# Planetary Health Report Card (Medicine):

## *Rosalind Franklin University*


2024-2025 Contributing Team:

- Co-directors: Paige Anschutz*, Natalie Kasir*, and Michael Letz*
- Section Leads: Mariyah AbdurRahman, Paige Anschutz, Natalie Kasir, Michael Letz, Charmila Meesala
- Student Contributors: Michael Boler, Emma Crawford, Chloe Liew, Megan Lumbert, Henry Morrison, Eli Schulman, Shanti Shrestha, Hayley Petit
- Student Advisors: Christian Arcelona, Ayesha Mohammad, and Neha Basti
- Faculty Mentors: Regina Gomez, MD; Jeanette Morrison, MD
- *Primary Contacts: Paige Anschutz paige.anschutz@my.rfums.org, Natalie Kasir natalie.kasir@my.rfums.org, and Michael Letz michael.letz@my.rfums.org
- **Alternative Contacts: Neha Basti neha.basti@my.rfums.org, Allison Monie allison.monie@my.rfums.org

# Summary of Findings

| Overall Grade | C+ |
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| Curriculum | C+ |
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- Chicago Medical School (CMS) has made strong efforts to include information on air pollution and environmental risk factors in core and elective curriculum. Environmental racism is thoroughly discussed through longitudinal core coursework. The Clinical Foundations of Medicine Course for first year students integrates a mandatory four-hour EcoAmerica Climate Ambassador training and two hour debrief session, as well as an in-person Climate Workshop, which heavily emphasize the global burden of climate change, extreme weather events, extreme heat, and drought on cardiovascular, respiratory, and reproductive health. In addition, 2 new elective courses–Climate Change and the Clinical Community (a fourth year elective) and Climate Change and the Local Community (a second year elective)–were approved on 9/9/2024, and will be offered in the 25/26 school year. Furthermore, the Vertical and Horizontal Integration committee has selected "Health Effects of Climate Change" as one of the top societal problems to highlight in the educational program; this means there are specific learning objectives that address the diagnosis, prevention, and treatment of the medical consequences related to climate change. The committee has overall intended goals to develop a distinction opportunity for students in planetary health or related thread or develop a faculty role responsible for overseeing curricular integration of planetary health curriculum.
- **Recommendations**: While several social determinants of health, overmedicalization, benefits of non-pharmaceutical management of chronic disease, and nutrition are discussed, core courses do not directly link these factors to planetary health. Overall, the curriculum should have a greater focus on marginalized populations and emphasize learning from Indigenous knowledge of environmental practices. Discussion of the carbon footprint of the healthcare system would also be a valuable addition to courses such as Essentials of Clinical Reasoning or Patient Safety. Years 3 and 4 curriculum could also benefit from more integrated climate health topics throughout rotations, electives, and Sub-Internships as well. Implementing course objectives related to climate change, teaching how to take an environmental exposure history in the Essentials of Clinical Reasoning, hiring a faculty member to oversee planetary health and sustainability curriculum, and offering distinction in planetary health would all be great next steps in improving climate health curriculum at CMS.

| Interdisciplinary Research | C |
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- Chicago Medical School attempts to emphasize Interdisciplinary Research by branching out to study the various environmental impacts on healthcare. The institution is engaged in early-stage research on climate change and its impact on health services, with student projects examining environmental factors like heavy metals, PFAS, and particulate matter in Lake County, IL. The university lacks a dedicated planetary health research department, though efforts are being made to establish one, and the Michael Reese Foundation Center for Health Equity Research has the potential to expand its focus on environmental health. While the university has no significant community impact regarding sustainability or climate change mitigation, past efforts have integrated sustainability into healthcare services. The institution maintains a sustainability website outlining campus-wide initiatives, including GREEN programs, LEED certification goals, and recycling efforts, though it lacks detailed updates on planetary health leadership or events. In 2024, the Chicago Medical School hosted a seminar on climate justice at the WiSH Annual Symposium, and as of November 2022, the university has been part of the Global Consortium on Climate and Health Education, encouraging medical students' involvement in climate change organizations.
- **Recommendations**: To fulfill the standards of interdisciplinary health, Chicago Medical School should

establish a dedicated Planetary Health Research Center that integrates environmental science, medicine, and public health. This center could collaborate with the existing Environmental Health and Safety Department and the Michael Reese Foundation Center for Health Equity Research to expand research on climate change and health, fostering a multidisciplinary approach to addressing environmental determinants of health. Additionally, the university should integrate planetary health into the curriculum by embedding climate and health education across disciplines such as medicine, public health, pharmacy, and biomedical sciences. This could include required coursework on socio-environmental determinants of health, sustainability in healthcare, and climate-related disease prevention, ensuring that future healthcare professionals are equipped to address the growing impact of climate change on human health.

## Community Outreach and Advocacy | B

- Chicago Medical School demonstrates community outreach and advocacy relating to planetary health. Partnerships with local organizations such as the Brushwood Center and Ryerson Woods and through the Michael Reese Foundation Center for Health Equity Research, students have the opportunity to engage in environmental health projects and advocacy efforts. The medical school also offers some community facing events addressing planetary health through the Rosalind Franklin University WiSH Annual Symposium and participation in the Mano a Mano Back to School Fair where students educate the public on climate-related health impacts. Regular communication updates on planetary health are provided to students, primarily through EcoAmerica emails after participation in the Climate for Health Ambassadors Training and through university newsletters and social media highlights. However, post-graduate professional educational opportunities related to planetary health are lacking, as none of the 2024-2025 Medical Grand Rounds presentations have focused on planetary health. The medical school offers patient education materials on environmental health exposures, including information on asthma, heat-related illness prevention, and common allergens, with materials in both English and Spanish. However, there are limited resources specifically addressing the health impacts of climate change. Some affiliated clinical sites, such as Advocate Health Care, provide online articles on climate change and health-related issues but Chicago Medical School is a community engaged medical school and has many clinical sites that do not all provide such materials.
- **Recommendations**: Expand community partnerships, develop and offer planetary health focused courses or workshops with a community target audience, strengthen post graduate professional education by incorporating planetary health topics into the Medical Grand Rounds events, and develop patient education materials on climate change and health at Rosalind Franklin University's Interprofessional Community Clinic.

## Support for Student-Led Initiatives | B

- Chicago Medical School supports planetary health through student-led initiatives through mentorship for research as well as active student organizations dedicated to planetary health. Additionally, Rosalind Franklin University's sustainability committee engages faculty, staff, and students in campus-wide sustainability efforts. Chicago Medical School offers elective courses that incorporate planetary health research and service learning, though these require student initiative. Chicago Medical School also provides some support for sustainability related quality improvement projects through mentorship, but there is no dedicated funding or institutional requirement for participation. The university also offers speaker series, service learning with local organizations, outdoor programming and student-led clubs, as well as incorporating climate and medicine through various required lectures in the curriculum, as well as electives students can take.
- **Recommendations**: Create a designated and identifiable web page with current information on planetary health initiatives, research opportunities, and mentor contacts to support students in pursuing research and community service work related to planetary health. In addition, a student liaison should be appointed to speak on behalf of the student body to reform the school's curriculum and advocate on various climate issues that affect the school. Lastly, the Chicago Medical School should promote and advocate for cultural arts events, installations, or performances related to planetary health with the idea of students as the audience.

| Campus Sustainability | D |
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- While Rosalind Franklin University has made efforts to campus sustainability by establishing an office of sustainability, implementing an array of efforts to reduce its carbon footprint, transferring its energy portfolio into renewable sources, following LEED protocols in its infrastructure, having a bike friendly campus and a shuttle, providing sustainability criteria for supply procurement and by slowly disinvesting in fossil fuels, there is still much more work to be done. Rosalind Franklin University campus sustainability score had improved from last year, it was determined that the university is engaged in guidelines for supply procurement, so their overall score increased by 1 point. The university also increased its renewable energy supply from less than 1% to 14% this year. While it does not warrant a higher score, it is a significant improvement. Yet, the university still has no plan to attain carbon neutrality, has not retrofitted its older buildings, made efforts to encourage public transportation use, implemented sustainability guidelines for events or made efforts to make its lab spaces more sustainable.
- **Recommendations**: If the University were to implement an office of sustainability with a plan for carbon neutrality by 2040, its score would go up an entire letter grade. However, due to no learning hospital, the university could not improve its score in section 5.1. Maybe this section can be modified for universities without a teaching hospital. The university should continue to disinvest from fossil fuels and continue to rely more on renewable energy. Some universities do provide their students a U-pass through their tuition. Rosalind Franklin University could provide this to their third and fourth year medical students to encourage them to utilize public transportation. The university should continue to focus on retrofitting their buildings to meet LEED criteria, as well as establishing sustainability guidelines for campus events, lab spaces and supply procurement. CoAdditionally, if the university were to begin an on-campus compost program or food supply strategies such as meat free or no red meat days, it could improve its score in the future.

