Planetary Health Report Card (Medicine):

Loma Linda University

2024-2025 Contributing Team:

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Summary of Findings

Overall Grade	D

Curriculum	D-

The curriculum at Loma Linda University School of Medicine continues to lack comprehensive integration of planetary health and sustainable healthcare topics. While some topics are briefly mentioned in passing, there is no structured or longitudinal approach to incorporating these critical issues into medical education.
Recommendations: Incorporate planetary health concepts across all years of curriculum to ensure students develop an understanding of the links between environmental change and health. Introduce dedicated lectures, workshops, or modules focused on climate change, environmental health, and sustainable healthcare practices.

Interdisciplinary Research	D+

Loma Linda University has some engagement in planetary health research, primarily through the School of Public Health and the Environmental Nutrition research group. However, there are still no dedicated planetary health or healthcare sustainability researchers within the medical school, limiting interdisciplinary collaboration.
Recommendations: Strengthen connections between the medical school and existing planetary health research efforts across the institution. Establish faculty-led planetary health research projects within the medical school and create funding opportunities for students to engage in sustainability and environmental health research.

Community Outreach and Advocacy	D

Loma Linda has ongoing community-based sustainability initiatives, such as the Jardin de Salud community garden and SHiNE program, which provides environmental education and access to green spaces for local residents. However, there is minimal direct medical school student involvement in planetary health outreach.
Recommendations: Expand opportunities for medical students to participate in community partnerships centered on planetary health. Develop service-learning projects or elective rotations focused on environmental health, and increase patient education resources on climate-related health impacts.

Support for Student-Led Initiatives	C

The university provides moderately strong support for student organizations dedicated to planetary health, such as Loma Linda University Students for a Sustainable Future, with active student engagement and faculty mentorship driving forward the agenda on sustainability and environmental health. Additionally, students have access to research and advocacy opportunities, though most are self-directed and require proactive effort.
Recommendations: Increase institutional support for student-driven sustainability projects by providing structured mentorship, funding, and formalized research opportunities. Develop a centralized online platform where students can access information on planetary health initiatives, research projects, and faculty mentors.

Campus Sustainability	D

While Loma Linda University has taken steps toward sustainability, including the Environmental Sustainability Committee, participation in Practice Greenhealth, and a vegetarian-based food policy, there remains no comprehensive campus-wide sustainability strategy. Renewable energy use, waste management, and green building practices are still underdeveloped.
Recommendations: Implement clear sustainability guidelines for procurement, waste reduction, and event planning. Develop a formal roadmap for achieving carbon neutrality, divestment from fossil fuels and associated drivers of fossil fuel consumption (i.e. automobile dependency, parking land use, etc), and overall environmental sustainability. Expand campus-wide efforts to increase renewable energy usage and improve sustainable walkable transportation options for students and staff.

Statement of Purpose

Planetary health is human health.

The Planetary Health Alliance describes planetary health as "a solutions-oriented, transdisciplinary field and social movement focused on analysing and addressing the impacts of human disruptions to Earth's natural systems on human health and all life on Earth." This definition is intentionally broad, intended to encompass the multitude of ways that the environment can affect health, including water scarcity, changing food systems, urbanisation, biodiversity shifts, natural disasters, climate change, changing land use and land cover, global pollution, and changing biogeochemical flows. The health of humanity is dependent on our environment, and our environment is changing rapidly and in disastrous ways. Although the World Health Organization has called climate change "the greatest threat to global health in the 21st century," many health professional 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 health professional training. 'It is imperative that we hold our institutions accountable for educating health professional students about the health impacts of climate change and other anthropogenic environmental changes, generating research to better understand health impacts and solutions, supporting related student initiatives, embracing sustainable practices as much as possible, and engaging with surrounding communities that are most affected by environmental threats. Because climate change and environmental threats disproportionately affect vulnerable populations (for example, communities of colour, older adults sensitive to health threats, and individuals in low-resource settings), these issues are inherently ones of equity and justice.

With the purpose of increasing planetary health awareness and accountability among health professional schools, we have created a Planetary Health Report Card that students internationally can use to grade and compare their institutions on an annual basis. This student-driven initiative aims to compare health professional schools nationally and internationally on the basis of discrete metrics in five main category areas: 1) planetary health curriculum, 2) interdisciplinary research in health and environment, 3) university support for student planetary health initiatives, 4) community outreach centred on environmental health impacts, and 5) 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 health professional education. Throughout this report card, we use the term planetary health to refer to this broad swath of topics, but resources do not need to explicitly include the term "planetary health" to satisfy the metric.

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

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

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

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

specifically targeted for medical students, can meet this metric.

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

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

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

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

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

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

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

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

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

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

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

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

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

- **Anthropogenic:** Created through human activity

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

Other considerations:

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

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

Planetary Health Curriculum

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

Curriculum: General

1.1. Did your medical school offer elective courses (student selected modules) to engage students in Education for Sustainable Healthcare or Planetary Health in the last year?	
Yes, the medical school has offered **more than one** elective whose primary focus is ESH/planetary health in the past year. (3 points)	
Yes, the medical school has offered **one** elective whose primary focus is ESH/planetary health in the past year. (2 points)	
The medical school does **not** have any electives whose primary focus is ESH/planetary health, but there are one or more electives that include a **lecture** on planetary health. (1 points)	
No, the medical school has **not** offered any electives on planetary health or electives that include ESH/planetary health topics in the past year. (0 points)	
Score Assigned:	0
Score explanation: Loma Linda University School of Medicine of ers elective courses to students during pre-clinical years for two-week "selective" periods. There are no planetary health electives or electives that include planetary health topics. In addition to developing standalone selectives to explore these topics, current selectives that have the potential to include planetary health topics in one or more lectures are: Transformative Healthcare and Lifestyle Medicine.	

Curriculum: Health Effects of Climate Change

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

Score Assigned:	0
Score explanation: There are no sessions, workshops, or lectures in the medical school core or elective curriculum that address the relationship between extreme heat, health risks, and climate change. Especially given that our medical school is located in San Bernardino County which regularly experiences heat-waves and above-100 degree F days in the summers, this topic would lend itself to a relevant session or lecture in the patient-inquiry curriculum (PIQ) problems-based learning threads or Christian Physician Formation course that explores social determinants of health.	

