Planetary Health Report Card (Medicine):

Rush Medical College

2024-2025 Contributing Team:
● Students: Audrey Goldstien, MS3; Hayley Petit, MS4; Fedra Britvic, MS2; Renuka Chepuru, MS3; Isabel Hartner, MS2; Kaitlyn Jackson, MS3; Edena Khoshaba, MS3; Carmel Larson, MS2; Joanna Le, MS2; Jany Sun, MS3
● Faculty/staff Mentors: Dr. Ami Shah, MD; Dr. Vinoo Dissanayake, MD, MPH; Dr. Andy Garman, PsyD; Ian Hughes
● Primary Contact: Audrey Goldstien, MS3, audrey_r_goldstein@rush.edu

Land acknowledgment: We recognize that our institution rests on the native homeland of the Council of the Three Fires, or the Odawa, Ojibwe, and Potawatomi Nations, as well as the Ho-Chunk, Menominee, Sac, Miami, Fox, and many more Tribes.

Summary of Findings

Overall Grade	B-

Curriculum	B

- Rush Medical College (RMC) created an M4 session on climate change and patient health which explores the connection between planetary and human health and the disproportionate burden of climate change on marginalized communities. While the Health Equity and Social Justice Leadership Program includes two planetary health sessions, the core curriculum lacks consistent integration.
- **Recommendations**: Integrate planetary health throughout all years, culminating in the M4 comprehensive class.

Interdisciplinary Research	B-

- Rush has faculty engaged in planetary health and healthcare sustainability research, particularly in reducing the environmental impact of the operating room. However, there is no dedicated department or research institute for planetary health. Community input on environmental injustice is primarily gathered through CAPriCORN, the Institute for Translational Medicine, and the ALIVE Faith Network, but there is no direct mechanism for community-driven planetary health research.
- **Recommendations:** Establish a dedicated department or institute for planetary health. Integrate community input into research priorities to ensure research efforts align with the needs of those most impacted by climate change and environmental injustice.

Community Outreach and Advocacy	C+

- RMC has two meaningful community partnerships with urban gardens. Individuals receive intermittent news about Rush's sustainability efforts, and the Office of Environmental Sustainability (OES) has an internal website which highlights these events. Rush does not have any current events which are open to the community and focused on climate change and health.
- **Recommendations:** Host a regular event that is focused on local climate crises and patient health that is open to the public, allowing healthcare practitioners to educate the community on relevant, pressing topics.

Support for Student-Led Initiatives	C

- Rush supports student's independent research projects through the Dean's Fellowship, and the Office of Student Life and Engagement provides support for student organizations. However there is no current student-led organization dedicated to planetary health
- **Recommendations:** Create a sustainability research page on the OES website that is dedicated to sustainability research at Rush, as well as contact information for potential mentors. The internal OES website should be more accessible by including additional links to it on the Rush internal website. Students should create an organization dedicated to planetary health.

Campus Sustainability	C

- The OES has improved supply procurement, increased sustainable food sourcing, and expanded back-of-house composting. Rush has pledged carbon neutrality by 2050, later than some institutions, and has not divested from fossil fuels.
- **Recommendations:** Accelerate renewable energy transitions, implement a staff/student composting program, and divest from fossil fuels.

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

Rush Medical College offers the Health Equity & Social Justice Leadership Program (HESJLP), which is an elective track consisting of up to 20 students per cohort. The HESJLP gives students the opportunity to engage in enhanced clinical training and experiences focused on themes of global and local health equity/social justice. A session on environmental justice was taught during the M1 year and another session was incorporated for M3s on global climate change this academic year. This new session discusses the intersections between climate change and human health with a focus on vulnerable populations and health disparities on a global scale. The class also explores the ethical implications of climate change on health equity and social justice and identifies countries that are significantly impacted compared to countries that are the greatest contributors to a changing climate. The session then engages students to think of strategies to lessen individual and national carbon footprint.

Students in the HESJLP participate in a curriculum specifically focused on vulnerable populations, health equity, and global health. The class is graded on a pass/fail basis and students are allowed to opt out of the program if they desire.

Rush Medical College offers an elective, EMD 717 Disaster Medicine, which addresses the effects of extreme weather events on individual health and the emergency response protocols of healthcare systems. This includes natural disasters such as hurricanes, blizzards, earthquakes, etc. This elective curriculum is open to M3 and M4 students. There is no specific emphasis on planetary health at this time.

There are no current plans to create a new elective focused on planetary health.

Curriculum: Health Effects of Climate Change

1.2. Does your <u>medical school</u> curriculum address the relationship between extreme heat, health risks, and climate change?	
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

A new class was piloted in the M4 year in 2024 titled "Planetary Health and Climate Justice". This 2-hour session, split between a lecture and small group case-based learning, aims to introduce M4 students to the impact of climate change on health. This information will be useful as students transition to residency in order to screen patients at risk for climate-related health conditions and provide appropriate counseling and treatment.

Students are first given a lecture about planetary health before breaking out into small groups to work on individual cases. Patients in each case are affected by various aspects of climate change, and students are tasked with screening patients for environmental and social risk factors related to their conditions to create treatment plans. Patient presentations also underscore the disproportionate impacts of climate change on marginalized communities. Student groups then present their answers and treatment plans to the entire class.

