetary health. Outside of the ESS course, the effects of climate change on health are briefly mentioned in core preclinical lectures.

**Recommendations:** Develop an elective on planetary health and sustainability. Integrate climate change, environmental racism, and environmental determinants of health longitudinally in the core curriculum alongside current offerings in the Equity and Systems Science course, specifically content on effects on cardiovascular health and reproductive health. Within the 4th year residency transition courses, we recommend including didactics and discussions on the role of hospital systems as waste and greenhouse gas producers.

#### **Interdisciplinary Research**

B+

The UCSD School of Medicine is home to many faculty members who are focused on planetary health and/or healthcare sustainability research. In addition to UCSD's recent Heat and Human Health Summit, the institution has multiple departments dedicated to such research.

**Recommendations**: Establish a process in which community members can influence the research being conducted at the School of Medicine. Join a national planetary health organization, such as the Planetary Health Alliance.

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

A

UC San Diego hosted the first annual San Diego Heat and Human Health Summit this past year to raise awareness about the impacts of increasing temperatures on human health. The health system has resources available for patients to learn about environmental exposures, and offers trainings like the Cool Campus Challenge for providers. **Recommendations**: Develop more relationships with community organizations and increase updated communications with medical students regarding planetary health and sustainable healthcare.

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

B

Currently, UCSD SOM does not offer a dedicated program or organization directly within the Medical School for planetary health or climate change work. However, there are multiple established interest groups and UCSD Extended Studies courses with faculty support that allow students to explore planetary health opportunities. **Recommendations:** We recommend the medical school publish a website that publicizes planetary health and climate change research to introduce students to possible research projects and faculty members for mentorship.

#### **Campus Sustainability**

A

UCSD Health and Medical School campuses both have undertaken sustainability initiatives. The medical school also undertakes sustainability measures in line with broader UCSD sustainability policy guidelines. These initiatives include joining the White House Health Sector pledge to reduce carbon footprint, CoolFood pledge, Green Clinic certification, Green Lab certifications, and also implementing renewable energy as a predominant power source for newly constructed facilities.

**Recommendations:** Expand on current initiatives, reduce the use of non-renewable energy sources, and increase the use of renewable energy sources. Continue efforts to reduce waste via implementation of reusable wares.

### **Statement of Purpose**

Planetary health is human health.

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

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

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

#### **Definitions & Other Considerations**

#### **Definitions:**

- Planetary Health: is described by the Planetary Health Alliance as "the health of human 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 vs. Institution: When "medical school" is specified in the report card, this
  only refers to curriculum and resources offered by the School of Medicine and does not
  include offerings from other parts of the university (e.g. undergraduate departments (USA),
  other related departments (e.g. Public Health, Population Health departments). In contrast,
  when "institution" is specified in the report card, we are referring to the university more

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

- Environmental history (Metric #19 in Curriculum Section): This is a series of questions providers are taught to ask during medical encounters that 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 mold after flooding. Key components include place of residence over the lifecourse, occupational history, food and water sources (e.g. meat from industrial feeding operations, regular fishing in contaminated water, access to clean drinking water), and exposure to air pollution.
- **Elective:** The word "elective" refers to an optional course or lecture series that a medical student can opt to take part in but is not a requirement in the core curriculum. Generally, these elective courses take place in the preclinical curriculum but vary by school.
- Clerkship: This is a term used in the USA to refer to placements that medical students go on e.g. Pediatrics, General medicine, Psychiatry. In the UK these are referred to as rotations or placements.