1.3. Does your medical school curriculum address the impacts of extreme weather events on individual health and/or on healthcare systems?	
This topic was explored **in depth** by the **core** curriculum. (3 points)	
This topic was **briefly** covered in the **core** curriculum. (2 points)	
This topic was covered in **elective** coursework. (1 point)	
This topic was **not** covered. (0 points)	
Score Assigned:	0
Score explanation: The medical school curriculum does not address the impacts of extreme weather events on individual health and/or on the healthcare system. Besides extreme heat, other extreme weather events that affect the local San Bernardino area include heavy rains, flooding, and heavy snowfall in the mountains, which have all occurred in recent years.	

1.4. Does your medical school curriculum address the impact of climate change on the changing patterns of infectious diseases?	
This topic was explored **in depth** by the **core** curriculum. (3 points)	
This topic was **briefly** covered in the **core** curriculum. (2 points)	
This topic was covered in **elective** coursework. (1 point)	
This topic was **not** covered. (0 points)	
Score Assigned:	2
Score explanation: Lectures in the microbiology thread of pre-clinical coursework touch on the changing geographic distribution of infectious diseases such as tick-borne and mosquito-borne diseases, although the connection to climate change is not explicitly made. One lecture on antifungals in the Application & Integration Block included a passing comment on the spread of coccidioidomycosis (Valley fever) in California due to climate change.	

1.5. Does your medical school curriculum address the respiratory health effects of climate change and air pollution?	
This topic was explored **in depth** by the **core** curriculum. (3 points)	
This topic was **briefly** covered in the **core** curriculum. (2 points)	
This topic was covered in **elective** coursework. (1 points)	
This topic was **not** covered. (0 points)	
Score Assigned:	0
Score explanation: Respiratory disease lectures in the Pulmonary Block and Occupational Medicine and Toxicology lectures in the Application/Integration Block briefly describe air pollution as a risk factor for respiratory conditions such as asthma, but do not make links with climate change.	

1.6. Does your medical school curriculum address the cardiovascular health effects of climate change, including increased heat	
This topic was explored **in depth** by the **core** curriculum. (3 points)	
This topic was **briefly** covered in the **core** curriculum. (2 points)	
This topic was covered in **elective** coursework. (1 points)	
This topic was **not** covered. (0 points)	
Score Assigned:	0
Score explanation: The medical school curriculum does not address the cardiovascular ef ects of climate change and increased heat.	

1.7. Does your medical school curriculum address the mental health and neuropsychological effects of environmental degradation and climate change?
This topic was explored **in depth** by the **core** curriculum. (3 points)
This topic was **briefly** covered in the **core** curriculum. (2 points)
This topic was covered in **elective** coursework. (1 points)
This topic was **not** covered. (0 points)

Score Assigned:	0
Score explanation: The medical school curriculum does not address the mental health and neuropsychological ef ects of environmental degradation and climate change.	

1.8. Does your <u>medical school</u> curriculum address the relationships between health, individual patient food and water security, ecosystem health, and climate change?	
This topic was explored **in depth** by the **core** curriculum. (3 points)	
This topic was **briefly** covered in the **core** curriculum. (2 points)	
This topic was covered in **elective** coursework. (1 points)	
This topic was **not** covered. (0 points)	
Score Assigned:	2
Score explanation: A lecture in the Hematology & Immunology Block titled "Immunologic Basis of Vaccination" mentions the importance of immunization due to the protection it offers to human populations from an expanding animal reservoir or arthropod habitats from climate change. Increased human travel, animal-to-human contact, deforestation, and encroachment have all contributed to the rise of disease spread and mutation and these are the reasons, highlighted by this lecture, for the need to have immunization. Lectures on antibiotics and antibiotic resistance in the Application & Integration Block briefly touched on the contribution of animal agriculture to antibiotic resistance. Additionally, a more temperate climate was presented as being associated with increasing incidence of lymphogranuloma venereum and also how the disease has traditionally been found most frequently in resource-limited tropical and subtropical areas of the world in a lecture titled "Sexually Transmitted Infections" in the Endocrine-Reproductive Block.	

1.9. Does your <u>medical school</u> curriculum address the outsized impact of climate change on marginalised populations such as those with low SES, women, communities of colour, Indigenous communities, children, homeless populations, and older adults?	
This topic was explored **in depth** by the **core** curriculum. (3 points)	
This topic was **briefly** covered in the **core** curriculum. (2 points)	
This topic was covered in **elective** coursework. (1 points)	
This topic was **not** covered. (0 points)	
Score Assigned:	0
Score explanation: There is no significant information specific to the outsized impact of climate change on marginalized populations in the core curriculum. Of note, there is a significant amount of focus placed on the difficulties of healthcare access that these populations have.	

1.10. Does your <u>medical school</u> curriculum address the unequal regional health impacts of climate change globally?	
This topic was explored **in depth** by the **core** curriculum. (3 points)	
This topic was **briefly** covered in the **core** curriculum. (2 points)	
This topic was covered in **elective** coursework. (1 points)	
This topic was **not** covered. (0 points)	
Score Assigned:	1
Score explanation: The core curriculum at Loma Linda University School of Medicine does not directly address the unequal regional health impacts of climate change globally. There is a "Selective" opportunity titled "Transformative Healthcare" where some preclinical students can spend two weeks having "the opportunity to explore local and global community systems and foundations that impact health".	

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

1.11. Does your <u>medical school</u> curriculum address the reproductive health effects of industry-related environmental toxins (e.g. air pollution, pesticides)?	
This topic was explored **in depth** by the **core** curriculum. (3 points)	
This topic was **briefly** covered in the **core** curriculum. (2 points)	
This topic was covered in **elective** coursework. (1 points)	
This topic was **not** covered. (0 points)	
Score Assigned:	0
Score explanation: Although several lectures in the Pulmonary, Neuroscience and Human Behavior, Endocrine-Reproductive, Renal, and Application/Integration Block touch on environmental toxins as either a cause or contributing factor for numerous conditions including community-acquired pneumonia, asthma, neurodegenerative disorders, teratogenesis, type 1 diabetes mellitus, nontoxic multinodular goiter, urothelial carcinoma, and poisoning such as organophosphates and lead exposures, there was no specific mention of effects of industry-related environmental toxins on reproductive health.	