# Statement of Purpose

*Planetary health is human health.*

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

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

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

# Definitions & Other Considerations

**Definitions:**

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

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

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

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

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

specifically targeted for medical students, can meet this metric.

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

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

- **Core Curriculum:** This refers to taught material that is develiered 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: | 1 point |

Chicago Medical School does not offer any elective courses specific to planetary health or environmental impact. Several electives offered to students, such as the "Stories of Health Disparities" elective offered to fourth-year students, include readings and lectures pertaining to environmental impacts on health outcomes, but do not solely focus on education for sustainable healthcare.

A Global Health elective offered to fourth-year students is partnered with Child Family Health International (CFHI). Depending on the specific CFHI site, there is the opportunity for students to learn about the impact on climate change on health in a particular environment as planetary health is a focus of many CFHI programs; however, it is not a required focus for students.

Two new electives were approved on 9/09/2024 that primarily focus on educating future physicians on health impacts of climate change: Climate Change and the Local Community, an M2 elective, and Climate Change and the Clinical Community, an M4 elective.

Climate change and the Local Community is an M2 elective focused on how the impacts of climate change may affect the local community, teaching students how to identify examples of climate impacts on human health. Students will partner with local

organizations, communities, agencies and stakeholders working on climate change solutions in order to contribute to their knowledge of how one's personal actions or those of a community that may potentially mitigate or reduce the environmental effects of climate change.

Climate Change and the Clinical Community is an M4 elective that focuses on the health impacts of climate change and how healthcare systems are both major contributors to climate change and important organizations for innovating mitigation and adaptation strategies. Learners will explore how climate change impacts healthcare delivery, including patient care and systems-based care. At the conclusion of the elective, students will identify principles of sustainability and healthcare decarbonization for future clinical practice.

Both of these electives will become available for students in the 2025-2026 school year. These electives will help lead the way to expanding our curriculum and electives offered that solely focus on educating future physicians on how to best practice sustainable healthcare and the importance of planetary health care.

***Curriculum: Health Effects of Climate Change***

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

The Clinical Foundations of Medicine Course (CFoM) for M1 students integrates a mandatory four-hour EcoAmerica Climate Ambassador training and two hour debrief session, as well as an in-person Climate Workshop, which heavily emphasizes the effects of extreme heat, and drought on cardiovascular, respiratory, and reproductive health.

The Chicago Medical School Clinical Foundations of Medicine (CFoM) course's Climate Workshop breakout lecture "Heat-Related Illness" addressed how extreme heat due to climate change impacts a person's overall health, as well as how certain populations- such as seniors, children, pregnant women, unhoused, and those with chronic medical conditions- are more vulnerable to the impacts of extreme heat.

In addition, the first year course, Cardiovascular, Pulmonary and Renal (CPR), Lecture title: Pulmonary Questions, the greenhouse effect, CFCs depleting ozone at high heats, the pathophysiology of particulate matter in the atmosphere from droughts and wildfires reaching lung alveoli, increased mortality and morbidity during heat waves, ROS due to particulate matter,

ground ozone release from tailpipes, smokestacks, and factories (nitrogen oxides, volatile organic compounds) are all discussed.

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

This topic was explored **in depth** by the **core** curriculum. (3 points)

This topic was **briefly** covered in the **core** curriculum. (2 points)

This topic was covered in **elective** coursework. (1 point)

This topic was **not** covered. (0 points)

| Score Assigned: | 3 points |
|---|---|

The Rosalind Franklin Chicago Medical School Clinical Foundations of Medicine (CFoM) first-year course includes a mandatory 4-hour EcoAmerica Ambassador climate health training and 3 hour interactive debrief session, which discuss climate change and climate disasters on human health.

Chicago Medical School's core course M2 year, Endocrinology and Reproduction, then goes into depth regarding the health implications of extreme weather events. This is explored in physiology, such as in a lecture on the glucocorticoid stress response and its role during environmental challenges, as well as in epidemiological terms regarding chronic pain syndromes. In a lecture titled, "Teratology and Epidemiology of Birth Defects/Pregnancy and Climate Change," a graphic showing heightened El Nino Health Risks, including increased drought; malnutrition; communicable, vector-borne, and water-borne diseases; respiratory disease; reduced access to healthcare; and mental health and psychosocial effects is presented and discussed. This lecture also discusses mitigation strategies–such as reducing carbon emissions, implementing carbon taxes and increased use of carbon sinks–as well as adapting by adjusting agricultural practices and strengthening human and animal immunity to climate-related disease.

In a lecture titled "Clinical Assessment of Pelvic Pain, Racial Disparity, Climate Change and Pain", the effects of extreme weather on chronic prostatitis, chronic pelvic pain, and bladder pain syndromes is explored. The burden of weather-related/induced health effects on the healthcare system is also discussed.

**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 points |

The Rosalind Franklin Chicago Medical School Clinical Foundations of Medicine (CFoM) first-year course includes a mandatory 4-hour EcoAmerica Ambassador climate health training and 3 hour interactive debrief session, which discuss climate change and human health, including the rise in vector-borne illnesses with the spread of warmer temperatures.

The Rosalind Franklin first year course, Cardiovascular, Pulmonary, and Renal (CPR), lecture, "Respiratory Fungal Infections I and II," contains slides showing a graph of impacts of increasing temperatures and precipitation, extreme weather events, and increasing use of agricultural fungicides on increasing numbers and spread of fungal infections and antifungal resistance. It also discusses the emergence of a new Candida auris, which may become a heat adapted multidrug-resistant fungus.

In the same course, lecture title: Pulmonary Questions, the effect of ozone on human health, including exacerbation of asthma and COPD, increased cardiovascular events, and increased respiratory infections are discussed briefly as well.

It may be helpful to emphasize infectious diseases such as tuberculosis, which spread more in low and middle-income countries and during climate disasters, when people are in closer proximity and/or when people do not have consistent access to multidrug therapies.

| **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. | |
| This topic was **briefly** covered in the **core** curriculum. | |
| This topic was covered in **elective** coursework. | |
| This topic was **not** covered. | |
| Score Assigned: | 2 points |

In the M1 course, Cardiovascular, Pulmonary and Renal Course (CPR), Lecture title: Pulmonary Questions, the greenhouse effect, CFCs depleting ozone at high heats, the pathophysiology of particulate matter in the atmosphere from droughts and wildfires reaching lung alveoli, increased mortality and morbidity during heat waves, ROS due to particulate matter, ground ozone release from tailpipes, smokestacks, and factories (nitrogen oxides, volatile organic compounds) are all discussed. In addition, the effect of ozone on human health, including exacerbation of asthma and COPD, increased cardiovascular events, and increased respiratory infections are discussed. Also increased pollen and increased allergies due to longer growing seasons. In addition, socioeconomic

impacts on asthma, COPD, and cystic fibrosis, in part through environmental pollutant exposures are discussed.

Within the M1 curriculum, the Chicago Medical School Clinical Foundations of Medicine (CFoM) course's Climate Workshop keynote lecture "Health Impacts of Climate Change" addressed how air pollution due to climate change can manifest as respiratory complications, such as exacerbating lung conditions like asthma, COPD, and allergies. Additionally, the effects of climate change on respiratory health were also discussed in two of the breakout lectures titled "Pulmonary and Pregnancy Case Studies" and "Pulmonary Case Studies." Both of these breakout rooms discussed clinical cases in which poor air quality due to climate change had exacerbated lung diseases.

**1.6. Does your medical school curriculum address the cardiovascular health effects of climate change, including increased heat**

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| This topic was explored **in depth** by the **core** curriculum. | |
| This topic was **briefly** covered in the **core** curriculum. | |
| This topic was covered in **elective** coursework. | |
| This topic was **not** covered. | |
| Score Assigned: | 3 points |

In the M1 course, Cardiovascular, Pulmonary and Renal Course (CPR), Lecture title: Pulmonary Questions, the effect of ozone on human health, including exacerbation of asthma and COPD, increased cardiovascular events, and increased respiratory infections are discussed.