There are six cases in the session:

- *Heat-related health risks: This is a patient with heart failure suffering from heat stroke. The case also discusses how high temperatures can increase seizure and heart attack risk and that formerly redlined neighborhoods are more likely to face extreme heat events.*
- *Asthma and particulate matter: This is a pediatric patient with asthma who has multiple environmental risk factors, such as living near a highway and next to ongoing wildfires.*
- *Reproductive health, infertility, and heat stress: This is a patient who delivered a preterm infant after being subjected to high temperatures. The case also discusses how climate disasters impact long-term reproductive outcomes and gender-based violence.*
- *Vector-borne disease: This is a pediatric patient with Lyme disease that discusses the evolving geographic distribution of tick-borne diseases due to climate change.*
- *Neurologic and neurodegenerative disease: This is a patient with multiple sclerosis that is suffering from an exacerbation in her illness due to air pollution and high temperatures.*
- *Anxiety, depression, PTSD: This is a patient experiencing an anxiety attack due to climate anxiety. The case highlights the mental health impacts associated with both direct and indirect exposure to extreme weather.*

The class concludes with examples of planetary health initiatives for students to bring to their new institutions for residency, including the creation of an employee sustainability group and routine counseling for patients at risk for environment-related disease exacerbations.

Other topics that are briefly discussed during the lecture portion of the session include climate injustices both globally and unique to Chicago, food insecurity related to climate change, the importance of Indigenous knowledge and practices for climate solutions, and benefits of plant-based diets. The planning of the class was largely guided by the components of the PHRC. This will continue to be presented in the M4 curriculum in the 2025 year.

1.3. Does your <u>medical school</u> 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

Rush Medical College offers an elective, EMD 717 Disaster Medicine, which addresses the effects of extreme weather events on individual health and the emergency response protocols of healthcare systems. This includes natural disasters such as hurricanes, blizzards, earthquakes, etc. This elective curriculum is open to M3 and M4 students.

The new M4 core curriculum session, "Planetary Health and Climate Justice", uses case-based learning and a lecture portion to discuss the health effects of wildfires and extreme heat waves, such as increased risks of heat stroke, seizures, heart attacks, and respiratory conditions like asthma. The lecture portion of the class further explores how extreme weather events contribute to food insecurity and the spread of disease. Additionally, the session highlights the disproportionate impact of climate change on marginalized communities and equips students with skills to screen for environmental and social risk factors in patient care.

1.4. Does your <u>medical school</u> 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:	3

In Rush Medical College's M1 Host Defense Host Response (HDHR) block, there is an Advocate Role Session titled "Intro to Populations and Systems" that discusses how infectious disease is related to public health achievements, levels of infection prevention, and social determinants of

health. One of the three articles for students to read is from the Healthy People 2020 initiative, which defines social determinants of health and gives examples of different determinants. Under the "examples of physical determinants" section, there is a single bullet point listed as "natural environment, such as green space (e.g., trees and grass) or weather (e.g., climate change)." Additionally, in the HDHR block, the self-study guide for Case 5: Walter Peters contains the following brief sentence: "Climate change and global warming are bringing major changes to the epidemiology of infectious diseases by altering microbial and vector geographic range." However, the curriculum fails to go in-depth about the mechanisms by which climate change impacts infectious disease patterns.

The new M4 core curriculum session, "Planetary Health and Climate Justice", uses case-based learning and a lecture portion to discuss the impact of climate change on vector-borne illnesses. One of the session's case studies focuses on a pediatric patient with Lyme disease, highlighting how climate change is shifting the geographic distribution of tick-borne illnesses. Additionally, the lecture portion discusses how extreme weather events and environmental changes contribute to the spread of infectious diseases , such as how malaria and diarrheal illnesses are expected to rise significantly due to rising temperatures and water scarcity.

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:	3

In the M1 core curriculum, the topic of respiratory health effects of climate change and air pollution is not extensively covered. There is mention that air pollution is involved in exacerbating COPD and asthma. As part of the elective curriculum in Rush University's Health Equity and Social Justice Leadership Program, students were given a lecture about the effects of climate change and health. It briefly covers the general effect of air pollution on respiratory illnesses.

The new M4 core curriculum session, "Planetary Health and Climate Justice", uses case-based learning and a lecture portion to discuss the impacts of environmental toxins on respiratory health. One case study focuses on a pediatric patient with asthma who is exposed to multiple environmental risk factors, including living near a highway and ongoing wildfires. Additionally, the lecture portion covers the broader respiratory health impacts of climate change, emphasizing how air pollution disproportionately affects vulnerable populations.

1.6. Does your <u>medical school</u> curriculum address the cardiovascular health effects of climate

change, including increased heat	
This topic was explored **in depth** by the **core** curriculum.	
This topic was **briefly** covered in the **core** curriculum.	
This topic was covered in **elective** coursework.	
This topic was **not** covered.	
Score Assigned:	3
In the M1 curriculum Vital Fluids block, which focuses on the cardiac and renal systems, there is a small section investigating the effects of heat stroke on a young healthy patient's renal function. *The new M4 core curriculum session, "Planetary Health and Climate Justice", uses case-based learning to discuss the cardiovascular health effects of climate change. One of the session's case studies features a patient with heart failure experiencing heat stroke, highlighting how extreme heat can exacerbate cardiovascular conditions. The case also discusses the increased risk of seizures and heart attacks due to high temperatures, particularly in historically redlined neighborhoods that face disproportionate heat exposure.*	

1.7. Does your <u>medical school</u> curriculum address the mental health and neuropsychological effects of environmental degradation and climate change?	
This topic was explored **in depth** by the **core** curriculum.	
This topic was **briefly** covered in the **core** curriculum.	
This topic was covered in **elective** coursework.	
This topic was **not** covered.	
Score Assigned:	3
The new M4 core curriculum session, "Planetary Health and Climate Justice", uses case-based learning and a lecture portion to discuss the impacts of climate change on mental health. One of the session's case studies focuses on a patient experiencing an anxiety attack due to climate anxiety, highlighting the mental health impacts of both direct and indirect exposure to extreme weather. Additionally, the lecture portion discusses the broader psychological and neurological consequences of climate change, including PTSD, depression, and anxiety	