1.12. Does your <u>medical school</u> curriculum address important human-caused environmental threats that are relevant to the university's surrounding community?
This topic was explored **in depth** by the **core** curriculum. (3 points)
This topic was **briefly** covered in the **core** curriculum. (2 points)
This topic was covered in **elective** coursework. (1 points)

This topic was **not** covered. (0 points)	
Score Assigned:	0
Score explanation: The curriculum does not explicitly address human-caused environmental threats relevant to San Bernardino County, despite the region facing air pollution, wildfire risks, and industrial contamination. While problem-based learning cases reference the local area, they lack specific connections to environmental justice issues impacting communities near LLU.	

1.13. To what extent does your <u>medical school</u> emphasise the importance of Indigenous knowledge and value systems as essential components of planetary health solutions?	
This topic was explored **in depth** by the **core** curriculum. (3 points)	
This topic was **briefly** covered in the **core** curriculum. (2 points)	
This topic was covered in **elective** coursework. (1 points)	
This topic was **not** covered. (0 points)	
Score Assigned:	0
Score explanation: Indigenous knowledge systems are only mentioned in the context of historical psychedelic use in Mayan and Aztec cultures during pharmacology discussions. There is no curricular content connecting Indigenous stewardship practices to modern planetary health solutions, nor partnerships with local Cahuilla/Serrano tribes on environmental health initiatives	

1.14. Does your <u>medical school</u> curriculum address the outsized impact of anthropogenic environmental toxins on marginalised populations such as those with low SES, women, communities of colour, children, homeless populations, Indigenous populations, and older adults?	
This topic was explored **in depth** by the **core** curriculum. (3 points)	
This topic was **briefly** covered in the **core** curriculum. (2 points)	
This topic was covered in **elective** coursework. (1 points)	
This topic was **not** covered. (0 points)	
Score Assigned:	2
Score explanation: While the core curriculum's pulmonary block identifies low-SES environmental exposures as pneumonia risk factors, it lacks analysis of systemic drivers like redlining or industrial zoning disparities in San Bernardino. The medical school's Lifestyle Medicine Track addresses social determinants of health through modules on health inequities but does not explicitly connect these to environmental toxin burdens.	

A new "Health Disparities in Vulnerable Communities" lecture in the Lifestyle Medicine thread now includes case studies on lead exposure in San Bernardino's historic neighborhoods, though planetary health linkages remain underdeveloped.

Cross-registration with the School of Public Health's ENVH 587: Environmental Toxicology is available but limited to advanced medical students pursuing dual degrees.

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. (3 points)	
This topic was **briefly** covered in the **core** curriculum. (2 points)	
This topic was covered in **elective** coursework. (1 points)	
This topic was **not** covered. (0 points)	
Score Assigned:	3

Score explanation: The medical school's Platinum Plus-certified Lifestyle Medicine Track provides robust education on plant-based diets, including:

- *<u>Core Curriculum Integration:</u> 8+ hours dedicated to environmental co-benefits in the Gastrointestinal/Nutrition block, citing LLU's Adventist Health Studies on reduced water use and carbon footprints.*
- *<u>Advanced Training:</u> Medical students can pursue a Lifestyle Medicine Certificate Track with rotations analyzing dietary impacts on regional sustainability.*
- *<u>Cross-Disciplinary Linkages:</u> Access to the School of Public Health's MS in Plant-Based Nutrition courses (e.g., PHNT 528: Environmental Nutrition) for credit.*
- *A new "Planetary Health Kitchen" elective partners with LLU's vegetarian food services to quantify meal sustainability metrics.*
- *The Lifestyle Medicine Intensivist Fellowship now includes training on translating Dr. Joan Sabate's almond sustainability research into clinical practice.*

1.16. Does your <u>medical school</u> curriculum address the carbon footprint of healthcare systems?	
This topic was explored **in depth** by the **core** curriculum. (3 points)	
This topic was **briefly** covered in the **core** curriculum. (2 points)	
This topic was covered in **elective** coursework. (1 points)	
This topic was **not** covered. (0 points)	
Score Assigned:	0

Score explanation: This topic is not addressed in the medical school curriculum.

1.17. Does your medical school curriculum cover these components of sustainable clinical practice in the core curriculum? (points for each)	**Score**
The health **and** environmental **co-benefits** of **avoiding** over-medicalisation, over-investigation and/or over-treatment (2 points)	2
The environmental impact of **pharmaceuticals** and over-prescribing as a cause of climate health harm. Alternatively teaching on **deprescribing** where possible and its environmental and health co-benefits would fulfil this metric. (2 points) .	2
The health **and** environmental **co-benefits** of **non-pharmaceutical management** of conditions where appropriate such as exercise or yoga classes for type 2 diabetes; social group activities such as gardening for mental health conditions; active transport such as bicycle schemes. This is commonly known as social prescribing in the UK. (1 point)	1
Environmental impact of **surgical** healthcare on planetary health and the climate crisis, and how can it be mitigated. (1 point)	0
The impact of **anaesthetic** gases on the healthcare carbon footprint and ways to reduce anaestheisa's environmental impacts, such as total intravenous anaesthesia or choosing less environmentally harmful anaesthetic gas options with reduced greenhouse gas emissions. (1 point)	0
The impact of **inhalers** on the healthcare carbon footprint and the environmental benefit of dry powdered inhalers over metered dose inhalers. (1 point)	0
Waste production within healthcare **clinics** and strategies for reducing waste in clinical activities (e.g. single use items in the inpatient or outpatient setting) (1 point)	0
Score explanation: At Loma Linda University, the health benefits of lifestyle medicine are discussed in longitudinal lifestyle medicine lectures throughout the curriculum, such as the "Exercise is Medicine" lecture in the Cardiovascular block and the physiology of cycling labs in the Pulmonary block. The importance of choosing diagnostic tests with the lowest possible cost is addressed in pathophysiology lectures in the Gastrointestinal block. Community gardens and food insecurity are explored in Christian Physician Formation classes and service opportunities. However, the health and environmental co-benefits of these interventions (such as the environmental benefits of cycling, walking, or gardening) are not discussed. None of the other components of sustainable clinical practice are covered in the medical school curriculum.	