The Chicago Medical School Clinical Foundations of Medicine (CFoM) course's Climate Workshop keynote lecture "Health Impacts of Climate Change" addressed how climate change can exacerbate heart conditions, including how air pollution can increase ischemic heart disease, stroke, and oxidative stress. Additionally, one of the breakout lectures from this Climate Workshop titled "Heat-Related Illness" addressed how climate change can impact the cardiovascular system due to extreme heat, such as leading to heat exhaustion, heat stroke, cardiovascular failure, and death due to loss of fluid and perfusion.

In the "Metabolism, Nutrition, and Energy" lecture in the first-year Scientific Foundation of Medicine (SFoM) course, there are relevant slides that discuss the connection of nutrition and health being closely related. Stating that 50% of American adults have one or more preventable diseases, including cardiovascular disease and high blood pressure due to poor eating and food insecurities. The course then goes on to explain the connection of food insecurity and climate change with specific examples including how increased climate shocks slow or even reverse years of progress in poor childhood nutrition, as well as how temperatures are continuing to rise, with more frequent droughts limiting food availability, access, utilization and stability for many. This lecture also discusses Chicago's climate action plan (2022) and the city's strategies for mitigating and adapting to climate change including food systems that impact chronic health, acknowledging the interconnection of climate change impacts and stressing the importance of finding solutions that

address all vulnerability in the food system, including climate, poverty, access to healthy food and systemic inequalities.

In addition, in the M2 Endocrine and Reproductive course, in the lecture: Nutrition for Patients with Diabetes, environmental factors contributing to diabetes and its comorbidities–including cardiovascular disease–including arsenic, bisphenol A, organophosphates, chlorinated pesticides, air pollution, and global warming- wildfires leading to reduced pulmonary function, increased morbidity and mortality of Type 2 Diabetes patients are discussed.

| **1.7. Does your medical school curriculum address the mental health and neuropsychological effects of environmental degradation and climate change?** | |
|---|---|
| This topic was explored **in depth** by the **core** curriculum. | |
| This topic was **briefly** covered in the **core** curriculum. | |
| This topic was covered in **elective** coursework. | |
| This topic was **not** covered. | |
| Score Assigned: | 2 points |

For first year students, the Chicago Medical School Clinical Foundations of Medicine (CFoM) course's Climate Workshop breakout lecture "Heat-Related Illness" discussed how mentally ill populations are more vulnerable to the impacts of extreme heat due to climate change. Additionally, this lecture also explained how mental status changes (confusion, dizziness, loss of consciousness) may occur due to heat stroke from the loss of perfusion to the brain. A survey administered to all first year medical students following this Climate Workshop showed that 100% of students answered positively that they understood the role of climate change in the development of climate anxiety, PTSD, displacement, and their toll on mental health.

In addition, in a lecture about chronic pain, the Endocrinology and Reproduction core course second year discussed the effects of extreme weather on mood and chronic health issues (including mental health issues) across three slides, noting that climate change negatively impacted mental health and exacerbated physical illnesses.

Finally, one of the RFU affiliated Psychiatry programs for third and fourth year student rotations provides a lecture on the relationship between climate and mental health to residents, so some third and fourth year medical students are exposed to this topic.

| **1.8. Does your medical school curriculum address the relationships between health, individual patient food and water security, ecosystem health, and climate change?** |
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| This topic was explored **in depth** by the **core** curriculum. |
| This topic was **briefly** covered in the **core** curriculum. |

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|---|---|
| This topic was covered in **elective** coursework. | |
| This topic was **not** covered. | |
| Score Assigned: | 3 points |

At Chicago Medical School, the first year Scientific Foundations of Medicine course briefly discusses the impacts of climate change on childhood malnutrition in the "Metabolism, Nutrition, and Energy" lecture. The relevant slide emphasizes the increase in childhood malnutrition as temperatures and droughts increase due to climate change.

The first-year course Foundations for Interprofessional Practice requires students to participate in a module titled "Social Determinants of Health", which explores the relationships between general health and food choices, food security, water quality, housing, safety, and access to transit.

In addition, the first year Clinical Epidemiology course mentions the Traditional Triad of Disease (environmental factors, social interventions, and preventative services). This included discussion of climate, population density, social structures, housing quality, sanitation, and water; lead exposure and related developmental issues in Flint, Michigan was used as a case example to teach these relationships.

Finally, the second year Endocrinology and Reproduction curriculum includes a lecture dedicated to Type II Diabetes Mellitus and related environmental risks. The lecture spends one slide listing environmental risk factors (arsenic, bisphenol A, organophosphates, chlorinated pesticides, air pollution), and then spends the next few slides discussing the role of global warming and wildfires in exacerbating diabetes. Climate change was discussed in relation to reduced pulmonary function and increased morbidity and mortality of patients with Type II Diabetes Mellitus.

| **1.9. Does your <u>medical school</u> curriculum address the outsized impact of climate change on marginalised populations such as those with low SES, women, communities of colour, Indigenous communities, children, homeless populations, and older adults?** | |
|---|---|
| This topic was explored **in depth** by the **core** curriculum. | |
| This topic was **briefly** covered in the **core** curriculum. | |
| This topic was covered in **elective** coursework. | |
| This topic was **not** covered. | |
| Score Assigned: | 3 points |

Chicago Medical School's Clinical Epidemiology course taken M1 year also addresses and acknowledges the impact of climate change on marginalized and vulnerable populations in the "Public Health Overview" lecture. There is a slide that provides an overview on vulnerability factors (demographic, biological, socioeconomic, gender and equity, ect) and the

climate related hazards and various individual health outcomes, as well as outcomes on health systems and facilities. This lecture also addressed where/how students can access the latest data on these important public health issues.

This is also addressed in the Clinical Foundations of Medicine 4-hour Eco-America Ambassador Training and 2-hour debrief.

In addition, the CMS second year course Principles of Professionalism, Healthcare and Health Equity (P2H2) II, includes a mandatory session called "Climate change and environmental racism: Impact on Health," in which speakers from a local organization called the Brushwood Center, share about the local effects of superfund sites and coal plants on poorer areas, and an Emergency Medicine Climate medicine Fellow shares about the unequal distribution of air pollution, extreme weather events, etc. globally.

The elective courses in Conversational Spanish and Advanced Conversational Spanish explore global and cultural competencies; learning about these highlights the racial disparities in and among climate change-related health outcomes. However, these are student-driven discussions. Still, the criteria of the elective states learners must discuss existing inequities for diverse (Latinx) patient populations.

**1.10. Does your medical school curriculum address the unequal regional health impacts of climate change globally?**

| | |
|---|---|
| This topic was explored **in depth** by the **core** curriculum. | |
| This topic was **briefly** covered in the **core** curriculum. | |
| This topic was covered in **elective** coursework. | |
| This topic was **not** covered. | |
| Score Assigned: | 2 points |

In the "Metabolism, Nutrition, and Energy" lecture in the first-year SFoM course, Chad, Eritrea, Sudan, South Sudan, Somalia, and Yemen are identified as being the most vulnerable to globally increasing droughts. There is mention of unequal health impacts varying across global regions, but this topic is not further investigated.

Also, the first year Clinical Foundations of Medicine 4-hour Ambassador training includes topics on regional and global unequal effects of climate change. Following this, in the CFoM Climate Workshop, one of the six breakout sessions which students could be assigned to was titled, "Trauma, Pregnancy." In this talk, one of our faculty discussed a recent mission trip she took to the Philippines in response to the tsunami, working with those with extremely low resources, food, and clean water due to storm surges.