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

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

The elective course Health Equity and Social Justice Leadership Program has two lectures, in M1 and M3 year, that are dedicated to food insecurity and health. The M1 lecture includes a discussion with the local urban agricultural organization, Farm on Ogden, about its contribution to its community. The class discusses food insecurity's health and social impacts and the role of medical professionals in addressing this barrier. The project VeggieRx, by Rush University and Farm on Ogden, is also described during this lesson as an example of the medical community taking part in the food security of patients. This project includes providers "prescribing" produce boxes for patients if they screen positive for food insecurity. Farm on Ogden will then provide these patients with boxes as well as educational sessions on cooking and nutrition.

The new M4 core curriculum session, "Planetary Health and Climate Justice", explores the health impacts of climate change through lectures and case-based learning, preparing students to address climate-related health risks in clinical practice. During the lecture portion, the impacts of climate change on food and water security are discussed. Students learn how extreme weather events disrupt agriculture and food distribution systems, particularly in vulnerable populations, leading to increased rates of malnutrition and food shortages. Additionally, students learn that the expected increase in freshwater scarcity is expected to increase the rate of diarrheal illnesses and death from pollution and poor sanitation.

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

The Health Equity and Social Justice Leadership Program elective at Rush Medical College hosts a lecture entitled "Environmental Injustice and Its Impact on Health." This module investigates the links between industrial exploitation of marginalized communities within the Chicagoland area and the prevalence of asthma and severe COVID-19 cases in populations with airborne pollutant exposure.

The new M4 core curriculum session, "Planetary Health and Climate Justice", explores the health impacts of climate change through lectures and case-based learning, preparing students to address climate-related health risks in clinical practice. It explores this topic in-depth throughout the class. An aim of this session is for students to learn about the importance of screening for social determinants of health to mitigate climate-change related health effects. The lecture portion of the

class discusses the disproportionate impact of climate change on low- and middle-income countries (LMICs) as well as marginalized communities in the US. Throughout the case-based portion of the session, students also learn about how redlining in urban areas places communities of color and low SES at higher risk for environmental toxin exposure, leading to chronic diseases. Patients with poor housing conditions without air conditioning or proper ventilation are also identified as being at risk for heat-related illness.

1.10. Does your <u>medical school</u> curriculum address the unequal regional health impacts of climate change globally?	
This topic was explored **in depth** by the **core** curriculum.	
This topic was **briefly** covered in the **core** curriculum.	
This topic was covered in **elective** coursework.	
This topic was **not** covered.	
Score Assigned:	3
Rush Medical College offers a Global and Community Health elective for M3 and M4 students. The projects that students work on in this course focus on the social determinants of population health, including the impact of environment, poverty, social structure and culture on health status and health care. Students obtain a framework for addressing common diseases in an underserved community setting from a clinical, epidemiologic and public health perspective. In addition to the didactic portion of the course, the student spends 2-4 weeks in an underserved community or developing country setting under the supervision of Rush faculty. *The new M4 core curriculum session, "Planetary Health and Climate Justice", explores the health impacts of climate change through lectures and case-based learning, preparing students to address climate-related health risks in clinical practice. The lecture portion explores the disproportionate impacts of climate change on global communities. Students learn that low- and middle-income countries experience a disproportionate amount of negative health impacts from climate change compared to high-income countries. These include increased rates of malaria, diarrhea-related illness, crop yield failures, and water scarcity. Students also learn that millions of people will be displaced from their homes due to extreme weather.*	

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

The new M4 core curriculum session, "Planetary Health and Climate Justice", uses case-based learning and a lecture portion to discuss the impacts of environmental toxins and extreme weather events on reproductive health. One case study focuses on a patient who delivered a preterm infant after exposure to air pollutants and high temperatures, highlighting how climate-related factors, including air pollution and environmental toxins, can impact reproductive health. The session also discusses the broader effects of climate change and environmental degradation on long-term reproductive outcomes and gender-based violence.

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

The Health Equity and Social Justice Leadership Program elective at Rush Medical College hosts a lecture entitled "Environmental Injustice and Its Impact on Health." This module investigates the links between industrial exploitation of marginalized communities within the Chicagoland area and the prevalence of asthma and severe COVID-19 cases in populations with airborne pollutant exposure.

The new M4 core curriculum session, "Planetary Health and Climate Justice", explores the health impacts of climate change through lectures and case-based learning, preparing students to address climate-related health risks in clinical practice. The lecture portion discusses climate injustices unique to Chicago. Examples includes Chicago's history of redlining leading to higher rates of pollution in communities of color due to highway and landfill placement, the disproportionate death rate in poor communities during the 1995 Chicago heat wave, and Chicago's "Toxic Doughnut" which is surrounded by the most landfills per square mile in the United States.

1.13. To what extent does your <u>medical school</u> emphasise the importance of Indigenous knowledge and value systems as essential components of planetary health solutions?

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

Score Assigned:	2

The Health Equity and Social Justice Leadership Program elective holds a session on global climate justice that emphasizes Indigenous values and knowledge as essential components of planetary health solutions.

The new M4 core curriculum session, "Planetary Health and Climate Justice", explores the health impacts of climate change through lectures and case-based learning. The lecture briefly discusses the importance of preserving Indigenous values in climate initiatives. Students learn that forested areas settled by Indigenous Peoples globally have lower deforestation rates and higher carbon densities due to unique land management practices. However, students also learn that Indigenous Peoples are not well represented in climate action organizations and are at high risk for climate-related health impacts.