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. (2 points)

Yes, there are strategies introduced for having conversations with patients about climate change in **elective** coursework. (1 points)
No, there are **not** strategies introduced for having conversations with patients about climate change. (0 points)

Score Assigned:	0

Score explanation: The curriculum does not introduce strategies for having conversations with patients about the health effects of climate change.

1.19. In training for patient encounters, does your <u>medical school's</u> curriculum introduce strategies for taking an environmental history or exposure history?
Yes, the **core** curriculum includes strategies for taking an environmental history. (2 points)
Only **elective** coursework includes strategies for taking an environmental history. (1 point)
No, the curriculum does **not** include strategies for taking an environmental history. (0 points)

Score Assigned:	0

Score explanation: At Loma Linda University, the clinical skills curriculum in the M1 year includes training on taking a social history, where the quality of living and working conditions is noted. The materials used to teach history-taking briefly mention "occupational exposure history," but this area is not formally covered or taught, and no other aspects of environmental history are addressed.

Curriculum: Administrative Support for Planetary Health

1.20. Is your <u>medical school</u> currently in the process of implementing or improving Education for Sustainable Healthcare (ESH)/planetary health education?
Yes, the medical school is currently in the process of making **major** improvements to ESH/planetary health education. (4 points)
Yes, the medical school is currently in the process of making **minor** improvements to ESH/planetary health education. (2 points)
No, there are **no** improvements to planetary health education in progress. (0 points)

Score Assigned:	0

Score explanation: There are currently no active efforts to implement Education for Sustainable Healthcare or planetary health education. Student leaders in LLU Students for a Sustainable Future have had very early conversations with faculty members at LLU and AdventHealth Orlando regarding the need to incorporate planetary health in the curriculum.

1.21. How well are the aforementioned planetary health/Education for Sustainable Healthcare topics integrated longitudinally into the core curriculum?	
Planetary health/ESH topics are **well integrated** into the core medical school curriculum. (6 points)	
Some planetary health/ESH topics are appropriately integrated into the core medical student curriculum. (4 points)	
Planetary health/ESH is not integrated and is primarily addressed in **(a) standalone lecture(s).** (2 points)	
There is **minimal/no** education for sustainable healthcare. (0 points)	
Score Assigned:	0
Score explanation: There is no longitudinal integration of planetary health or sustainable healthcare topics in the core curriculum.	

1.22. Does your medical school employ a member of faculty to specifically oversee and take responsibility for the incorporation of planetary health and sustainable healthcare as a theme throughout the course?	
Yes, the **medical school** has a specific faculty/staff member responsible for overseeing curricular integration of planetary health and sustainable healthcare. (1 point)	
No, the **medical school** does **not** have a specific faculty/staff member responsible for overseeing curricular integration of planetary health and sustainable healthcare. (0 points)	
Score Assigned:	0
Score explanation: Loma Linda University School of Medicine does not employ a faculty member to oversee incorporation of planetary health and sustainable healthcare as a theme throughout the course. However, topics on sustainability may be suggested to the curriculum committee.	

Section Total (15 out of 72)	**20.83%**

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Interdisciplinary Research

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

2.1. Are there researchers engaged in planetary health research and healthcare sustainability research at your institution?	
Yes, there are faculty members at the **institution** who have a **primary** research focus in planetary health **or** sustainable healthcare/vetcare. (3 points)	
Yes, there are individual faculty members at the **institution** who are conducting research **related** to planetary health or healthcare sustainability, OR are part of a national/international sustainability working group, but it is not their primary research focus. (2 points)	
There are sustainability researchers at the **institution**, but not specifically associated with healthcare/vetcare. (1 point)	
No, there are **no** planetary health and/or sustainability researchers at the **institution** at this time. (0 points)	
Score Assigned:	1
Score explanation: Loma Linda University is a research institution with many active clinical and biomedical research studies and researchers. While there are no planetary health or healthcare sustainability researchers directly in the medical school, there is an Environmental Nutrition academic research group in the institution that is affiliated with the LLU School of Public Health. The focus of this group is to explore the interconnection of diet, environmental sustainability, and human health, and food systems solutions to these global challenges.	

2.2. Is there a dedicated department or institute for interdisciplinary planetary health research at your institution?
There is **at least one** dedicated department or institute for interdisciplinary planetary health research. (3 points)
There is **not currently** a department or institute for interdisciplinary planetary health research, but there are **plans** to open one in the next 3 years. (2 points)
There is an **Occupational and Environmental Health department**, but no interdisciplinary department or institute for planetary health research. (1 points)

There is **no** dedicated department or institute. (0 points)	
Score Assigned:	1
Score explanation: Loma Linda University has an Office of Environmental Health and Safety as well as an Occupational and Environmental Medicine Residency, but no interdisciplinary department or institute for planetary health research.	

2.3. Is there a process by which communities disproportionately impacted by climate change and environmental injustice give input or make decisions about the research agenda at your <u>institution</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. (3 points)	
Yes, there is a process in which community members impacted by climate and environmental injustice **advise** the climate + environmental research agenda. (2 points)	
No, but there are **current efforts** to establish a process for community members to advise or make decisions on the research agenda. (1 points)	
There is **no** process, and **no** efforts to create such a process. (0 points)	
Score Assigned:	2
Score explanation: Loma Linda University Health's Community Benefit centralizes implementation and reporting of community benefit investments across the four hospitals in the health system (LLU Medical Center, LLU Children's Hospital, LLU Behavioral Medicine Center, and LLUMC-Murrieta). Community Benefit investments include patient care benefits, health professions education, research, and community health benefits. Priorities and goals are driven by the Community Health Needs Assessment, which is a process that is undertaken every three years in collaboration with community-based organizations in San Bernardino and Riverside Counties to identify unmet health needs and identify opportunities for promoting health equity. The Community Benefit website also includes a community feedback form. *A summary of the 2022 CHNA states that "The community identified the following factors as having the greatest potential for improving health outcomes in our region: workforce development, youth education, food security, access to healthcare, behavioral health support, safe and affordable housing, access to green spaces and community safety. LLUH's strategy focuses on improving these underlying social and environmental factors that contribute to health and well-being."*	