In addition, the second year Principles of Professionalism and Health Equity course included a mandatory session called "Climate change and environmental racism: Impact on Health." This session addressed local superfund sites in and around Waukegan, including the Yeoman Creek Landfill, Johns Manville Corporation, and North Shore gas plants, and ethylene oxide emissions in Lake County, as well as

| |
|---|
| efforts by “Clean Power Lake County,” and “the Brushwood Center.” The session also discussed global health effects of climate change, showing a map graphic that outlined the disproportionate contribution to and impact of the climate crisis by different countries |

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

| **1.11. Does your <u>medical school</u> curriculum address the reproductive health effects of industry-related environmental toxins (e.g. air pollution, pesticides)?** | |
|---|---|
| This topic was explored **in depth** by the **core** curriculum. | |
| This topic was **briefly** covered in the **core** curriculum. | |
| This topic was covered in **elective** coursework. | |
| This topic was **not** covered. | |
| Score Assigned: | 3 points |
| The Clinical Foundations of Medicine (CFoM) course includes a mandatory 4-hour EcoAmerica Ambassador Training program, which focuses on effects of climate change on respiratory, cardiovascular, and reproductive health. This is followed by a 2 hour debrief interactive session discussing planetary and human health.<br><br>The Clinical Foundations of Medicine course also holds an in-person Climate Workshop with lecture options of varying climate-health related topics. The keynote lecture “Health Impacts of Climate Change” addresses how exposures to air pollution can cause low birth weight and increased infant mortality in general. Additionally, one breakout lecture titled “Environmental Degradation: Endocrine-Disrupting Chemicals in our Environment” from the Climate Workshop focused on endocrine disruptors found in pesticides, herbicides, anti-bacterials, personal care products, clothing, and other common household items. The lecture covered how these chemicals impact reproductive/endocrine function, such as leading to increased cancer, infertility, preterm birth, and obesity. Not all students attend this lecture, as they are assigned to one of 6 breakout lectures.<br><br>In the Endocrine and Reproductive course second year, the lectures titled, “Teratology and Epidemiology of Birth Defects” and “Pregnancy and Climate Change” discussed the effects of environmental toxins on birth outcomes/the infant as well as on the pregnant mother/pregnancy complications. | |

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

| This topic was **not** covered. | |
|---|---|
| Score Assigned: | 3 points |

Students at the Chicago Medical School are required to construct a Community Health Improvement Plan to address a specific Lake County public health issue as part of the first-year Clinical Epidemiology course. The project spans multiple sessions and culminates in a report/analysis and group oral presentation. A separate lecture in the Clinical Epidemiology course titled “Principles of Study Design” briefly mentions industrial pollution in Chicago and Lake County.

Students also have an opportunity to research environmental threats relevant to local communities during the first-year Foundations for Interprofessional Practice course. The course includes a module that requires students to analyze programs offered by the Lake County Health Department that address specific issues.

The second year P2H2 II course includes a mandatory session called “Climate change and environmental racism: Impact on Health,” in which speakers from a local organization called the Brushwood Center, share about the local effects of superfund sites and coal plants on poorer areas in Waukegan.

A new M2 elective, titled, Climate change and the Local Community has been approved as of 9/09/2024. Climate change and the Local Community focuses on how the impacts of climate change may affect the local community, teaching students how to identify examples of climate impacts on human health. Students will partner with local organizations, communities, agencies and stakeholders working on climate change solutions in order to contribute to their knowledge of how one's personal actions or those of a community that may potentially mitigate or reduce the environmental effects of climate change.

In addition, the fourth-year Principles of Professionalism, Healthcare, and Health Equity IV course includes a detailed session on climate change and environmental racism. Students hear from representatives of the Clean Power Lake County, which is a community-driven nonprofit organization committed to local action to secure environmental, economic, and racial justice. The manager of Brushwood Center's collective strategy for community art and nature programs also presents at this interaction session. Learning objectives for the session include “Reflect on the physician’s role in environmental advocacy”.

| **1.13. To what extent does your <u>medical school</u> emphasise the importance of Indigenous knowledge and value systems as essential components of planetary health solutions?** | |
|---|---|
| This topic was explored **in depth** by the **core** curriculum. | |
| This topic was **briefly** covered in the **core** curriculum. | |
| This topic was covered in **elective** coursework. | |
| This topic was **not** covered. | |
| Score Assigned: | 0 points |

The Chicago Medical School curriculum does not address the importance of Indigenous knowledge in planetary health solutions.

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

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

| | |
|---|---|
| Score Assigned: | 3 points |

The Clinical Epidemiology lecture for first year students titled, “Epidemiology in Practice” explores social determinants of health, some of which include toxin exposure and physical environment. The lecture relates these determinants directly to structural racism/racial inequities, socioeconomic status, ethnic background, and ultimately, health outcomes.

In addition, the first-year Principles of Professionalism, Health Care and Health Equity discusses how redlining has been associated with higher rates of air pollution and asthma. The course presents and adds context to statistics that describe race as the most significant predictor of a person living near contaminated air, water, or soil. Structural issues and opportunities for policy advocacy are identified; specifically, that people of color are significantly more likely to have their claims against polluters denied by the EPA.

The first year Clinical Foundations of Medicine (CFoM) course’s Climate Workshop keynote lecture “Health Impacts of Climate Change” addressed how climate change has disproportionately discriminated against racial and socioeconomic groups throughout the world, such as poorer countries having a higher burden from climate change. Additionally, one of the breakout lectures from this Climate Workshop titled “Food Insecurity, Health, the World & Chicago” addressed how climate change has impacted food insecurity worldwide, such as how climate change has slowed the years of progress in addressing poor childhood nutrition and how droughts from climate change are affecting food production. Also, the climate workshop titled, “Environmental Degradation,” discussed the use of mercury in medicine and medical emissions, and decades-long efforts to ban mercury from healthcare, culminating in the International Mercury Treaty (or Minamata Treaty) in 2013 by the World Health Organization.

The first year Gastroenterology course lecture titled, “Absorption and Secretion” mentions increased risk of heavy metal (lead, cadmium, polonium) poisoning due to increased exposure of heavy metals–which act on intestinal divalent metal

transporters–caused by modern mining. Furthermore, the Infection, Immunology, and Hematology course includes a lecture titled, “Pathology: Cell Injury 1”, which mentions radon exposure from uranium mining in the development of cancers. However, the course does not explicitly connect the exposure to mining toxins to marginalized populations.

In the fourth-year core course of Principles of Professionalism, Health Care and Health Equity IV, a lecture is dedicated to environmental justice and examining disproportionate impacts of environmental toxins on marginalized populations.

***Curriculum: Sustainability***

| **1.15. Does your medical school curriculum address the environmental and health co-benefits of a plant-based diet?** | |
|---|---|
| This topic was explored **in depth** by the **core** curriculum. | |
| This topic was **briefly** covered in the **core** curriculum. | |
| This topic was covered in **elective** coursework. | |
| This topic was **not** covered. | |
| Score Assigned: | 0 points |
| In the M2 core course, Endocrine and Reproduction, lecture: Nutrition for Patients with Diabetes, the vegan diet's impact on the health of patients with diabetes was discussed via results of the 7th Day Adventist, Adventist-2, and GEICO studies. Benefits including reduced cardiovascular risk, reduced A1C, reduced risk of developing diabetes were outlined. However, this lecture did not directly discuss the effects of vegan diet on the environment. | |

| **1.16. Does your medical school curriculum address the carbon footprint of healthcare systems?** | |
|---|---|
| This topic was explored **in depth** by the **core** curriculum. | |
| This topic was **briefly** covered in the **core** curriculum. | |
| This topic was covered in **elective** coursework. | |
| This topic was **not** covered. | |
| Score Assigned: | 0 points |
| The Chicago Medical School second year Patient Safety Course, lecture title: Healthcare Social Determinants, Disparities, Access, and Social Justice mentions that climate change is related to health disparities and presents the World Health Organization revised Hippocratic Oath, which now contains the following statement, “I will protect the environment which sustains us, in the | |

knowledge that the continuing health of ourselves and our societies is dependent on a healthy planet." However, this course does not tie together medical systems and the carbon emissions/footprint they cause.

One of two new electives which were approved on 9/09/2024 is for fourth year medical students and is called Climate Change and the Clinical Community. This course focuses on the health impacts of climate change and how healthcare systems are both major contributors to climate change and important organizations for innovating mitigation and adaptation strategies. Learners will explore how climate change impacts healthcare delivery, including patient care and systems-based care. At the conclusion of the elective, students will identify principles of sustainability and healthcare decarbonization for future clinical practice.