#### Other considerations:

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

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

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

Curriculum: General

| 1.1. Did your <u>medical school</u> offer elective courses (student selected modules) to engage students in Education for Sustainable Healthcare or Planetary Health in the last year? |   |
|--|---|
| 3  | Yes, the medical school has offered <b>more than one</b> elective whose primary focus is ESH/planetary health in the past year.   |
| 2  | Yes, the medical school has offered <b>one</b> elective whose primary focus is ESH/planetary health in the past year.   |
| 1  | The medical school does <b>not</b> have any electives whose primary focus is ESH/planetary health, but there are one or more electives that include a <b>lecture</b> on planetary health. |
| 0  | No, the medical school has <b>not</b> offered any electives on planetary health or electives that include ESH/planetary health topics in the past year.                                   |
| Score explanation: There are no electives offered on planetary health or related topics.   |   |

#### Curriculum: Health Effects of Climate Change

| 1.2. Does your <u>medical school</u> curriculum address the relationship between extreme heat, health risks, and climate change? |  |
|--|--|
| 3  | This topic was explored in depth by the core curriculum.             |
| 2  | This topic was <b>briefly</b> covered in the <b>core</b> curriculum. |
| 1  | This topic was covered in <b>elective</b> coursework.                |
| 0  | This topic was <b>not</b> covered.                                   |

*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.

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

| 3 | This topic was explored in depth by the core curriculum.             |
|---|--|
| 2 | This topic was <b>briefly</b> covered in the <b>core</b> curriculum. |
| 1 | This topic was covered in <b>elective</b> coursework.                |
| 0 | This topic was <b>not</b> covered.                                   |

*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.

# $1.4.\ Does\ your\ \underline{medical\ school}\ curriculum\ address\ the\ impact\ of\ climate\ change\ on\ the\ changing\ patterns\ of\ infectious\ diseases?$

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

*Score explanation:* In the 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 <u>medical school</u> curriculum address the respiratory health effects of climate change and air pollution?

- 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 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 <u>medical school</u> curriculum address the cardiovascular health effects of climate change, including increased heat?

| 3 | This topic was explored in depth by the core curriculum.             |
|---|--|
| 2 | This topic was <b>briefly</b> covered in the <b>core</b> curriculum. |
| 1 | This topic was covered in <b>elective</b> coursework.                |
| 0 | This topic was <b>not</b> covered.                                   |

Score explanation: No lectures in any course in the MS1 or MS2 curriculum address the CVS effects of climate change and heat.

# 1.7. 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. O This topic was not covered.

*Score explanation:* No lectures in any course in the MS1 or MS2 curriculum address the mental health and neuropsychological effects of environmental degradation and climate change.

# 1.8. 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. O This topic was not covered.

*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. There is no discussion of climate change and ecosystem health.

| 1.9. Does your <u>medical school</u> curriculum address the outsized impact of climate change on marginalized populations such as those with low SES, women, communities of color, Indigenous communities, children, homeless populations, and older adults? |  |
|--|--|
| 3  | This topic was explored in depth by the core curriculum.             |
| 2  | This topic was <b>briefly</b> covered in the <b>core</b> curriculum. |

| 1 | This topic was covered in <b>elective</b> coursework. |
|---|---|
| 0 | This topic was <b>not</b> covered.                    |

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? |  |
|--|--|
| 3  | This topic was explored in depth by the core curriculum.             |
| 2  | This topic was <b>briefly</b> covered in the <b>core</b> curriculum. |
| 1  | This topic was covered in <b>elective</b> coursework.                |
| 0  | This topic was <b>not</b> covered.                                   |
| Score explanation: No lectures in any course in the MS1 or MS2 curriculum address the unequal                            |  |

*Score explanation:* No lectures in any course in the MS1 or MS2 curriculum address the unequal regional health impacts of climate change globally.

#### 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)? |  |
|---|--|
| 3   | This topic was explored in depth by the core curriculum.             |
| 2   | This topic was <b>briefly</b> covered in the <b>core</b> curriculum. |
| 1   | This topic was covered in <b>elective</b> coursework.                |
| 0   | This topic was <b>not</b> covered.                                   |
| Score explanation: No lectures in any course in the MS1 or MS2 curriculum address the reproductive  |  |

1.12. Does your <u>medical school</u> curriculum address important human-caused environmental

health effects of industry-related environmental toxins.