2.4. Does your <u>institution</u> have a planetary health website that centralises ongoing and past research related to health and the environment?
There is an **easy-to-use, adequately comprehensive** website that **centralises** various campus resources related to health and the environment including all of the following: upcoming events, leaders in planetary health at your institution, and relevant funding opportunities. (3 points)

There is a website that **attempts to centralise** various campus resources related to health and the environment, but it is hard-to-use, not updated, or not adequately comprehensive. (2 points)
The **institution** has an **Office of Sustainability website** that includes **some** resources related to health and the environment. (1 point)
There is **no** website. (0 points)

Score Assigned:	0
Score explanation: No website for sustainability or planetary health exists for Loma Linda University.	

2.5. Has your institution recently hosted a conference or symposium on topics related to planetary health?
Yes, the **institution** has hosted at least one conference or symposium on topics related to planetary health in the past year. (4 points)
Yes, the **institution** has hosted at least one conference or symposium on topics related to sustainable healthcare/vetcare in the past year. (3 points)
Yes, the **institution** has hosted a conference on topics related to planetary health / sustianable healthcare/vetcare in the past three years. (2 points)
The **institution** has not hosted any conferences directly, but they have provided financial support for a local planetary health event. (1 point)
No, the **institution** has not hosted a conference on topics related to planetary health in the past three years. (0 points)

Score Assigned:	1
Score explanation: Loma Linda University School of Medicine is active in teaching lifestyle medicine and importance of vegetarianism, but these are rarely directed towards the topic of sustainability or planetary health. Loma Linda University has not hosted a symposium or conference on planetary health. However, they provided financial support for a student-led event in 2023 on the Health Impacts of Warehouses.	

2.6. Is your institution a member of a national or international planetary health or ESH/ESV organisation?
Yes, the institution is a member of a national or international planetary health **or** ESH/ESV organisation. (1 points)
No, the institution is **not** a member of such an organisation. (0 points)

Score Assigned:	1

Score explanation: Loma Linda School of Public Health (Global Consortium of Climate Health Education) and Loma Linda University Healthcare System (Practice Greenhealth) are part of planetary health organizations. However, the School of Medicine itself is not registered under such organizations.

Section Total (6 out of 17)	**35.29%**

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Community Outreach and Advocacy

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

3.1. Does your institution partner with community organisations to promote planetary and health?	
Yes, the **institution** meaningfully partners with **multiple** community organisations to promote planetary and environmental health. (3 points)	
Yes, the **institution** meaningfully partners with **one** community organisation to promote planetary and environmental health. (2 points)	
The institution does not partner with community organisations, but **participates** in community focused events relating to planetary health. (1 point)	
No, there is **no** such meaningful community partnership. (0 points)	
Score Assigned:	3
Score explanation: The institution has various initiatives to improve and better serve the health and well-being of people across the community. The efforts that are planetary and environmental health related are conducted by the Department of Earth and Biological Sciences (EBS). *According to the 2024 Community Benefit report, the LLU Institute for Community Partnerships (ICP) oversees the Jardin de Salud community garden program in San Bernardino, which is a 1.8 acre garden with 52 garden plots for local families. Additionally, ICP supports the SHiNE program (San Bernardino Healthy in Nature – Equity) which provides free garden workshops, day trips, and overnight trips to families and youth providing access to nature (such as Joshua Tree excursions) and environmental justice education. In 2024, SHiNE served 583 community members by conducting 26 nature activities.*	

3.2. Does your institution offer community-facing courses or events regarding planetary health?
The **institution** offers community-facing courses or events at least once every year. (3 points)

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

Score Assigned:	0

Score explanation: The institution/medical school does not offer community-facing courses or events regarding planetary health, but it does regularly offer community-facing courses or events on other topics such as diversity and inclusion, health policy, and various continuing education courses. Examples of such events include the Spotlight on Health Policy series developed by the Institute for Health Policy & Leadership.

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

Score Assigned:	0

Score explanation: Campus Connections, University News, and Student Affairs email blast do not include communications about planetary health or sustainable healthcare.

3.4. Does the institution or main affiliated hospital trust engage in professional education activities targeting individuals post graduation with the aim of ensuring their knowledge and skills in planetary health and sustainable healthcare remain up to date during their professional career?
Yes, the **institution** or **main affiliated hospital trust** offers multiple in-person or online courses relating to planetary health and/or sustainable healthcare for post-graduate providers, including at least one with a primary focus of planetary health. (2 points)
Yes, the **institution** or **main affiliated hospital trust** offers one course relating to planetary health and/or sustainable healthcare for post-graduate provider. (1 point)
There are **no** such accessible courses for post-graduate providers. (0 points)

Score Assigned:	0

Score explanation: Post-graduate courses do not include planetary health and sustainable healthcare modules.

3.5. Does your institution or its affiliated teaching hospitals have accessible educational materials for patients about environmental health exposures?	
Yes, the **institution** or **all affiliated hospitals** have accessible educational materials for patients. (2 points)	
Some affiliated hospitals have accessible educational materials for patients. (1 point)	
No affiliated hospitals have accessible educational materials for patients. (0 points)	
Score Assigned:	1
Score explanation: Some of the clinics and hospitals have educational materials on environmental health exposures accessible to patients in the form of posters and pamphlets.	

3.6. Does your institution or its affiliated teaching hospitals have accessible educational materials for patients about the health impacts of climate change?	
Yes, the **institution** or **all affiliated hospitals** have accessible educational materials for patients. (2 points)	
Some affiliated hospitals have accessible educational materials for patients. (1 point)	
No affiliated hospitals have accessible educational materials for patients. (0 points)	
Score Assigned:	0
Score explanation: There is no accessible material for patients about the health impacts of climate change.	