This elective will become available for students in the 2025-2026 school year, and will help lead the way to expanding our curriculum and electives offered that solely focus on educating future physicians on how to best practice sustainable healthcare and the importance of planetary health care..

| **1.17. Does your <u>medical school</u> curriculum cover these components of sustainable clinical practice in the <u>core</u> curriculum? (points for each)** | **Score** |
|---|---|
| The health **and** environmental **co-benefits** of **avoiding** over-medicalisation, over-investigation and/or over-treatment (2 points) | 0 |
| The environmental impact of **pharmaceuticals** and over-prescribing as a cause of climate health harm. Alternatively teaching on **deprescribing** where possible and its environmental and health co-benefits would fulfil this metric. (2 points) . | 0 |
| The health **and** environmental **co-benefits** of **non-pharmaceutical management** of conditions where appropriate such as exercise or yoga classes for type 2 diabetes; social group activities such as gardening for mental health conditions; active transport such as bicycle schemes. This is commonly known as social prescribing in the UK. (1 point) | 0 |
| 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 |

**Overtreatment and Deprescribing:**

Various courses mention the disadvantages of polypharmacy; however, they do not relate this issue to sustainable clinical practices.

The Essential of Clinical Reasoning (ECR) second year course has a lecture and workshop titled, "Pain Assessment & Management (Safe Opioid Prescribing)," which focuses on how to prescribe the smallest dose of opioid for the shortest period of time possible, as well as how to counsel patients on opioid disposal (including dropping leftover pills off at a pharmacy on a designated opioid disposal day or dropping them off at a police station). However, this discussion mainly focuses on the benefit of minimal prescribing of opioids/proper opioid disposal on patient health (i.e. reduced addiction or substance abuse risk) and does not really touch on the benefit to the environment.

**Non-pharmacologic Treatments:** The second year course, Musculoskeletal System (MSK), teaches a 'Movement as Medicine' workshop, which includes ballroom dancing, yoga, spin class, and weight lifting session options. Students are then asked to submit a reflection regarding their overall thoughts on movement as a form of medicine. However, these sessions did not directly correlate these non-pharmacological interventions with environmental benefits.

**Waste Production**: A new fourth year elective course, which was approved on September 9, 2024, entitled, "Climate Change and the Clinical Community," which educates future physicians on the health impacts of climate change and how healthcare systems are both major contributors to climate change and important organizations for innovating mitigation and adaptation strategies. Learners will explore how climate change impacts healthcare delivery, including patient care and systems-based care. At the conclusion of the elective, students will identify principles of sustainability and healthcare decarbonization for future clinical practice. This course will be offered starting the 2025-2026 school year. However, this course is not offered yet, and once offered, it will not be considered a core curriculum course.

***Curriculum: Clinical Applications***

| **1.18. In training for patient encounters, does your <u>medical school's</u> curriculum introduce strategies to have conversations with patients about the health effects of climate change?** | |
|---|---|
| Yes, there are strategies introduced for having conversations with patients about climate change in the **core** curriculum. (2 points) | |
| Yes, there are strategies introduced for having conversations with patients about climate change in **elective** coursework. (1 points) | |
| No, there are **not** strategies introduced for having conversations with patients about climate change. (0 points) | |
| Score Assigned: | 2 points |
| The Chicago Medical School Clinical Foundations of Medicine (CFoM) course first year requires that students complete the EcoAmerica ambassador training, which involves a 2-hour debrief and interactive exercises where students model conversations about climate health in various settings. Strategies for raising awareness about climate change and health effects were the primary focus of this session; story-telling, presenting statistics, and demonstrating empathy were among the skills practiced. Medical students were asked to brainstorm opportunities where they might be able to engage others in conversations about climate health. | |

| |
|---|
| While not every student may have chosen to brainstorm a conversation to address a patient, all were given Climate Rx badges, which is a non-confrontational way to start a conversation. |

| **1.19. In training for patient encounters, does your <u>medical school's</u> curriculum introduce strategies for taking an environmental history or exposure history?** | |
|---|---|
| Yes, the **core** curriculum includes strategies for taking an environmental history. (2 points) | |
| Only **elective** coursework includes strategies for taking an environmental history. (1 point) | |
| No, the curriculum does **not** include strategies for taking an environmental history. (0 points) | |
| Score Assigned: | 2 points |
| The Chicago Medical School Clinical first-year Foundations of Medicine (CFoM) course's Climate Workshop keynote lecture "Health Impacts of Climate Change" addressed how students can take an occupational history and exposure history by inquiring about the patient's current work, prior work, and home/community environment.<br><br>It would also be valuable to have a workshop focused on environmental history taking in the first or second year ECR courses. | |

***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: | 2 points |
| The Chicago Medical School identified Climate Change as a major enhancement necessary for the medical curriculum during the Spring 2022 Curricular Retreat. During a meeting on 12.20.22, the Curriculum Sub-Committee associated Climate Change as part of an overall curriculum improvement to better meet 7.5 LCME Standards (Common Societal Problems). A task force was established, a literature review was conducted in order to identify rationale for curricular inclusion and/or enhancement (including societal costs, medical consequence, etc.), a cursory analysis of required resources was performed, and faculty champions and aligned courses were identified. Climate change was named a priority among 6 others in the University's Strategic Plan of 2023. | |

In 2024, Health Effects of Climate Change was identified by the Curriculum Committee as a common societal problem (LCME 7.5) and assigned as a "hot topic" to the Vertical and Horizontal Integration committee for analysis. This topic was then presented and assigned to the Curriculum Committee in the 2024 school year.

In 2024, students, faculty, and members of the CMS student chapter of the Medical Society Consortium on Climate and Health discussed ways to integrate climate health into first and second-year schema cases (problem based learning sessions). However this work on schema case integration is ongoing and has not been implemented yet.

Two new electives have been approved as of 9/09/2024 that primarily focus on educating future physicians on health impacts of climate change. These courses are a second year elective, Climate Change and the Local Community, which focuses on the impacts of climate change and climate-related issues on the surrounding community, and a fourth year elective, Climate Change and the Clinical Community, which focuses on healthcare systems' contributions to climate change and how these systems can be adapted.

| **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: | 4 points |

Planetary Health and climate change is covered fairly extensively in the first year Clinical Foundations of Medicine (CFoM) course, through the mandatory 4-hour EcoAmerica training and 2-hour debrief and in-person climate workshop. It is also sprinkled throughout core courses in the Phase I curriculum (years 1 and two) including mentions in lectures for Scientific Foundations of Medicine; Gastrointestinal; Cardiac, Pulmonary, and Renal; Endocrine and Reproductive; and Principles of Professionalism, Health Care, and Health Equity. However, once students move onto Phase III and IV curriculum, which includes rotations, Sub-Is and additional electives, there is little exposure to climate topics. It is especially difficult to standardize this information in our curriculum at Rosalind Franklin University Chicago Medical School because there is no SINGLE affiliated hospital/healthcare system, and students attend rotations all around Chicago. Therefore, it is an ongoing challenge to integrate climate topics longitudinally. However, efforts are being made by the Vertical and Horizontal Integration committee and curriculum committee including assigned Climate change as a Hot Topic throughout years 1-4 and approval of new years 2 and 4 electives which will focus on climate change in the surrounding community and the impact of healthcare systems on climate.

| **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 |
| Currently, there is no one employed with the role of overseeing curricular integration of planetary health curriculum at the Chicago Medical School. | |

| **Section Total (43 out of 72)** | **59.72%** |
|---|---|

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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: | 2 points |
| There is current research on climate change and the challenges it may be to health services going on within the facility of Rosalind Franklin University of Medicine and Sciences, and is in the beginning stages of development.<br>Student research projects during Summer 2024 included assessing the distribution of heavy metal and PFAS in Lake County, IL as well as particulate matter (PM 2.5) levels in Lake County, IL. Another ongoing project includes building a database of measures of neighborhood-level social determinants of health including environmental toxicants, green space, and walkability measures. | |

| **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: | 0 points |
| *Score explanation:* There is no department of the sort within either Chicago Medical School or Rosalind Franklin University of Medicine and Sciences in general that focuses on planetary health research specifically. There is indication that efforts are being made to have a dedicated department, and the school does have a department of Environmental Health and Safety that focuses on research and promoting safety measures under OSHA standards within a research environment. The Michael Reese Foundation Center for Health Equity Research has the potential capacity to also focus on environmental health, as it focuses on researching the socio-structural determinants of health within the community surrounding the University. | |