| threats that are relevant to the university's surrounding community? |  |
|--|--|
| 3  | This topic was explored <b>in depth</b> by the <b>core</b> curriculum. |
| 2  | This topic was <b>briefly</b> covered in the <b>core</b> curriculum.   |
| 1  | This topic was covered in <b>elective</b> coursework.                  |

0 This topic was **not** covered.

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 medical school emphasize the importance of Indigenous knowledge and value systems as essential components of planetary health solutions? Indigenous knowledge and value systems are integrated throughout the medical school's planetary health education Indigenous knowledge and value systems as essential components of planetary health solutions are included briefly in the core curriculum. Indigenous knowledge and value systems as essential components of planetary health solutions are included in elective coursework. This topic was not covered.

*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.

# 1.14. Does your <u>medical school</u> curriculum address the outsized impact of anthropogenic environmental toxins on marginalized populations such as those with low SES, women, communities of color, children, homeless populations, Indigenous populations, and older adults?

- 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 ESS course (required MS1/MS2 core curriculum) briefly touches upon a variety of topics in environmental racism and anthropogenic pollutants. There is specific emphasis placed on Latinx/Chicano communities in San Diego as well as Indigenous communities in greater San Diego County.

#### 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.
- 2 This topic was **briefly** covered in the **core** curriculum.

| 1 | This topic was covered in <b>elective</b> coursework. |
|---|---|
| 0 | This topic was <b>not</b> covered.                    |

*Score explanation:* No lectures in any course in the MS1 or MS2 curriculum address the environmental and health co-benefits of a plant-based diet.

| 1.16. Does your <u>medical school</u> curriculum address the carbon footprint of healthcare systems? |  |
|--|--|
| 3  | This topic was explored in depth by the core curriculum              |
| 2  | This topic was <b>briefly</b> covered in the <b>core</b> curriculum. |
| 1  | This topic was covered in <b>elective</b> coursework.                |
| 0  | This topic was <b>not</b> covered.                                   |

*Score explanation:* No lectures in any course in the MS1 or MS2 curriculum address the carbon footprint of healthcare systems.

|   | 1.17. Does your <u>medical school</u> curriculum cover these components of sustainable clinical practice in the <u>core</u> curriculum? (points for each)  |  |
|---|--|--|
| 2 | The health <b>and</b> environmental <b>co-benefits</b> of <b>avoiding</b> over-medicalisation, over-investigation and/or over-treatment  |  |
| 2 | The environmental impact of <b>pharmaceuticals</b> and over-prescribing as a cause of climate health harm. Alternatively teaching on <b>deprescribing</b> where possible and its environmental and health co-benefits would fulfill this metric.   |  |
| 1 | The health <b>and</b> environmental <b>co-benefits</b> of <b>non-pharmaceutical management</b> of conditions where appropriate such as exercise or yoga classes for type 2 diabetes; social group activities such as gardening for mental health conditions; active transport such as bicycle schemes. This is commonly known as social prescribing in the UK. |  |
| 1 | Environmental impact of <b>surgical</b> healthcare on planetary health and the climate crisis, and how can it be mitigated   |  |
| 1 | The impact of <b>anaesthetic</b> gases on the healthcare carbon footprint and ways to reduce anesthesia environmental impacts, such as total intravenous anaesthesia or choosing less environmentally harmful anaesthetic gas options with reduced greenhouse gas emissions  |  |
| 1 | The impact of <b>inhalers</b> on the healthcare carbon footprint and the environmental benefit of dry powdered inhalers over metered dose inhalers.  |  |
| 1 | Waste production within healthcare clinics and strategies for reducing waste in clinical activities (e.g. single use items in the inpatient or outpatient setting)   |  |
|   | 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. 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.

#### Curriculum: Clinical Applications

# 1.18. 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? Yes, there are strategies introduced for having conversations with patients about climate change in the core curriculum. Yes, there are strategies introduced for having conversations with patients about climate change in elective coursework. No, there are not strategies introduced for having conversations with patients about climate change change

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 medical school's curriculum introduce strategies for taking an environmental history or exposure history? 2 Yes, the core curriculum includes strategies for taking an environmental history. 1 Only elective coursework includes strategies for taking an environmental history. 0 No, the curriculum does not include strategies for taking an environmental history.