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

In the elective Health Equity and Social Justice Leadership Program, there is a lecture dedicated to addressing environmental injustice with a focus on Chicago. It describes events such as the recent Chicago heat wave and air pollution to better understand how extreme environmental events and pollutants burden marginalized communities in Chicago.

The new M4 core curriculum session, "Planetary Health and Climate Justice", explores the health impacts of climate change through lectures and case-based learning, preparing students to address climate-related health risks in clinical practice. The class explores this topic in-depth throughout the session. An aim of this session is for students to learn about the importance of screening for social determinants of health to mitigate climate-change related health effects. The lecture portion of the class discusses the disproportionate impact of climate change on low- and middle-income countries as well as marginalized communities in the US. Throughout the case-based portion of the session, students also learn about how redlining in urban areas places communities of color and low SES at higher risk for environmental toxin exposure, leading to chronic diseases. Patients with poor housing conditions without air conditioning or proper ventilation are also identified as being at risk for heat-related illness.

Curriculum: Sustainability

1.15. Does your <u>medical school</u> curriculum address the environmental and health co-benefits of a plant-based diet?	
This topic was explored **in depth** by the **core** curriculum.	
This topic was **briefly** covered in the **core** curriculum.	
This topic was covered in **elective** coursework.	
This topic was **not** covered.	
Score Assigned:	2
The new M4 core curriculum session, "Planetary Health and Climate Justice", explores the health impacts of climate change through lectures and case-based learning. The lecture briefly covers the benefits of a plant-based diet on both individual and planetary health. Students learn that greenhouse gas emissions from plant-based diets are significantly lower than omnivore diets. Students also learn that plant-based diets are correlated with lower rates of Type II diabetes and cardiovascular disease. These lessons can be used by students in practice when discussing nutritional options with patients.	

1.16. Does your <u>medical school</u> curriculum address the carbon footprint of healthcare systems?	
This topic was explored **in depth** by the **core** curriculum.	
This topic was **briefly** covered in the **core** curriculum.	
This topic was covered in **elective** coursework.	
This topic was **not** covered.	
Score Assigned:	0
There are no specific classes in the medical school curriculum that identify the carbon footprint of the healthcare system.	

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
In the core curriculum at Rush Medical College, there are no lectures on waste generation by the hospital system. Lectures do include teaching the importance of non-pharmaceutical management of conditions including diet and nutrition, physical activity, and mental health maintenance. These lectures focus on the health benefits and not on the added environmental benefits of these activities. Additionally, there are brief lectures on the importance of medication reconciliation throughout medical school, especially during clinical years. It is mentioned most during lectures about caring for the elderly population and taking off unnecessary medications.	

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
The new M4 core curriculum session, "Planetary Health and Climate Justice", explores the health impacts of climate change through lectures and case-based learning, with the aim of preparing students to address climate-related health risks in clinical practice. Students are presented with patient cases and tasked with developing recommendations to reduce their patient's risk of environment-related disease. Students learn how to discuss preventative steps that patients can take during heat waves or on poor air quality days, such as seeking shelters or staying inside. *The Communicator role sessions in the M1 & M2 years also present teaching points relating to dealing with difficult emotions, breaking bad news, and helping patients make behavior changes,*	

which are related skills when holding conversations on planetary health. However, the communication strategies introduced and assessed in the simulated patient encounters can be used broadly in conversations with patients, and do not specifically name nor address planetary health.

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
In the M1 Host Defense and Host Response block, there is a detailed explanation of how to take a pediatric history in the self-study guide for Case 3: Jenna Wilson. The pediatric history outline includes taking a social and environmental history. In the printed text and the accompanying PowerPoint, there are statements that recommend documenting parents' occupations, current living conditions, the presence of smoke detectors, dust exposure, lead exposure, problems with cockroaches and other environmental contaminants. *The new M4 core curriculum session, "Planetary Health and Climate Justice", explores the health impacts of climate change through lectures and case-based learning, with the aim of preparing students to address climate-related health risks in clinical practice. The course teaches students how to determine what types of social and environmental factors to screen for when evaluating a patient through case-based learning. These include housing conditions and air pollution exposure.*	

Curriculum: Administrative Support for Planetary Health

1.20. Is your <u>medical school</u> currently in the process of implementing or improving Education for Sustainable Healthcare (ESH)/planetary health education?	
Yes, the medical school is currently in the process of making **major** improvements to ESH/planetary health education. (4 points)	
Yes, the medical school is currently in the process of making **minor** improvements to ESH/planetary health education. (2 points)	
No, there are **no** improvements to planetary health education in progress. (0 points)	
Score Assigned:	4
The new planetary health session in the M4 core curriculum, "Planetary Health and Climate Justice", explores the health impacts of climate change through lectures and case-based learning, with the aim of preparing students to address climate-related health risks in clinical practice. It was developed for this academic year, and is a major improvement to planetary health education.	

The curriculum development team has approved future plans to include topics related to climate change and planetary health into almost all preclinical blocks throughout the M1-M2 years.