| **2.3. Is there a process by which communities disproportionately impacted by climate change and environmental injustice give input or make decisions about the research agenda at your institution?** | |
|---|---|
| Yes, there is a process in which community members impacted by climate and environmental injustice have **decision-making power** in the climate + environmental research agenda. (3 points) | |
| Yes, there is a process in which community members impacted by climate and environmental injustice **advise** the climate + environmental research agenda. (2 points) | |
| **No**, but there are **current efforts** to establish a process for community members to advise or make decisions on the research agenda. (1 points) | |
| There is **no** process, and **no** efforts to create such a process. (0 points) | |
| Score Assigned: | 1 point |
| *Score explanation:* There are no open impacts that the University is making in the surrounding community in terms of sustainability and working against climate change, but efforts have been made in the past to incorporate sustainability measures in their healthcare when providing for the community. The Michael Reese Foundation Center for Health Equity Research works on research and also is involved in implementing the best possible care to the underserved populations of the Lake County community situated around the University. This foundation has the ability to focus more on environmental impacts within the community if the foundation and school chooses to do so. | |

| **2.4. Does your institution have a planetary health website that centralises ongoing and past research related to health and the environment?** |
|---|
| There is an **easy-to-use, adequately comprehensive** website that **centralises** various campus resources related to health and the environment including all of the following: upcoming events, leaders in planetary health at your institution, and relevant funding opportunities. (3 points) |
| There is a website that **attempts to centralise** various campus resources related to health and the environment, but it is hard-to-use, not updated, or not adequately comprehensive. (2 points) |

| The **institution** has an **Office of Sustainability website** that includes **some** resources related to health and the environment. (1 point) | |
|---|---|
| There is **no** website. (0 points) | |
| Score Assigned: | 1 point |
| *Score explanation:* Rosalind Franklin University of Medicine and Sciences as a whole does have a website about campus sustainability. The website breaks down the basic campus-wide initiatives that are being made and followed by the institute, as well as future plans on that the University aims to accomplish in terms of sustainability. The sustainability website highlights the University's efforts in creating a Sustainability Committee and promoting GREEN programs to be utilized within the school to improve sustainability in the common workings of the school, such as the school's canteen, where they are seeking to have sustainable products. The website also talks of having and maintaining these GREEN initiatives within the school to become LEED certified by working on water and energy management, as well as promotion of recycling programs. But, the website has no additional detail of any upcoming events or leaders relating to planetary health, nor are there any additional forms of resources. | |

| **2.5. Has your institution recently hosted a conference or symposium on topics related to planetary health?** | |
|---|---|
| Yes, the **institution** has hosted at least one conference or symposium on topics related to planetary health in the past year. (4 points) | |
| Yes, the **institution** has hosted at least one conference or symposium on topics related to sustainable healthcare/vetcare in the past year. (3 points) | |
| Yes, the **institution** has hosted a conference on topics related to planetary health / sustainable healthcare/vetcare in the past three years. (2 points) | |
| The **institution** has not hosted any conferences directly, but they have provided financial support for a local planetary health event. (1 point) | |
| No, the **institution** has not hosted a conference on topics related to planetary health in the past three years. (0 points) | |
| Score Assigned: | 4 |
| *Score explanation:* Chicago Medical School, through Rosalind Franklin University, hosted the WiSH Annual Symposium in 2024, which included a seminar on "Climate Justice and Health in a Gendered World" with Christopher "Todd" Beer, PhD. This event directly addressed planetary health by exploring climate justice and its impact on health, particularly for women. | |

| **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 point |
| *Score explanation:* As of November 2022, Rosalind Franklin University of Medicine and Sciences as a whole has been a part of the Global Consortium on Climate and Health Education. The University has been promoting GREEN programs and have been pursuing the sustainability goals needed to achieve LEED certification. There is also an active call for medical students to participate in climate change organizations in the school's curriculum. | |

| | |
|---|---|
| **Section Total (9 out of 17)** | **52.94%** |

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# Community Outreach and Advocacy

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

| **3.1. Does your institution partner with community organisations to promote planetary 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 has participating in community focused events relating to planetary health. (1 point) | |
| No, there is **no** such meaningful community partnership. (0 points) | |
| Score Assigned: | 3 points |
| *Score explanation:* Chicago Medical School partners with local community groups through the Michael Reese Foundation Center for Health Equity Research. Students can get involved with several ongoing projects that promote planetary and environmental health such as with the Brushwood Center at Ryerson Woods which works to improve health equity and access to nature in Lake County, Illinois, and the Chicago region. Student research projects during Summer 2024 included assessing the distribution of heavy metal and PFAS in Lake County, IL as well as particulate matter (PM 2.5) levels in Lake County, IL. Another ongoing project includes building a database of measures of neighborhood-level social determinants of health including environmental toxicants, green space, and walkability measures. | |

| **3.2. Does your institution offer community-facing courses or events regarding planetary health?** |
|---|
| The **institution** offers community-facing courses or events at least once every year. (3 points) |
| The **institution** offers courses or events open to the community at least once per year, but they are not primarily created for a community audience. (2 points) |
| The **institution** has promoted community-facing courses or events, but was not involved in planning those courses or events. (1 point) |

| |
|---|
| The **institution/medical school** have not offered such community-facing courses or events. (0 points) |

| | |
|---|---|
| Score Assigned: | 2 points |

*Score explanation:* The Rosalind Franklin University of Medicine and Science Women in Science and Healthcare (WiSH) Annual Symposium was launched in 2016 and for the past two years, seminars have addressed planetary health. On May 7th, 2024, the spring seminar titled "Climate Justice and Health in a Gendered World" with Christopher "Todd" Beer, PhD, focused on the foundations of climate justice as a lens to think about the current causes and consequences of climate change for women and health.
Additionally, students attend the annual Mano a Mano Back to School Fair at Mundelein High School. Students help address climate change's impact on health such as asthma, allergies, heart health, and food with flyers in both spanish and english. Students also promoted planetary health by distributing native seeds, energy-efficiency light bulbs and reusable produce bags and water bottles.
Lastly, faculty gave a virtual presentation on "A Look at Climate Through the Reproductive Justice Lens" to the League of Women Voters (Arlington Heights-Mount ProspectBuffalo Grove Area) on September 30 which was promoted through school communications. Dr. Gomez and Dr. Sullivan discussed how the changed climate and environmental degradation is affecting women's health and contributing to health inequities as factors like heat, pollution, and extreme weather events negatively impact reproductive health.

**3.3. Does your institution have regular coverage of issues related to planetary health and/or sustainable healthcare in university update communications?**

| |
|---|
| Yes, all students **regularly** receive communication updates dedicated to planetary health and/or sustainable healthcare. (2 points) |
| Yes, planetary health and/or sustainable healthcare topics are regularly included in communication updates to **some courses**. (1 point) |
| Students **do not** receive communications about planetary health or sustainable healthcare. (0 points) |

| | |
|---|---|
| Score Assigned: | 2 points |

*Score explanation:* Chicago Medical School students receive regular emails from "EcoAmerica" dedicated to planetary health and climate action after completing the "Climate for Health Ambassadors Training" as part of the first year Clinical Foundations of Medicine course. Additionally, Rosalind Franklin University communications include some coverage of issues related to planetary health in quarterly newsletters, monthly highlights, and reminders for relevant events. CMS Awards and Accolades Monthly Highlights on October 2024 featured Regina de Leon Gomez, MD, FACOG, assistant professor of obstetrics and gynecology and Clinical Foundations of Medicine course director, and Myrtis Sullivan, MD, MPH, FAAP, professor of pediatrics, were invited to give a virtual presentation on "A Look at Climate Through the Reproductive Justice Lens" to the League of Women Voters (Arlington Heights-Mount Prospect-Buffalo Grove Area). Dr. Gomez and Dr. Sullivan discussed how the changed climate and environmental degradation is affecting women's health and contributing to health. Additionally, many emails were sent out regarding the spring seminar titled "Climate Justice and Health in a Gendered World" with Christopher "Todd" Beer, PhD, which focused on the foundations of climate justice as a lens to think about the current causes and consequences of climate change for women and health.