Score explanation: 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.

Yes, the medical school is currently in the process of making minor improvements to ESH/planetary health education.

No, there are no improvements to planetary health education in progress.

*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?

- 6 Planetary health/ESH topics are **well integrated** into the core medical school curriculum.
- 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).
- There is **minimal/no** education for sustainable healthcare.

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
- No, the **medical school** does **not** have a specific faculty/staff member responsible for overseeing curricular integration of planetary health and sustainable healthcare.

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.

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

### **Interdisciplinary Research**

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

| 2.1. Are there researchers engaged in planetary health research and healthcare sustainability research at your <u>medical school</u> ? |   |  |
|--|---|--|
| 3  | Yes, there are faculty members at the <b>medical school</b> who have a <b>primary r</b> esearch focus in planetary health <b>or</b> healthcare sustainability.  |  |
| 2  | Yes, there are individual faculty members at the <b>medical school</b> who are conducting research <b>related</b> 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 <b>institution</b> , but none associated with the medical school.  |  |
| 0  | No, there are <b>no</b> planetary health and/or healthcare sustainability researchers at the <b>institution</b> or <b>medical school</b> at this time.  |  |

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 and Public Health. His research focuses on the impacts of climate change on high-risk and vulnerable populations, and he co-led and co-authored a book on planetary health: Health of People, Health of Planet and Our Responsibility.
- Tarik Benmarhnia, PhD is a Professor in the Department of Family Medicine and Public Health whose <u>interdisciplinary lab</u> investigates the impact of the environment and severe weather events on population health and environmental justice.
- Jack Gilbert, PhD is a Professor in the Department of Pediatrics whose <u>lab</u> 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 Ramanathan, PhD 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 2023, she published a few <u>articles</u> 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. 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. There is an Occupational and Environmental Health department, but no interdisciplinary department or institute for planetary health research.

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 <u>medical school</u>?

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

There is **no** dedicated department or institute.

0

Score explanation: There are no efforts to create such a process at the UCSD School of Medicine. However, the Center for Community Health at UCSD is in the process of establishing a Community Learning Food Justice Center for education and research.

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

- 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.
- 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.

The institution has an Office of Sustainability website that includes some resources related to health and the environment.

There is no website.

Score explanation: The Scripps Institution of Oceanography has a <u>Climate Change and Health website</u> with information about academic leaders in planetary health; various centers, programs, and labs that focus on climate change impacts; and upcoming events.

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

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

Score explanation: In August 2023, the UCSD School of Medicine co-hosted the first ever <u>Heat and Human Health Summit</u>. The summit entailed presentations and breakout sessions that discussed topics such as cardiopulmonary morbidity and San Diego County's Excessive Health Plan, and the recorded talks can be found <u>online</u>.

# 2.6. Is your <u>medical school</u> a member of a national or international planetary health or ESH organization?

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

Score explanation: UC San Diego School of Medicine is not a member of a planetary health or ESH organization, such as the <u>Planetary Health Alliance</u> or the <u>Global Consortium on Climate and Health Education</u>.

| Section Total (13 out of 17) | 6.47% |
|------------------------------|-------|
|------------------------------|-------|

| 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. |
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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 color. Institutions should partner with local communities affected by climate change and pollution to share information about environmental health threats, advocate together for change, and provide opportunities for students to be a part of this work.

# 3.1. Does your medical school partner with community organizations to promote planetary and environmental health? Yes, the medical school meaningfully partners with multiple community organizations to promote planetary and environmental health. Yes, the medical school meaningfully partners with one community organization to promote planetary and environmental health. The institution partners with community organizations, but the medical school is not part of that partnership. No, there is no such meaningful community partnership.

Score explanation: 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.