1.21. How well are the aforementioned planetary health/Education for Sustainable Healthcare topics integrated longitudinally into the <u>core</u> curriculum?	
Planetary health/ESH topics are **well integrated** into the core medical school curriculum. (6 points)	
Some planetary health/ESH topics are appropriately integrated into the core medical student curriculum. (4 points)	
Planetary health/ESH is not integrated and is primarily addressed in **(a) standalone lecture(s).** (2 points)	
There is **minimal/no** education for sustainable healthcare. (0 points)	
Score Assigned:	2
Although there are references to planetary health topics within the M1-M2 curriculum, as outlined in preceding sections, they do not constitute focal points, and the curriculum lacks longitudinal perspectives on these matters. While there was approval to include topics related to climate change and planetary health into almost all preclinical blocks throughout the M1-M2 years, this has not yet been implemented. *The new M4 session on climate change and health, "Planetary Health and Climate Justice", serves as a standalone lecture in the core medical school curriculum to discuss planetary health topics.*	

1.22. Does your <u>medical school</u> employ a member of faculty to specifically oversee and take responsibility for the incorporation of planetary health and sustainable healthcare as a theme throughout the course?	
Yes, the **medical school** has a specific faculty/staff member responsible for overseeing curricular integration of planetary health and sustainable healthcare. (1 point)	
No, the **medical school** does **not** have a specific faculty/staff member responsible for overseeing curricular integration of planetary health and sustainable healthcare. (0 points)	
Score Assigned:	1
The specific faculty member responsible for overseeing the integration of planetary health and sustainable healthcare into the curriculum serves as the Advocate Curriculum role leader and as a	

faculty lead for the Health Equity and Social Justice Leadership Program elective at Rush Medical College. They are actively working to incorporate these concepts into the Advocate curriculum as well as the Basic Sciences curriculum.

Section Total (52 out of 72)	**72.22%**

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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:	3
Dr. Ami Shah and Dr. Brian Gulack have appointments within Rush Medical College and have primary research focuses in healthcare sustainability. Their research is primarily focused on improving the environmental impact of the operating room. *Here are recent publications from these authors:* *A Life Cycle Assessment of Reusable and Disposable Surgical Caps* *Surgeon Perspectives on Preference Cards and Environmental Stewardship*	

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
There is currently no department or institute for interdisciplinary planetary health research at Rush.	

2.3. Is there a process by which communities disproportionately impacted by climate change and environmental injustice give input or make decisions about the research agenda at your <u>institution</u>?
Yes, there is a process in which community members impacted by climate and environmental injustice have **decision-making power** in the climate + environmental research agenda. (3 points)
Yes, there is a process in which community members impacted by climate and environmental injustice **advise** the climate + environmental research agenda. (2 points)
No, but there are **current efforts** to establish a process for community members to advise or make decisions on the research agenda. (1 points)
There is **no** process, and **no** efforts to create such a process. (0 points)

Score Assigned:	2

Rush Medical College is a participant organization in the Chicago Area Patient-Centered Outcomes Research Network (CAPriCORN) Consortium, a partnership of 11 local research institutes joined together to investigate ways of improving health care focused on the people living in Chicago. CAPriCORN research initiatives are driven by input from an established Patient Community Advisory Committee (PCAC) and the Health & Medicine Research Policy Group (HMPRG) composed of patients, community members, caregivers, advocates, and healthcare providers. The PCAC and HMPRG allow for input from a wide variety of community voices about the research priorities of CAPriCORN.

Rush University, with the University of Chicago, is a co-leader of the Institute for Translational Medicine (ITM). The ITM is a NIH Clinical and Translational Science Award (CTSA) program dedicated to improving health in Chicago and around the world. Rush Medical College faculty member James Mulshine, MD is the ITM Community and Collaboration Core Leader, overseeing city-wide research collaborations between community members, organizations, industry, and researchers.

Through the ALIVE Faith Network program, a collaboration between Rush and local pastors, there has been work to improve the health of urban, segregated communities in Chicago and a new expansion into the Northwest Corridor of the Chicago suburbs. The Community Health Ministry is an advisory council of churches that help Rush University researchers through the ALIVE Faith Network in identifying community health needs and creating sustainable health programming. Additionally, the ALIVE Faith Network facilitates community-based participatory research partnerships with local churches to more accurately identify health inequities and improve well being of African American communities.

Currently, there is no process where community members can make decisions regarding the planetary health research agenda, namely because we do not have a specific department dedicated to this research.

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
There is not a centralized, publicly available website describing current or past research in environmental sustainability at Rush. Rush does have an internal Office of Environmental Sustainability webpage that describes current sustainability efforts and provides general resources related to health and the environment, however it is not comprehensive and does not include research opportunities.	

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

Rush University hosted a student-led conference for Earth Day in 2024, showcasing planetary health research and educating students and staff on climate change. This is a yearly event that started in 2022. *There is also a yearly global health symposium, of which the 2024 topic was climate change.*

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
Rush is a member of Practice Greenhealth and the Consortium of Universities for Global Health, both of which are involved in healthcare sustainability research and advocacy nationally and internationally.	

Section Total (11 out of 17)	**65%**

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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
Rush Medical College partners with two community gardens through the Rush Community Services Initiative Program, Healthy Hood Chicago and BEET Chicago. Rush students and faculty participate in city gardening at two Healthy Hood garden locations and the BEET Chicago North Lawndale garden. Student organizations hosted clothing drives to donate gently used clothes and hygiene products to community organizations, such as Brave Alliance and Philips High School. In addition, our institution has helped collect data for the Cool Chi program, which measures heat across communities in Chicago in summer, and sent organic waste to Green Era Chicago to support their biodigester, education center, and community garden effort in Auburn Gresham in Chicago's South Side.	

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

Rush University hosted the Academy of Management conference, inviting participants to learn about sustainability initiatives at Rush University and Erasmus, share strategies, and explore opportunities for healthcare management research aimed at furthering ecological sustainability. Also, our institution led Rush Supplier Summit that attracted over 100 attendees from local businesses/vendors to learn the opportunities to partner with Rush for commercial activities and celebrate their diverse, local, and sustainable made products and services.