- Green sustainability section from online newsletter - PHRC and Mano a Mano highlights
- Highlights on social media

**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 points |

*Score explanation:* Chicago Medical School's Department of Clinical Sciences presents "Medical Grand Rounds" presentations targeting Physicians, faculty and non-physicians of the university and participating sites (generalist, and specialist), Residents, Students and other inter-professionals which fulfills 1.0 AMA PRA Category 1 Credit. However, none of these presentations in 2024 have covered planetary health or sustainable healthcare.

| **3.5. Does your institution or its affiliated teaching hospitals have accessible educational materials for patients about environmental health exposures?** |
|---|
| Yes, the **medical school** or **all affiliated hospitals** have accessible educational materials for patients. (2 points) |
| **Some** affiliated hospitals have accessible educational materials for patients. (1 point) |
| **No** affiliated medical centres have accessible educational materials for patients. (0 points) |

| | |
|---|---|
| Score Assigned: | 2 points |

*Score explanation:* Rosalind Franklin University offers education materials for patients about environmental health exposures through the Interprofessional Community Clinic. The education material inventory includes handouts with general information about asthma, action plan for asthma, how to prevent heat illness, and tips for avoiding allergens. These handouts are offered in both Spanish and English.
Students at Chicago Medical School also rotate through 21 affiliated teaching hospitals, of which 7 had patient-facing educational materials available online. As such, some affiliated clinical rotation sites have patient educational materials in both English and Spanish regarding environmental exposures to pollution and respiratory health. For example, the Advocate Health Care clinical sites offer patient facing articles that provide information about environmental health exposures such as air quality, pollen, rising temperatures, insect borne infections, and much more to keep patients up to date and informed. Similarly, the John H. Stroger, Jr., Hospital of Cook County offers information about factors affecting childhood asthma. McHenry Hospital under Northwestern Medicine has a patient-facing online encyclopedia which includes a section on environmental diseases.

| **3.6. Does your institution or its affiliated teaching hospitals have accessible educational materials for patients about the health impacts of climate change?** | |
|---|---|
| Yes, the **medical school** or **all affiliated hospitals** have accessible educational materials for patients. (2 points) | |
| **Some** affiliated hospitals have accessible educational materials for patients. (1 point) | |
| **No** affiliated hospitals have accessible educational materials for patients. (0 points) | |
| Score Assigned: | 1 point |
| *Score explanation:* Rosalind Franklin University does not have education materials for patients regarding climate change and health impacts. Some affiliated clinical rotation sites such as the Advocate Health Care clinical sites offer several patient-facing articles about how the climate crisis will continue to impact health, such as allergies, mental health, and infectious diseases. There is also information for patients on how to reduce their carbon footprint. | |

| **Section Total (10 out of 14)** | **71.43%** |
|---|---|

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# Support for Student-Led Planetary Health Initiatives

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

| **4.1. Does your institution offer support for students interested in enacting a sustainability initiative/QI project?** | |
|---|---|
| Yes, the **institution** *either* offers grants for students to enact sustainability initiatives/QI projects *or* sustainability QI projects are part of the core curriculum. (2 points) | |
| The **institution** encourages sustainability QI projects (to fulfil clerkship or longitudinal requirements) and offers resources to help students succeed in these projects, **but** there is no student funding available and there is no requirement to participate. (1 point) | |
| No, **neither** the medical school or the institution offer opportunities or support for sustainability initiatives or QI projects. (0 points) | |
| Score Assigned: | 1 point |
| *Score explanation:* The Chicago Medical School does allow students to pursue research projects based on their interests and are supported in these initiatives through mentorship. There is still no indication that there is funding or encouragement for sustainability-specific QI projects and there is no requirement to pursue them. | |

| **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 point |
| *Score explan*ation: Chicago Medical School has garnered approval to offer two new educational opportunities for students to pursue research in planetary health/sustainable healthcare research. New opportunities include two elective courses for M2s and M4s that include aspects of self-learning and research. The first is a class available to M2s, “Climate Change and the Local Community,” in which students first undergo introductory learning on climate change through | |

online modules, a service learning activity with a local community, and an independent project. The other elective is for M4s called "Climate Change and the Clinical Community," in which students complete an advanced application of the Climate Change and the Community I learning objectives with additional emphasis on healthcare systems. This includes a summary of published research/study and evaluation of a healthcare system or clinical site.

In addition, CMS continued to require the course "Principles of Professionalism, Health Care and Health Equity" in which medical students learn about how societal factors impact their role as physicians and their patients. This class is unique in the sense that the course director is willing to change the curriculum based on student interests, allowing for students to pursue and engage in planetary health/sustainable healthcare research. Lastly, there have been opportunities in the past for students to work with faculty and pursue a research project that interests them, in addition to a QI project involving planetary health/sustainable healthcare research that has been undertaken in the past two years. Student initiative is required for these projects to occur and there is no internal funding for students who pursue research.

| **4.3. Does the institution have a webpage where students can find specific information related to planetary health and/or sustainable healthcare/vetcare activities and mentors within the institution? For example, projects achieved, current initiatives underway at the medical school and/or contact of information of potential mentors.** | |
|---|---|
| The institution has a webpage with specific information related to planetary health or sustainable healthcare/vetcare that includes up-to-date information on relevant initiatives and contact information of potential mentors. (2 points) | |
| There is an institution webpage that features some information on projects and mentors within planetary health and sustainable healthcare within the medical school, but it lacks key information. (1 point) | |
| There is **no institution** specific webpage for locating planetary health and/or sustainable healthcare projects or mentors. (0 points) | |
| Score Assigned: | 1 point |
| *Score explanation:* There are webpages highlighting Rosalind Franklin University's current efforts toward sustainability, including their mission, but there are no specific sites for Chicago Medical School's efforts. RFU does have a webpage regarding fields of research and types of projects students can pursue, but there is no specific site for locating planetary health or sustainable healthcare projects and mentors. | |

| **4.4. Does your institution have registered student groups dedicated towards fostering a culture of planetary health engagement, scholarship, and advocacy on campus, supported by faculty advisors?** |
|---|
| Yes, there is a student organisation **with faculty support** at my medical school dedicated to planetary health or sustainability in healthcare. (2 points) |

| | |
|---|---|
| Yes, there is a student organisation at my medical school dedicated to planetary health or sustainability in healthcare but it **lacks faculty support.** (1 point) | |
| No, there is **not** a student organisation at my institution dedicated to planetary health or sustainability in healthcare. (0 points) | |
| Score Assigned: | 2 points |
| *Score explanation:* Chicago Medical School has two specific organizations dedicated to planetary health and sustainability in healthcare. The Planetary Health Report Card (PHRC) has been established as a recurrent project for 3 years. Beyond this, the medical students involved in the inaugural PHRC report have presented their work on and with the PHRC at the National Collaborative for Education to Address the Social Determinants of Health (NCEAS). In addition, the Illinois Clinicians for Climate Action (ICCA) has been an established and active organization within CMS for over 2 years. The ICCA works to raise awareness about how climate change impacts one's health and aims to engage healthcare professionals in more sustainable practices for their communities. Lastly, a Sustainability committee composed of faculty, staff, and students is noted to exist on RFU's website and has taken part in different sustainability efforts around campus, including a recycling program, electric vehicle charging Stations, use of biodegradable trays and utensils at the university cafe, hydration stations, converting university land back into its natural habitat, and lighting at the university being changed to LEDs. | |

| **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: | 0 points |
| *Score explanation:* Student members of the curriculum committee and its sub-committees do possess voting rights that can be used to reform CMS' curriculum and sustainability best practices. Also, the ICCA chapter at CMS aims to advocate for curriculum reform and sustainability best practices as well. Advocacy relies on student groups and members of the curriculum committee, but there is no formal student liaison at CMS. | |

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

| | |
|---|---|
| Events in which students learn directly from members of a local environmental justice community about the climate and environmental challenges they face, and how health professionals can partner with their community to address these exposures and impacts. | 1 |
| Cultural arts events, installations or performances related to planetary health that have students as an intended audience. | 0 |
| Local volunteer opportunities related to building community resilience to anthropogenic environmental impacts. | 1 |
| Wilderness or outdoors programs (e.g., that organise hiking, backpacking, kayaking, or other outings for students) | 1 |

*Score explanation:* Chicago Medical School has various student organizations for medical students interested in the environment, both in an academic and entertainment lens. These include Wilderness Medical Group and RFU Outdoor & Adventure Club. Wilderness Medical Group encourages outings in nature and also invites speakers to speak about wilderness medicine and the careers available here, as well as holding skills sessions. The RFU Outdoor & Adventure Club is similar to the Wilderness Medical Group in holding events for students to explore nature, but has less emphasis on medicine and climate change awareness.