# 3.2. Does your medical school offer community-facing courses or events regarding planetary health? 3 The medical school offers community-facing courses or events at least once every year. 2 The medical school offers courses or events open to the community at least once per year, but they are not primarily created for a community audience. 1 The institution has offered community-facing courses or events, but the medical school was not involved in planning those courses or events. O The institution/medical school have not offered such community-facing courses or events.

Score explanation: In 2023 UC San Diego hosted the first ever <u>Heat and Human Health Summit</u> (<u>H3SD</u>). 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. Plans are under way to hold the event in 2024 and continue the summit as an annual event.

| 3.3. Does your medical school 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.
- Yes, planetary health and/or sustainable healthcare topics are **sometimes** included in communication updates.
- O Students **do not** receive communications about planetary health or sustainable healthcare.

Score explanation: UC San Diego Sustainability sends out regular email communications, like the Energy Town Hall to discuss the role of advanced microgrid and energy storage systems in aiming to decarbonize by 90% no later than 2045, if students subscribe to their email list. UCSD Physician update emails also highlighted UC San Diego Health's <u>commitment to sustainability</u>.

# 3.4. Does the <u>institution</u> or <u>main affiliated hospital trust</u> engage in professional education activities targeting individuals post graduation with the aim of ensuring their knowledge and skills in planetary health and sustainable healthcare remain up to date during their professional career?

- Yes, the **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.
- Yes, the **institution** or **main affiliated hospital trust** offers one course relating to planetary health and/or sustainable healthcare for post-graduate providers
- 0 There are **no** such accessible courses for post-graduate providers

Score explanation: The Cool Campus Challenge is an online learning experience and 4-week competition for UC San Diego Health designed to encourage energy-saving actions and create a culture of sustainability. UC San Diego providers can also become a "Green Graduate" by completing three lessons in climate action and biodiversity loss, food security, and zero waste. In addition, UC San Diego hosted grand rounds featuring the impact of climate change on human health (2022) and the carbon footprint of healthcare (2023).

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

- Yes, the **medical school** or **all affiliated hospitals** have accessible educational materials for patients.
- 1 **Some** affiliated hospitals have accessible educational materials for patients.

0 **No** affiliated medical centres have accessible educational materials for patients.

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 MotherToBaby 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 <u>medical school</u> or its <u>affiliated teaching hospitals</u> have accessible educational materials for patients about the health impacts of climate change?

- Yes, the **medical school** or <u>all</u> **affiliated hospitals** have accessible educational materials for patients.
- 1 **Some** affiliated hospitals have accessible educational materials for patients.
- 0 **No** affiliated hospitals have accessible educational materials for patients.

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 <u>University of California website</u> 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 <u>ClimateRx.Org</u> badges. These badges have QR codes patients can scan to learn about the impacts of climate change on health.

| Section Total (12 out of 14) | 86% |
|------------------------------|-----|
| ~~~~~~( **** **- **)         |     |

#### Back to Summary Page <u>here</u>

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

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

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

# $\textbf{4.1. Does your } \underline{\textbf{medical school}} \ \textbf{or your } \underline{\textbf{institution}} \ \textbf{offer support for medical students interested in enacting a sustainability initiative/QI project?}$

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

Score explanation: UC San Diego SOM is part of the UC System which boasts the <u>UC Carbon Neutrality Initiative Student Fellowship Program</u> which also includes the UC President <u>Bonnie Reiss Climate Action Fellowship</u>. 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. <u>UCOP Leading on Climate</u>

Bonnie Reiss Climate Action Fellowship

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

- The **institution** has a **specific** research program or fellowship for students interested in doing planetary health/sustainable healthcare research.
- 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.
- There are **no opportunities** for students to engage in planetary health/sustainable healthcare research.