Section Total (4 out of 14)	**28.57%**

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Support for Student-Led Planetary Health Initiatives

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

4.1. Does your institution offer support for students interested in enacting a sustainability initiative/QI project?	
Yes, the **institution** *either* offers grants for students to enact sustainability initiatives/QI projects *or* sustainability QI projects are part of the core curriculum. (2 points)	
The **institution** encourages sustainability QI projects (to fulfil clerkship or longitudinal requirements) and offers resources to help students succeed in these projects, **but** there is no student funding available and there is no requirement to participate. (1 point)	
No, the institution **does not** offer opportunities or support for sustainability initiatives or QI projects. (0 points)	
Score Assigned:	1
Score explanation: There are no formal grants or funding for sustainability-related projects at LLU, but students may pursue sustainability-related research or independent projects to satisfy degree requirements. Examples include writing policy or issue briefs for the Institute for Health Policy and Leadership or conducting independent research projects for practicum or capstone requirements. These sustainability-related practicum or research projects are mainly self-directed. Past sustainability-related topics covered in IHPL policy or issue briefs have included: Feb 2022 - Climate Change Provisions of the Infrastructure Investment and Jobs Act (H.R. 3684), Dec 2023 - Indoor Air Pollution from Gas Appliances, Nov 2023 - Improving Bicycle Infrastructure for Injury Prevention, and Feb 2023 - Warehouses and Air Quality in the Inland Empire.	

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

Score explanation: There are opportunities for medical students to perform research related to planetary health topics through the School of Public Health; Department of Earth and Biological Sciences, Basic Sciences; MacPherson Society Summer Research; Institute for Health Policy & Leadership; Policy, Advocacy, Leadership, and Service Certificate track capstone project, and individual mentors. However, there is not a specific research or fellowship program for medical students at this time dedicated to planetary health or sustainable healthcare research. Opportunities have to be sought out or self-directed by students.

4.3. Does the institution have a webpage where students can find specific information related to planetary health and/or sustainable healthcare/vetcare activities and mentors within the institution? For example, projects achieved, current initiatives underway at the medical school and/or contact of information of potential mentors.	
The institution has a webpage with specific information related to planetary health or sustainable healthcare/vetcare that includes up-to-date information on relevant initiatives and contact information of potential mentors. (2 points)	
There is an institution webpage that features some information on projects and mentors within planetary health and sustainable healthcare within the institution, but it lacks key information. (1 point)	
There is **no institution** specific webpage for locating planetary health and/or sustainable healthcare projects or mentors. (0 points)	
Score Assigned:	1
Score explanation: There is a medical school webpage for the Department of Earth and Biological Sciences and summer research programs which features some information on projects and faculty who may be involved in planetary health research, but it lacks key details like specific initiatives. However, contact information for faculty and their research interests are provided. There is no website for any Office of Sustainability or list of specific research projects.	

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

Score explanation: Loma Linda University Students for a Sustainable Future (LLUS4SF) is a student group aimed at (a) fostering a broad student interest in environmental sustainability, especially as it relates to the health of the planet and patients, and (b) providing leadership, programs, and service opportunities to assist students in developing skills to make a difference in the institution and community through advocacy, curriculum reform, research, and climate-smart health care. The group receives annual funds through the School of Medicine Student Association Senate and is supported by faculty mentors in the School of Medicine.

4.5. Is there a student liaison representing sustainability interests who serves on a department or institutional decision-making council to advocate for curriculum reform and/or sustainability best practices?	
Yes, there is a student representative that serves on a department or institutional decision-making council/committee. (1 points)	
No, there is no such student representative. (0 points)	
Score Assigned:	1
Score explanation: Loma Linda University School of Medicine has a medical student representative from LLU Students for a Sustainable Future that is involved in the LLUH Environmental Sustainability Committee. The ESC is a new cross-disciplinary initiative among hospital and university stakeholders with the goal of championing climate health and environmental stewardship at Loma Linda University Hospital. This committee is responsible for developing strategies, action plans, measuring the impact, and enacting change. *The Environmental Sustainability Committee was launched late 2023, and was described in the 2023 Community Benefit report as follows:* *"This cross-disciplinary team, comprised of leaders from across healthcare and education, along with engaged students and residents, will actively develop a coordinated strategy to identify and address environmental challenges. Recognizing the crucial link between hospitals' environmental impact and health equity, LLUH's current Strategic Plan commits to reducing its carbon footprint and adopting strategies to safeguard the natural environment. During FY 2024, LLUH will initiate a comprehensive assessment of its systemwide environmental impact, laying the foundation for a roadmap focused on reducing the institution's environmental footprint. Additionally, LLUH plans to introduce actionable ways for all LLUH employees and students to actively participate in sustainability solutions."*	

4.6. In the past year, has the institution had one or more co-curricular planetary health programs or initiatives in the following categories? (1 point each)	**Score**
Projects where students are able to gain experience in organic agriculture and sustainable food systems, such as gardens, farms, community supported agriculture (CSA), fishery programs, or urban agriculture projects.	1
Panels, speaker series, or similar events related to planetary health that have students as an intended audience.	0

Events in which students learn directly from members of a local environmental justice community about the climate and environmental challenges they face, and how health professionals can partner with their community to address these exposures and impacts.	0
Cultural arts events, installations or performances related to planetary health that have students as an intended audience.	0
Local volunteer opportunities related to building community resilience to anthropogenic environmental impacts.	0
Wilderness or outdoors programs (e.g., that organise hiking, backpacking, kayaking, or other outings for students)	1
Score explanation: *1. There is a student-run Gardening Club at the university where students can gain experience with organic gardening. The Jardín de la Salud is a Community Garden initiative of Loma Linda University Community-Academic Partners in Service provides wholesome produce and safe outdoor green spaces to the local San Bernardino community. Students can volunteer and help maintain the garden. The university also organizes opportunities to volunteer for fresh produce distribution in the community, assist the Helping Hands Pantry, and package food boxes at Community Action Partnership of San Bernardino County Food Bank.* *2. The Wilderness Medicine Interest Group, Hulda Hikers, and Running Club organize outdoor outings for students (hiking, running, bouldering events). The University also hosts a yearly retreat at Pine Springs Ranch in Mountain Center with hiking activities.*	