Chicago Medical School has partnered with many local organizations to allow medical students to connect with the local community. Lamb's Farm continues to be a popular organization for students to work with individuals with developmental disabilities and contribute to the upkeep of the farm.The implementation of an M2 elective course on climate change requires students to complete a service learning initiative with local community organizations, most notably, the Brushwood Center, on sustainability, effects of climate change, climate change mitigation measures, research, or other related topics.

Lastly, medical students are required to take classes that invite speakers to speak about the intersectionality of climate change and medicine. Topics include lectures dedicated to how climate change affects healthcare, opportunities to speak to local community organizations, and medical education integrated with a climate change lens.

| | |
|---|---|
| **Section Total (10 out of 15)** | **66.67%** |

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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 | 1 |
| *Score explanation:* While Rosalind Franklin University has an office of sustainability, there are no salaried staff members. It is made up of faculty, staff and student volunteers. For this reason, Rosalind Franklin University will receive a "1" rating. | |

| **5.2. How ambitious is your institution's plan to reduce its own carbon footprint?** | |
|---|---|
| The institution has a **written and approved plan** to achieve carbon neutrality by **2030** (5 points) | |
| The institution has a **written and approved plan** to achieve carbon neutrality by **2040** (3 points) | |
| The institution has a stated goal of carbon neutrality by **2040** but has **not created a plan** to reach that goal or the **plan is inadequate** (1 point) | |
| The institution/medical school does **not** meet any of the requirements listed above (0 points) | |
| Score Assigned: | 0 |
| *Score explanation:* Rosalind Franklin University of Medicine and Science does not have any goals to reduce net-zero carbon dioxide emissions by any date. There is similarly no goal in place to accomplish these goals. However, Rosalind Franklin has made attempts to reduce its carbon | |

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|---|
| footprint. The university has a campus-wide recycling system which diverts over 50% of its waste products from landfills. There are hydration stations located all over campus, biodegradable trays and utensils in the school's cafe and electric vehicle charging stations. LED lighting will also be used in campus facilities as well, with all locations being controlled with a software program that will help the institution monitor and strategically reduce energy use. Finally, there is a tree planting program and the institution's landscaping carbon footprint is being reduced. However, there is no specifically stated goal of carbon neutrality. |

| **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 | 0 |
| *Score explanation:* No building at Rosalind Franklin University uses 100% renewable power. Approximately 14% of Rosalind Franklin University's energy portfolio is utilized by renewable energy. This is an improvement from the previous year. The university is actively researching options to further reduce their carbon footprint via Community Solar projects, the university is also exploring renewable energy credits. However, due to renewable energy taking up less than 20% of Rosalind Franklin University's energy portfolio, a rating of "0" will be applied. | |

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

| |
|---|
| *Score explanation:* Sustainable building practices have been implemented for new buildings on campus. Campus parking lots are replacing lightbulbs with LED lighting and computer programs have been instituted to reduce energy usage in these lights, as well as EV charging stations. Newly built facilities have been designed to LEED standards, but certificates have not been accomplished. |

| **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:* Rosalind Franklin University will receive a "1" rating score. The University does advertise and provide access to a shuttle for students who commute by the city by train. There is also adequate biking infrastructure on the campus and walkable housing options for some students. Rosalind Franklin University does not have a teaching hospital, but they do have multiple affiliate sites that are reachable via public transportation. | |

| **5.6. Does your institution have an organics recycling program (compost) and a conventional recycling program (aluminium/paper/plastic/glass)?** | |
|---|---|
| Yes, the institution has **both** compost **and** recycling programs accessible to students and faculty. (2 points) | |
| The institution has **either** recycling **or** compost programs accessible to students and faculty, but not both. (1 point) | |
| There is **no** compost or recycling program at the medical school. (0 points) | |
| Score Assigned: | 1 |
| *Score explanation:* Rosalind Franklin University of Medicine and Science has a campus-wide recycling program that diverts over half of facility waste from the landfill. This is a conventional recycling program that is sorted after collection, primarily involving paper, cardboard, glass, metal, and plastic. There are numerous recycling bins on campus that allow for students to participate in the program. While there are biodegradable trays and utensils available in the cafe, there is no campus wide composting program. | |

| **5.7. Does the institution apply sustainability criteria when making decisions about the campus food and beverage selections (e.g. local sourcing, reduced meat, decreased plastic packaging)?** | |
|---|---|
| Yes, the institution has a**dequate s**ustainability requirements for food and beverages, including meat-free days or no red-meat, and **is engaged** in efforts to increase food and beverage sustainability. (3 points) | |
| There are sustainability guidelines for food and beverages, but they are **insufficient or optional**. The institution **is engaged** in efforts to increase food and beverage sustainability. (2 points) | |
| There are sustainability guidelines for food and beverages, but they are **insufficient or optional.** The institution is **not** engaged in efforts to increase food and beverage sustainability. (1 point) | |
| There are **no** sustainability guidelines for food and beverages. (0 points) | |
| Score Assigned: | 2 |
| *Score explanation:* Contacted the University's food vendor "Food for Thought" which they replied *"*Food for Thought sources our products from Gordon Food services. GFS is a local supplier who provides Eco friendly items. FFT products in the cafe are almost all sustainable and eco friendly. We try to reduce the use of plastic and will reuse wherever possible. FFT uses Pritzlaff, fortune fish company and Testa for our meat, seafood and produce selections and are locally owned.<br>We are mindful when it comes to our menus and provide Halal items whenever possible. All of our chicken (Aside from the tenders) is Halal." Beginning in the 2018-2019 school year, Rosalind Franklin University began taking efforts, working with Food for Thought, on waste and product use to provide sustainable and eco-friendly options. For their effort, Rosalind Franklin University will receive a "2" rating. | |

| **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: | 2 |
| *Score explanation:* Rosalind Franklin University of Medicine and Science does currently have sustainability guidelines for supply procurement. The institution does seek to prioritize and use local businesses for supply procurement whenever achievable. Additionally, the school annually reviews opportunities for more sustainable initiatives from their vendors and seeks to incorporate | |

| |
|---|
| those changes into yearly contracts. Continually attempting to implement more sustainable solutions when available, such as no plastic cups with the water dispensers. |

| **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 | 0 |
| *Score explanation:* Upon evaluating the Student Leadership Handbook, there is no mention of sustainability guidelines for institution events. For this reason, Rosalind Franklin University will receive a "0" rating. | |

| **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: | 0 |
| *Score explanation:* Rosalind Franklin University does not have any ongoing initiatives that seek to increase or improve the sustainability practices of laboratories. The school does not require use of reusable equipment or more sustainable practices in their laboratories and there are no ongoing efforts to remediate this. | |

| **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: | 2 |

*Score explanation:* Rosalind Franklin University's endowment does not have direct investments in fossil fuel companies. However, the university has investments in various mutual and index funds, some of which do include investments in fossil fuel companies. The University adheres to the guidelines and philosophy of Environmental, Social, and Governance (ESG) Investing when making investments. The Institution does acknowledge that responsible investing is necessary for satisfying the school's mission and vision, but the Finance Committee's primary fiduciary responsibility is to maximize the return on their investment portfolio. The University states that their policy works to achieve both of these priorities.

| | |
|---|---|
| **Section Total (11 out of 32)** | **34.38%** |

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# Grading

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

| Section | Raw Score % | Letter Grade |
|---|---|---|
| **Planetary Health Curriculum (30%)** | (43/72) x 100 = 59.72% | C+ |
| **Interdisciplinary Research (17.5%)** | (9/17) x 100 = 52.94% | C |
| **Community Outreach and Advocacy (17.5%)** | (10/14) x 100 = 71.43% | B |
| **Support for Student-led Planetary Health Initiatives (17.5%)** | (10/15) x 100= 66.67% | B |
| **Campus Sustainability (17.5%)** | (11/32) x 100 = 34.38% | D |
| **Institutional Grade** | **(Ax0.3 + Bx0.175 + Cx0.175 + Dx0.175 + Ex0.175) = 58.91%** | **C+** |

# Report Card Trends

**Section Overview**
This graph demonstrates trends in overall and section grades for the years in which Rosalind Franklin University has participated in the Planetary Health Report Card initiative.