Score explanation: Currently, there are many opportunities for medical students to pursue research in planetary health/sustainable healthcare research through the UCSD Extension and Sustainability Programs or and few electives that may touch on certain climate health related issues such as "Clinical Perspectives in Global Health." There is even a Global Health Concentration Program that allows five medical students to perform research in complexities and challenges of global healthcare delivery, ethics of doing Global Health research, and socio-structural bases of health inequities in

which a medical student could do research in planetary health. However, there is no formal program dedicated for climate research for medical students at this time.

Global Health Academic Concentration

UCSD Extended Studies: Environment & Sustainability

- 4.3. Does the <u>medical school</u> 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.
- 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.
- 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.
- There is **no medical-school** specific webpage for locating planetary health and/or sustainable healthcare projects or mentors.

Score explanation: There is currently no medical school specific webpage for locating planetary health and/or sustainable healthcare projects or mentors. However, there is a UCSD Health website as well as a UCSD website.

- 4.4. Does your <u>medical school</u> have registered student groups dedicated towards fostering a culture of planetary health engagement, scholarship, and advocacy on campus, supported by faculty advisors?
- Yes, there is a student organization with faculty support at my medical school dedicated to planetary health or sustainability in healthcare.
- Yes, there is a student organization at my medical school dedicated to planetary health or sustainability in healthcare but it **lacks faculty support.**
- No, there is **not** a student organization at my institution dedicated to planetary health or sustainability in healthcare.

Score explanation: In addition to the concentration, UCSDSOM currently has a student interest group: Global Health in Medicine (faculty advisor, Sarah Averbach), which allows students who are not enrolled in GHAC to participate in global healthcare initiatives. There is also the Value-Based Medicine Interest Group (faculty advisor, Gregory Seymann, MD) which has a mission to "maximizing quality, safety, and affordability—while exercising good stewardship of limited health care resources [exposing students] to topics including health care financing, administration, waste and inefficiencies—as well as methods to combat overutilization." In addition, students are encouraged to develop their own student interest groups which have faculty support and institutional funding. Student Interest Group

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

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

Score explanation: There is a core curriculum representative, student innovations group, and committee on educational policy at UCSD that review course curriculum, review and approve changes to curriculum.

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

- Projects where students are able to gain experience in organic agriculture and sustainable food systems, such as gardens, farms, community supported agriculture (CSA), fishery programs, or urban agriculture projects.
- Panels, speaker series, or similar events related to planetary health that have students as an intended audience.
- 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.
- Cultural arts events, installations or performances related to planetary health that have students as an intended audience.
- Local volunteer opportunities related to building community resilience to anthropogenic environmental impacts.
- Wilderness or outdoors programs (e.g., that organize hiking, backpacking, kayaking, or other outings for students)

#### Score explanation:

- 1. The Leightag Rose Garden at the UCSDSOM campus is tended to by plant-loving volunteers on campus. <u>Leightag Rose Garden</u>
- 2. UCSDSOM hosted a Heat and Human Health Summit on August 12, 2023. The event convened physicians, researchers, and local climate leaders from all across San Diego to exchange knowledge and develop strategies for action. H3SD
- 3. Within the last year, there were no events in which students learned directly from members of a local environmental justice community about the climate and environmental challenges they face.
- 4. UCSDSOM has an annual art and literary magazine that is produced through student submission. Many of the pages possess photographs from students. <u>The Human Condition</u>
- 5. UCSDSOM has CALIFORNIA NATIVE AMERICAN RESEARCH CENTERS FOR HEALTH STUDENT DEVELOPMENT PROGRAM (CA-NARCH SDP) and PRIME-TIDE, both of which educate and prepare medical students to work with Native populations and explore the effects of climate change in the communities. <u>Pathways and Programs</u>

6. At UCSD, all first year medical students are invited to go on an outdoor camping and hiking trip at Laguna Mountain. Medical students can also join the student interest group for Wilderness Medicine, which receives funding from the school of medicine and has faculty support. The SIG hosts events such as hikes and other activities in the El Cajon Mountain Summit. Pre-Op Outdoor Experience MSI Incoming Students