However, these events, while curated for individuals and businesses outside the Rush network, are not primarily intended for the public community and do not prioritize education on climate change and patient 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:	1

Students at Rush Medical College receive intermittent emails regarding issues related to planetary health and sustainability. Rush's Office of Environmental Sustainability contributed to RUSH News, University News, and Student Life newsletters 23 times over the past year. Examples of excerpts include bike to work goals, tree planting, employee sustainability guides, and tree giveaways.

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
Rush University does not offer any courses related to planetary health and sustainable healthcare for post-graduate providers.	

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
Rush University Health System utilizes "Patient Pass", a supplemental educational material that relates to a patient's specific diagnosis and is added as part of a patient's "After Visit Summary" for those discharged from the Emergency Department and ambulatory clinic sites. These supplemental materials describe specific environmental factors that can exacerbate existing conditions. Through MyChart, patients are able to access diagnosis-specific educational materials but this is not always accessible for all patients.	

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:	0
The website for RUSH University System for Health, representing the medical college and all affiliated hospitals, has a patient and community-facing environmental sustainability webpage. The website explains the relationship between human and planetary health, acknowledges the impact of the healthcare sector, and addresses RUSH's sustainability efforts. However, it does not provide specific resources to patients for protecting their health in the face of the climate crisis.	

Section Total (8 out of 14)	**57.14%**

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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

Rush Medical College offers the Dean's Fellowship in the summer between the M1 and M2 years. To be eligible, students must find and develop a research project which is either self directed (with advising from faculty) or as part of an existing research project (with advising from the principal investigator). Students receive a stipend and are largely free to pursue any topic that interests them. While this is a legitimate avenue to pursue a sustainability initiative/QI project, it is not a protected or guaranteed avenue to do so. Several barriers exist: availability of sustainability/QI projects, availability of faculty advisors, its self-directed nature, and lastly, projects are contingent upon an acceptance into the Dean's Fellowship. A previous student who received this fellowship worked on a project about the impact of the operating room on the environment.

In addition, Rush Medical College offers an elective for first-year medical students called Innovation in Medicine. This elective is not primarily focused on issues of sustainability but provides an opportunity to integrate clinical and basic science knowledge in a broader context.

Regarding other avenues, the Office of Student Life and Engagement at Rush University, including the medical college, provides support and coordination to student organizations.

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

Rush Medical College offers the Dean's Fellowship in the summer between the M1 and M2, which is self-directed and students are largely free to pursue any topic that interests them. This avenue requires significant student initiative on their own and also requires acceptance into the fellowship. In addition, there is an interdisciplinary, informal cohort within Rush as an institution that works on medical sustainability research that students may participate in by joining projects.

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

Rush's Office of Environmental Sustainability (OES) has created a new internal webpage that highlights sustainability initiatives at Rush. The website highlights the work and goals of the OES office in regards to their five pillars (Climate, Resources, Waste, Purchasing, and People). It contains a calendar for upcoming events and information on volunteer opportunities. It also contains various internal resources such as a sustainability guide for Rush employees, instructions on how to make an account on Practice Greenhealth, and a local vendor guide which highlights businesses close to Rush that are owned by Black, Indigenous, People of Color (BIPOC) and/or women-owned businesses with public sustainability initiatives. There are also links to educational articles on topics such as public health and climate change. It does not include information on potential mentors. This is accessible to any student or faculty in the Rush system, however it is not accessible to the general public.

There is also a webpage within the Rush University public website detailing the OST's efforts to improve campus sustainability. This website does not include information on current research or mentors.

Finally, there is a website dedicated to Rush Medical Center's Green Team, a program within the Anesthesia department, dedicated to reducing Rush's environmental impact with various recycling

programs throughout the operating rooms. This outlines current and ongoing projects and provides information on the current Green Committee members.

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:	0
There is currently no active student organization dedicated to planetary health or sustainability in healthcare. Many efforts have been made in the past, however there have been barriers over student participation and continuation from year to year.	

4.5. Is there a student liaison representing sustainability interests who serves on a department or institutional decision-making council to advocate for curriculum reform and/or sustainability best practices?	
Yes, there is a student representative that serves on a department or institutional decision-making council/committee. (1 points)	
No, there is no such student representative. (0 points)	
Score Assigned:	1
There is a student who is heavily involved in medical sustainability research and advocacy who participates in the Student Curriculum Advisory Council, which submits monthly reports to faculty detailing suggested changes to curriculum. She has given a presentation on the importance of medical sustainability education to the pre-clerkship course directors.	

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

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

1. *Rush University students and faculty participate in city gardening at two Healthy Hood garden locations and the BEET Chicago North Lawndale garden. In addition to this, the Rush Central Kitchen has adopted a Kitchen Organic Waste program that was started by a student initiative in efforts to divert kitchen organic waste from landfill to composting.*
2. *The Office of Environmental Sustainability (OES) has provided multiple presentations and overviews of planetary health/healthcare impacts/human health implications for students, for example: WVU Sustainable Healthcare Summit, Academy of Management Workshop on advancing Healthcare Sustainability, and the Student Health Equity Cohort Sustainable Healthcare Presentation.*
   The Office of Global Health held their annual week-long Global Health Symposium with this year's presentations focusing on climate change. The intended audience was students and faculty .Speakers focused on public health threats of climate change and how healthcare professionals can care for patients during climate disasters, as well as the global and local impacts on health equity.
3. *There has not been an event for students to learn from members of a local environmental justice committee in the past year.*
4. *There are no visual or performing art events at Rush with themes of planetary health.*
5. *The OES provides multiple volunteer opportunities, information can be found on their internal site. Additionally, during Earth Month, the Rush Office of Environmental Sustainability has hosted volunteer opportunities, such as a Tree Planting Day etc, which they also did the previous year.*
6. *There is a Rush Wilderness Medicine group on campus that provides educational lectures for students. In the past year, they held a Wilderness Medicine Simulation day in a local park with simulated patients for students to both enjoy a walk outside and work on clinical skills. The group has also held hiking outings and rock climbing events at a local gym in past years.*