Section Total (8 out of 15)	**53.33%**

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Campus Sustainability

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

5.1. Does your institution have an Office of Sustainability?	
Yes, there is an Office of Sustainability with multiple full-time staff dedicated to campus sustainability. If the Office of Sustainability serves the entire campus, there is **at least one designated staff member** for sustainability at the hospital. (3 points)	
There is an Office of Sustainability with one or more full-time staff dedicated to campus sustainability, but **no specific staff member** in charge of hospital sustainability. (2 points)	
There are **no salaried sustainability staff,** but there is a sustainability task force or committee. (1 point)	
There are **no** staff members **or** task force responsible for overseeing campus sustainability. (0 points)	
Score Assigned:	1
Score explanation: Loma Linda University does not have an Office of Sustainability but there is an LLUH Environmental Sustainability Committee with the involvement of salaried staff employed by the Institute for Community Partnerships-Community Benefit and Environmental Health & Safety.	

5.2. How ambitious is your institution's plan to reduce its own carbon footprint?	
The institution has a **written and approved plan** to achieve carbon neutrality by **2030** (5 points)	
The institution has a **written and approved plan** to achieve carbon neutrality by **2040** (3 points)	
The institution has a stated goal of carbon neutrality by **2040** but has **not created a plan** to reach that goal or the **plan is inadequate** (1 point)	
The institution does **not** meet any of the requirements listed above (0 points)	
Score Assigned:	0
Score explanation: Loma Linda does not currently have a stated goal of carbon neutrality. However, there are several ongoing projects working on diverting medical waste. They are also working to eliminate piped nitrous oxide in the near future. LLUH is also a member of Practice	

Greenhealth, which offers a broad variety of practical tools, data, resources, and expert technical support on sustainability initiatives that help member organizations meet their goals.

5.3. Do buildings/infrastructure used by the institution for teaching (not including the hospital) utilize renewable energy?	
Yes, institution buildings are **100%** powered by renewable energy. (3 points)	
Institution buildings source **>80%** of energy needs from off-site and/or on-site renewable energy. (2 points)	
Institution buildings source **>20%** of energy needs from off-site and/or on-site renewable energy. (1 point)	
Institution buildings source **<20%** of energy needs from off-site and/or on-site renewable energy. (0 points)	
Score Assigned:	0
Score explanation: Loma Linda University's Medical School buildings utilize the University's Central Utilities Plant for energy needs which runs on natural gas. Their thermal energy storage tank facility also allows the power plant to create chilled or heated water during the hours when electricity is least expensive to store for use during the day. Due to restrictions within the main campus energy circuit, renewable energy projects are being prioritized outside of the main campus. One building in the health system, the LLUH/SACHS San Bernardino Campus building (community clinic with a gateway college) is LEED Silver certified.	

5.4. Are sustainable building practices utilised for new and old buildings on the institution's campus, with design and construction of new buildings and remodelling of old buildings conforming to a published sustainability rating system or building code/guideline?	
Yes, sustainable building practices are utilised for new buildings on the institution's campus and the **majority** of old buildings **have been retrofitted** to be more sustainable. (3 points)	
Sustainable building practices are utilised for new buildings on the institution's campus, but most old buildings have **not been retrofitted.** (2 points)	
Sustainable building practices are **inadequately or incompletely** implemented for new buildings. (1 point)	
Sustainability is **not considered** in the construction of new buildings. (0 points)	
Score Assigned:	1
Score explanation: Loma Linda University does not currently follow LEED, Green Globes, and the National Green Building Standard in building decisions. However, there are some environmental	

efforts taking place for buildings, including the consideration of sustainable practices for recent new construction as well as some retrofitting efforts.

5.5. Has the institution implemented strategies to encourage and provide environmentally-friendly transportation options for students and reduce the environmental impact of commuting?	
Yes, the institution has implemented strategies to encourage and provide **environmentally-friendly transportation options** such as safe active transport, public transport, or carpooling and these options are well-utilised by students. Alternatively, the campus location is not amenable to unsustainable forms of transportation by default. (2 points)	
The institution has implemented **some** strategies to provide environmentally-friendly transportation options, but the options are **unsatisfactorily** accessible or advertised. (1 point)	
The institution has **not** implemented strategies to encourage and provide environmentally-friendly transportation options. (0 points)	
Score Assigned:	1
Score explanation: The LLU Transportation Department manages shuttle services throughout the campuses and facilitates carpooling and bike parking programs, but these resources are not marketed widely. There is a rideshare program; however, this option is only available to LLU employees. There are opportunities for improvement such as implementing carshare and bikeshare programs for both students and employees, as well as incentivizing carpooling and biking to work/school. The campus is walkable, with the dorms located within a 15-minute walk to campus. However, several walkways to campus lack safety measures such as pedestrian signals or traffic lights. Bike racks on campus are available for students to use. There are bike-accessible pathways on campus (no stairs, smooth pavement); however, there are no bike-designated pathways. Some students bike, scooter, or skateboard to class, but many medical students drive to school due to housing being located farther away from campus. Additionally, during third year, many students drive to access off-campus clinical sites, as these sites are not easily accessible via biking or walking. Information about environmentally-friendly transportation is not emphasized in orientation.	

5.6. Does your institution have an organics recycling program (compost) and a conventional recycling program (aluminium/paper/plastic/glass)?	
Yes, the institution has **both** compost **and** recycling programs accessible to students and faculty. (2 points)	
The institution has **either** recycling **or** compost programs accessible to students and faculty, but not both. (1 point)	
There is **no** compost or recycling program at the institution. (0 points)	
Score Assigned:	1

Score explanation: There are recycling bins located around campus but there are no on-campus composting programs accessible to students and faculty. There is only one bin for food waste located on campus at the Councilors Student Pavilion. Landscaping waste is composted, but organic waste generated from hospital and university food services is not yet composted. The university is aware of California law (SB1383) which mandates organics waste recycling and will be developing a plan to comply with this. There is currently no LLU published policy regarding recycling or composting procedures. The Lindsay Hall campus dorms offer recycling bins for residents, but the Daniells Hall campus dorms do not offer options for recycling or composting.