#### Section Total (11 out of 15)

73.33%

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

### **Campus Sustainability**

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

| 5.1. Does your medical school and/or 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 and/or medical school. |   |  |
| 2   | There is an Office of Sustainability with one or more full-time staff dedicated to campus sustainability, but <b>no specific staff member</b> in charge of medical school and/or hospital sustainability. |  |
| 1   | There are <b>no salaried sustainability staff</b> , but there is a sustainability task force or committee   |  |
| 0   | There are <b>no</b> staff members <b>or</b> task force responsible for overseeing campus sustainability   |  |

#### Score explanation:

UCSD Health contains a Department of Sustainability entirely focused on goals focused on reducing carbon emissions and instituting greener health practices. Initiatives undertaken include: Greening the OR, reducing overall clinical waste, Green Clinic and Office Certifications, Coolfood Pledge, to name a few.

| 5.2. How ambitious is your <u>institution/medical school</u> plan to reduce its own carbon footprint? |   |  |
|---|---|--|
| 5   | The institution/medical school has a <b>written and approved plan</b> to achieve carbon neutrality by <b>2030</b>   |  |
| 3   | The institution/medical school has a <b>written and approved plan</b> to achieve carbon neutrality by <b>2040</b>   |  |
| 1   | The institution/medical school has a stated goal of carbon neutrality by <b>2040</b> but has <b>not created a plan</b> to reach that goal or the <b>plan is inadequate</b>  |  |
| 0   | The institution/medical school does <b>not</b> meet any of the requirements listed above  |  |
|   | Score explanation: Efforts established to address climate change at UC San Diego Health include: Achieving 100% clean electricity at both hospital campuses by 2025. A goal of carbon neutrality by 2025, and net zero emissions by 2045. The health system has also won awards from Practice Greenhealth for |  |

it's sustainability measures and actions to promote greener health practices and reduce environmental impact.

# 5.3. Do buildings/infrastructure used by the medical school for teaching (not including the hospital) utilize renewable energy? Yes medical school buildings are 100% powered by renewable energy Medical school buildings source >80% of energy needs from off-site and/or on-site renewable energy. Medical school buildings source >20% of energy needs from off-site and/or on-site renewable energy. Medical school buildings source <20% of energy needs from off-site and/or on-site renewable energy.

#### Score explanation:

UCSD has a microgrid, which is key to creating a carbon neutral campus. The microgrid provides a flexible, resilient, reliable, secure energy distribution system that is capable of generating approximately 85% of the electricity used on campus annually. Power is provided from several sources the campus' 30-megawatt cogeneration plant, 2.8-megawatt energy fuel cell and 2.4 megawatts of solar arrays. These power supplied includes buildings utilized by the medical school campus. The campus operates a 30-megawatt natural-gas-fired combined heat and power system that provides 72% of the campus's annual electricity needs. The Environmental Protection Agency recognized the plant with an Energy Star CHP Award for its high efficiency and low emissions. The campus still utilizes natural gas but actively taking steps to reduce and eliminate natural gas usage. UCSD Health's two health campuses (La Jolla and Hillcrest) cover 2,928,583 square feet. They are currently using approximately 50% renewable energy at these locations for electricity.

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

- 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.
- O Sustainability is **not considered** in the construction of new buildings.

Score explanation: All the electricity for the Hillcrest Outpatient Pavilion project will be purchased through the UC Clean Power Program, which includes 100% renewable electricity with zero carbon emissions. The project will be 92.5% less carbon-intensive than existing campus buildings. Older school buildings utilized by the medical campus are not fully retrofitted but adapted as best possible to promote greener spaces and reduced energy consumption.

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

- Yes, the medical school or 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-utilized by students. Alternatively, the campus location is not amenable to unsustainable forms of transportation by default.
- The medical school or institution has implemented **some** strategies to provide environmentally-friendly transportation options, but the options are **unsatisfactorily** accessible or advertised.
- The medical school or institution has **not** implemented strategies to encourage and provide environmentally-friendly transportation options.