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

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The Rush Office of Environmental Sustainability runs a bi-yearly volunteer program where individuals can take part in migratory bird collision monitoring efforts every spring and fall migration. Individuals are given instructions and tools on how to safely and humanely capture

stunned and injured birds, who are then picked up by Chicago Bird Collision Monitors and transported to local wildlife centers to heal and eventually continue on their journeys.

Campus Sustainability

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

5.1. Does your institution have an Office of Sustainability?	
Yes, there is an Office of Sustainability with multiple full-time staff dedicated to campus sustainability. If the Office of Sustainability serves the entire campus, there is **at least one designated staff member** for sustainability at the hospital. (3 points)	
There is an Office of Sustainability with one or more full-time staff dedicated to campus sustainability, but **no specific staff member** in charge of hospital sustainability. (2 points)	
There are **no salaried sustainability staff,** but there is a sustainability task force or committee. (1 point)	
There are **no** staff members **or** task force responsible for overseeing campus sustainability. (0 points)	
Score Assigned:	3
Rush has an Office of Environmental Sustainability (OES) that consists of a core Sustainability Department with currently three full time employees (the Director of Sustainability, Manager, and Sustainability Coordinator), as well as a Health Systems Management Student Intern and Program Analyst working part time. These staff members are dedicated to advocating for environmentally sustainable practices throughout the Rush University campus, which includes both the Armour Academic Center and the connected main hospital campus.	

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

Rush University System for Health has committed to the HHS Health Sector Climate Pledge, demonstrating a commitment to reduce scope 1 & 2 greenhouse gas emissions by 50% by 2030 and achieve net zero across all scopes by 2050.

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
Although Rush University Medical Center currently purchases all brown power from Constellation, there is a 25% renewable energy goal by 2025 through the Healthcare Anchor Network Impact Purchasing Commitment (HAN-IPC). With Rush's commitment to meet the HHS pledge to reduce Scope 1 and 2 greenhouse gas by 50% by 2030, an additional goal to procure 100% renewable electricity for the medical school buildings by 2030 has been made. There are plans to install solar panels on the university buildings in the future, but the project has been placed on hold as further funding is required.	

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:	3
Rush University Medical Center currently supports sustainable building practices for new buildings as the three most recently constructed buildings on RUMC's campus have been or are	

currently seeking LEED certification. The recent Joan and Paul Rubschlager Building used more than 30% recycled materials to build, with 46% of materials being manufactured and harvested within 500 miles of RUSH. This helped earn the building a LEED-gold certification; it is the third building on the RUSH campus to be LEED-certified. *The majority of buildings have some form of retrofitting, however it is not sufficient to meet the standards for LEED certification in older buildings. Additionally, in 2022 Rush University Medical Center opted into ComEd's energy efficiency program to pursue the following projects: installation of more efficient HVAC equipment, upgraded LED light fixtures, and monitoring-based commissioning (MBCx).*

5.5. Has the institution implemented strategies to encourage and provide environmentally-friendly transportation options for students and reduce the environmental impact of commuting?	
Yes, the institution has implemented strategies to encourage and provide **environmentally-friendly transportation options** such as safe active transport, public transport, or carpooling and these options are well-utilised by students. Alternatively, the campus location is not amenable to unsustainable forms of transportation by default. (2 points)	
The institution has implemented **some** strategies to provide environmentally-friendly transportation options, but the options are **unsatisfactorily** accessible or advertised. (1 point)	
The institution has **not** implemented strategies to encourage and provide environmentally-friendly transportation options. (0 points)	
Score Assigned:	2
Rush University Medical Center offers multiple options for students to reduce the environmental impact of commuting. Students are offered a discounted Ventra UPass which provides use of Chicago CTA Buses and Transit each semester while school is in session. RUMC is also a Divvy bike campus, students are offered a discounted annual membership. In addition to these services, RUMC has shuttle services from Union Station to campus and back. Ride sharing/carpooling is also encouraged through the use of LUUM for commuting. In 2024, a student-led initiative to bike to work was started by a current M3 student which was encouraged by administrators through email and social media postings.	

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

Rush University Medical Center as of early 2025 has officially implemented composting in their "back-of-house" operations after a successful pilot composting program with West Side Food Hall to better understand waste generation rates. In addition to introducing a new composting program, Rush has continually been involved with the Kitchen Organic Waste Composting program, which collected and transferred 32,761 pounds of organic waste to commercial composting facilities. Organic waste is collected through partnership with Collective Resource, and is transported to Green Era's anaerobic digester facility. There is no composting program available to students or staff for their individual,home organic waste.
Rush has also partnered with Franciscan Outreach to divert surplus food to provide meals for the houseless and marginalized and has delivered 37,015 pounds of food to date.

There is an ongoing recycling program in the medical school buildings with recycling bins placed in exterior spaces across the school.