5.7. Does the institution apply sustainability criteria when making decisions about the campus food and beverage selections (e.g. local sourcing, reduced meat, decreased plastic packaging)?	
Yes, the institution has **adequate s**ustainability requirements for food and beverages, including meat-free days or no red-meat, and **is engaged** in efforts to increase food and beverage sustainability. (3 points)	
There are sustainability guidelines for food and beverages, but they are **insufficient or optional**. The institution **is engaged** in efforts to increase food and beverage sustainability. (2 points)	
There are sustainability guidelines for food and beverages, but they are **insufficient or optional.** The institution is **not** engaged in efforts to increase food and beverage sustainability. (1 point)	
There are **no** sustainability guidelines for food and beverages. (0 points)	
Score Assigned:	3

Score explanation: Loma Linda University serves an exclusive vegetarian diet throughout their dining areas on campus and at the hospital, and a vegetarian-by-default diet for patients in the hospital:The on-campus cafeterias serve exclusively lacto-ovo-vegetarian menus (no meat) and include the Councilors Student Pavilion, the Faculty Dining Room, Cafe 197, and Farmacy Fresh Cafe. University catering serves an exclusively vegetarian menu. All on-campus events that serve food are required to serve vegetarian or vegan food only. The hospital cafeterias at LLUMC, East Campus Hospital, Surgical Hospital, Behavioral Medical Center ,and Faculty Medical Offices, serve entirely vegetarian cuisine. LLU Dining Services states:"As a Seventh-day Adventist institution, Loma Linda University Health has promoted a vegetarian diet for over a century. During this time numerous scientific findings have confirmed a vegetarian diet lowers the risk of many chronic conditions and can improve your health. Therefore, we promote a lacto-ovo-vegetarian (vegetable, eggs, dairy and no meat) diet in our dining areas and catering department. We believe healthy nutrition is foundational to our overall health."

The LLUMC hospital cafeteria has recently begun sourcing more locally-sourced items on the menu, and highlights these items with signs in the cafeteria. Patients in the hospital are served vegetarian meals by-default upon admission, but patients can opt for meat items if they choose. The medical center has also implemented an inpatient therapeutic meals program that features a fully plant-based menu for patients. Aside from vegetarian and plant-based menus, there are no formal published sustainability requirements for menus and food sourcing. However, the commitment to serving vegetarian menus and promoting a plant-based diet across the institution is a long-standing commitment to promoting health through nutrition and has sustainability benefits.

5.8. Does the institution apply sustainability criteria when making decisions about supply procurement?	
Yes, the institution has **adequate** sustainability requirements for supply procurement **and** is **engaged** in efforts to increase sustainability of procurement. (3 points)	
There are sustainability guidelines for supply procurement, but they are **insufficient or optional.** The institution is **engaged** in efforts to increase sustainability of procurement. (2 points)	
There are sustainability guidelines for supply procurement, but they are **insufficient or optional.** The institution is **not engaged** in efforts to increase sustainability of procurement. (1 point)	
There are **no** sustainability guidelines for supply procurement. (0 points)	
Score Assigned:	0
Score explanation: There are no published guidelines for procurement of supply items such as chemicals, materials, furniture, etc. as indicated on the Supply Chain Management webpage. There are no departments created to uphold or further sustainability efforts at LLU, as evidenced by the LLUH shared services webpage.	

5.9. Are there sustainability requirements or guidelines for events hosted at the institution?	
Every event hosted at the institution **must** abide by sustainability criteria. (2 points)	
The institution **strongly recommends or incentivizes** sustainability measures, but they are **not required.** (1 point)	
There are **no** sustainability guidelines for institution events. (0 points)	
Score Assigned:	0
Score explanation: Loma Linda University SOM does not currently have guidelines for sustainability measures at events, as seen on the Events Management webpage.	

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

Score explanation: Loma Linda University SOM faculty have started the nonprofit organization, My Green Lab, which includes initiatives to assist with making lab spaces more environmentally sustainable on campus. Additionally, several initiatives that have been ongoing since 2018 include recycling uncontaminated lab plastics, recycling styrofoam, recycling aluminum, the "Shut the Sash" initiative that reduces energy usage of fume hoods by 85%, and the "-70 is the new -80" initiative for freezer temperatures that reduced freezer energy usage by 30%.

5.11. Does your institution's endowment portfolio investments include fossil-fuel companies?	
The institution is **entirely divested** from fossil fuels **and** has made a **commitment to reinvest divested funds** into renewable energy companies or renewable energy campus initiatives. (4 points)	
The institution is **entirely divested** from fossil fuels. (3 points)	
The institution has **partially divested** from fossil fuel companies **or** has made a **commitment to fully divest**, but **currently** still has fossil fuel investments. (2 points)	
The institution has **not divested** from fossil-fuel companies, but faculty and/or students are **conducting organised advocacy** for divestment. (1 point)	
Yes, the institution has investments with fossil-fuel companies and there have been **no efforts** to change that. (0 points)	
Score Assigned:	0
Loma Linda University's Investment Policy Statement does not exclude investments in fossil fuel. There have been no organized efforts to change this.	

Section Total (9 out of 32)	**28.13%**

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Grading

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

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

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

Section	Raw Score %	Letter Grade
Planetary Health Curriculum (30%)	(15/72) x 100 = 21%	D-
Interdisciplinary Research (17.5%)	(6/17) x 100 = 35%	D+
Community Outreach and Advocacy (17.5%)	(4/14) x 100 = 29%	D
Support for Student-led Planetary Health Initiatives (17.5%)	(8/15) x 100= 53%	C
Campus Sustainability (17.5%)	(9/32) x 100 = 28%	D
Institutional Grade	**(21x0.3 + 35x0.175 + 29x0.175 + 53x0.175 + 28x0.175) = 32%**	**D**

Report Card Trends

Section Overview
This graph demonstrates trends in overall and section grades for the years in which Loma Linda University School of Medicine has participated in the Planetary Health Report Card initiative.