Score explanation: UCSD Medical School Campus as well as UCSD Health have free access to utilize the MTS trolley as well as campus transportation for free. Student status It is worth mentioning that the hospital campuses are spread apart around San Diego with the medical school campus located in La Jolla outside the city's central limits. Commuting is necessary and most students and healthcare workers employed utilize personal transportation.

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

- Yes, the medical school has **both** compost **and** recycling programs accessible to students and faculty.
- The medical school has **either** recycling **or** compost programs accessible to students and faculty, but not both.
- There is **no** compost or recycling program at the medical school.

*Score explanation:* Composting and recycling are available to students. Appropriate bins are made available in campus buildings and rooms. The health system also employs recycling policies targeted at reducing waste and improving reusing capacities.

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

- Yes, the medical school 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.
- 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.
- 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.

There are **no** sustainability guidelines for food and beverages.

Score explanation: UC San Diego Health has joined the Coolfood Pledge, which commits us to reducing the greenhouse gas emissions associated with the food we serve by 25 percent by 2030, relative to a 2015 baseline. This will be achieved in part by encouraging plant-rich meals. The health system is also actively decreasing ruminant meat procurements in favor of alternatives and increasing sustainable and plant sources of nutrients.

# 5.8. Does the medical school or institution apply sustainability criteria when making decisions about supply procurement? Yes, the medical school has adequate sustainability requirements for supply procurement and is engaged in efforts to increase sustainability of procurement, but they are insufficient or optional. There are sustainability guidelines for supply procurement, but they are insufficient or optional. 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. There are no sustainability guidelines for supply procurement. There are no sustainability guidelines for supply procurement.

*Score explanation:* The health system and medical school are bound by the procurement policies of UC. The procurement guidelines can be found <u>here</u>.

# 5.9. Are there sustainability requirements or guidelines for events hosted at the medical school? Every event hosted at the medical school must abide by sustainability criteria. The medical school strongly recommends or incentivizes sustainability measures, but they are not required. There are no sustainability guidelines for medical school events.

Score explanation: UCSD health and medical school system can participate in the Green Events program and are encouraged to do so. While this is encouraged, it is not a requirement.

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

| 5.11. Does your <u>institution's</u> endowment portfolio investments include fossil-fuel companies?          |  |  |
|--|--|--|
| 4  | The institution is <b>entirely divested</b> from fossil fuels <b>and</b> has made a <b>commitment to reinvest divested funds</b> into renewable energy companies or renewable energy campus initiatives. |  |
| 3  | The institution is <b>entirely divested</b> from fossil fuels.   |  |
| 2  | The institution has <b>partially divested</b> from fossil fuel companies <b>or</b> has made a <b>commitment to fully divest</b> , but <b>currently</b> still has fossil fuel investments.                |  |
| 1  | The institution has <b>not divested</b> from fossil-fuel companies, but faculty and/or students are <b>conducting organized advocacy</b> for divestment.   |  |
| 0  | Yes, the institution has investments with fossil-fuel companies and there have been <b>no efforts</b> to change that.  |  |
| Score explanation: The UC system including UCSD and schools under UCSD are fully divested from fossil fuels. |  |  |

| Section Total (28 out of 32) | 87.50% |
|------------------------------|--------|
|                              |        |

#### Back to Summary Page here

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

### **Grading**

#### **Section Overview**

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

| Letter Grade* | Percentage |  |
|---------------|------------|--|
| A             | 80% - 100% |  |
| В             | 60% - 79%  |  |
| С             | 40% - 59%  |  |
| D             | 20% - 39%  |  |
| F             | 0% - 19%   |  |

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%)                               | 50%         | С            |
| Interdisciplinary Research (17.5%)                              | 76%         | B+           |
| Community Outreach and Advocacy (17.5%)                         | 86%         | A            |
| Support for Student-led Planetary<br>Health Initiatives (17.5%) | 67%         | В            |
| Campus Sustainability (17.5%)                                   | 88%         | A            |
| Institutional Grade   | 70%         | В            |