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

Sustainable food purchasing at Rush University Medical Center includes local businesses but not necessarily locally sourced material. RUMC is currently following the sustainability guidelines that Healthcare Without Harm have put forth regarding food purchasing. These efforts are further amplified through the Healthcare Anchor Network - Impact Purchasing Commitment (HAN-IPC) sustainable food targets. RUMC reached its target of 20% Sustainable food spend which was originally targeted for 2025 and, as of early 2025, has reached 56% of total spending going to businesses within Healthcare Anchor Network and other local, minority-owned and women owned businesses. RUMC signed the Coolfood Pledge to address greenhouse gas emissions associated with food procurement and are in the process of baselining our food-related GHG emissions since 2023. RUMC signed up for the Good Food Purchasing Project in 2023 - a metric based framework that encourages large institutions to direct their buying power toward five core values: local economies, environmental sustainability, valued workforce, animal welfare and nutrition; they received an updated draft action plan to continue work with this partnership. Additionally, in 2024, the Food and Nutrition Staff have implemented "Leanpath" which has been engaged in taking steps to partner with "Greener by Default", an organization that provides guidance for institutions to provide plant based food solutions as a default in order to meet carbon reduction goals, save on food costs and improve overall health and wellness.

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
Rush University Medical Center is associated with the Rush Anchor Mission Team/Rush Local and part of the HAN-IPC. This includes making conscious decisions to support our local communities through procurement regarding furniture, food and other local spend. In 2024, the Office of Environmental Sustainability was moved under the VP of Supply Chain which resulted in a streamlined connection to procurement and strategic sourcing teams. They have established a working group that is in the process of developing a sustainable procurement policy which will act as a guideline for products and vendors in the future. *They also have a new working group that meets weekly and drives data tracking, analysis and insights to identify new sustainable procurement opportunities. As part of HAN-IPC, they have been able to make great strides at Rush to start eliminating PVC/DEHP from priority medical products by creating an official baseline/mapping of opportunities and are using this to target breast pumps and accessories, gloves and enteral tubes for which they anticipate to be able to eliminate from two of those categories by the end of 2025.*	

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
Currently, there are no sustainability guidelines for medical school events. Several different vendors incorporate recycling containers and silverware etc., thus it becomes difficult to have a set of guidelines for each vendor to follow. Many medical school events are held off site as well, and would be held to the standards of the off site venue rather than Rush University Medical Center's. Rush is currently in the process of putting together event sustainability guidelines university wide.	

5.10. Does your institution have programs and initiatives to assist with making lab spaces more environmentally sustainable?	
Yes, the institution has **programs** and **initiatives** to assist with making lab spaces more environmentally sustainable. (2 points)	
There are **guidelines** on how to make lab spaces more environmentally sustainable, but not programs or initiatives. (1 point)	
There are **no** efforts at the institution to make lab spaces more sustainable. (0 points)	
Score Assigned:	2
The Rush University Medical Center human anatomy lab has replaced all overhead fluorescent lights with low energy LED bulbs on dimmable switches with movement sensors that turn off the lights where there is no movement. They have also converted the ventilation system to a higher efficiency system and they are preparing to invest in a new, highly efficient air handler to power the system. This ventilation system will have the ability to lower its energy use during times when there is no one in the laboratory, such as during the overnight hours. For the last three years, they have also been using non-formalin embalmed donors (donors embalmed with an ethanol-based solution rather than formalin-based). The histology teaching lab at Rush University Medical Center has moved from the use of microscopes and glass slides to virtual histology which decreases the waste of materials and the use of chemicals. The virtual histology effort has also decreased the need for transportation of students to the lab in order to access materials. The Office of Environmental Sustainability has begun offering My Green Lab Certification sponsorships in an effort to improve the sustainability of research by reducing energy, water, waste, and money used in the lab. At the moment, five labs on campus have registered to become My Green Lab Certified.	

5.11. Does your institution's endowment portfolio investments include fossil-fuel companies?	
The institution is **entirely divested** from fossil fuels **and** has made a **commitment to reinvest divested funds** into renewable energy companies or renewable energy campus initiatives. (4 points)	
The institution is **entirely divested** from fossil fuels. (3 points)	
The institution has **partially divested** from fossil fuel companies **or** has made a **commitment to fully divest**, but **currently** still has fossil fuel investments. (2 points)	
The institution has **not divested** from fossil-fuel companies, but faculty and/or students are **conducting organised advocacy** for divestment. (1 point)	
Yes, the institution has investments with fossil-fuel companies and there have been **no efforts** to change that. (0 points)	
Score Assigned:	0
Rush University Medical Center has investments with fossil fuel companies and has not made a formal effort to divest from these companies. The Office of Environmental Sustainability and an	

investment committee oversee the institution's endowment portfolio but formal efforts to divest from fossil fuel companies have not been made.

Section Total (15 out of 32)	**46.88%**

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Grading

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

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

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

Planetary Health Grades for Rush Medical College
The following table presents the individual section grades and overall institutional grade for Rush Medical College on this medical-school-specific Planetary Health Report Card.

Section	Raw Score %	Letter Grade
Planetary Health Curriculum (30%)	(52/72) x 100 = 72%	B
Interdisciplinary Research (17.5%)	(11/17) x 100 = 65%	B-
Community Outreach and Advocacy (17.5%)	(8/14) x 100 = 57%	C+
Support for Student-led Planetary Health Initiatives (17.5%)	(8/15) x 100= 53%	C
Campus Sustainability (17.5%)	(15/32) x 100 = 47%	C
Institutional Grade	**(72x0.3 + 65x0.175 + 57x0.175 + 53x0.175 + 47x0.175) = 60.53%**	**B-**

Report Card Trends

Section Overview
This graph demonstrates trends in overall and section grades for the years in which Rush Medical College has participated in the Planetary Health Report Card initiative.