Planetary Health Report Card (Medicine):

Rush University Medical College

2023-2024 Contributing Team:
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Summary of Findings

Overall	C

Curriculum	B

- Rush Medical College shifted the climate change and health lecture from the M2 to the M4 year, switching the format to a lecture and case-based learning session. This class 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 touches on climate change's effects, the core curriculum lacks consistent integration of planetary health and climate justice.
- **Recommendations**: Moving forward, further efforts should be taken to incorporate planetary health principles throughout all years, culminating in a comprehensive final-year class.

Interdisciplinary Research	C

- Rush Medical College has faculty members that research healthcare sustainability, but lacks an interdisciplinary planetary health research group. There is no formal process for community involvement in setting the planetary health research agenda.
- **Recommendations:** Establish a formal interdisciplinary research group and involve communities in research priorities. We are pursuing membership in the Planetary Health Alliance as well.

Community Outreach and Advocacy	C-

- Rush Medical College has two meaningful community partnerships with urban gardens. Students, faculty, and staff receive intermittent news about Rush's sustainability efforts. This year, the Environmental Sustainability Team launched a community-facing webpage highlighting Rush's sustainability work, though this does not provide resources to patients.
- **Recommendations**: More robust community partnerships, community-facing events, access to resources online and in patient-facing spaces, and more regularly scheduled sustainability news.

Support for Student-Led Initiatives	C

- Rush Medical College supports students in their individual efforts to explore projects related to planetary health through opportunities such as the Dean's Fellowship. The Office of Student Life and Engagement provides support for student organizations that would pursue planetary health and sustainability endeavors, but there is not a current student-led organization dedicated to planetary health.
- **Recommendations**: Student-led initiatives in planetary health could be further supported by the creation of a website detailing current sustainability research at Rush to connect students to mentors. We additionally suggest the creation of a student organization dedicated to planetary health.

Campus Sustainability	C-

- Rush Medical College possesses an Office of Sustainability which actively works toward reducing our carbon footprint. While a pledged goal of carbon neutrality by 2050 has been set, this is later than the 2040 goal achieved by other institutions. Similarly, while some sustainability guidelines are in place, these are not currently enforced at our institution and are not universally available.
- **Recommendations:** Additional incremental progress toward our transition to renewable energy as pledged will benefit us in the near future. A statement with specific goals for environmental sustainability would be a vital step in gearing our school's mission toward preservation of the health of our patient population.

Statement of Purpose

Planetary health is human health.

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

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

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

Definitions & Other Considerations

Definitions:

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

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

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

    1. Describe how the environment and human health interact at different levels.

    2. Demonstrate the knowledge and skills needed to improve the environmental sustainability of health systems.

    3. Discuss how the duty of a doctor to protect and promote health is shaped by the dependence of human health on the local and global environment.

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

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

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

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

- **Clerkship:** This is a term used in the USA to refer to placements that medical students go on e.g. Pediatrics, General medicine, Psychiatry. In the UK these are referred to as rotations or placements.

Other considerations:

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

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

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?	
3	Yes, the medical school has offered **more than one** elective whose primary focus is ESH/planetary health in the past year.
2	Yes, the medical school has offered **one** elective whose primary focus is ESH/planetary health in the past year.
1	The medical school does **not** have any electives whose primary focus is ESH/planetary health, but there are one or more electives that include a **lecture** on planetary health.
0	No, the medical school has **not** offered any electives on planetary health or electives that include ESH/planetary health topics in the past year.

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.

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

Curriculum: Health Effects of Climate Change

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

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

Last academic year, Rush Medical College held a session on climate justice as part of the M2 core curriculum. This year, this session was removed from the M2 curriculum and replaced with a new class during the M4 year titled "Planetary Health and Climate Justice". The new 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.

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

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

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, as discussed in 1.2, also discusses the impacts of extreme weather events on individual health through case-based learning. Multiple cases in this session discuss the adverse health effects of wildfires and extreme heat waves. Additionally, during the lecture section of the class, students learn about how extreme weather events contribute to food insecurity and spread of disease.

1.4. Does your medical school curriculum address the impact of climate change on the changing patterns of infectious diseases?

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

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, as discussed in 1.2, expands on the impact of climate change on vector-borne illnesses through case-based learning. The case on infectious disease in this session discusses the increased prevalence of Lyme disease due to climate change. Additionally, during the lecture portion of the class, students learn about how the prevalence of malaria and diarrheal illnesses are expected to rise significantly due to rising temperatures and water scarcity.

1.5. Does your medical school curriculum address the respiratory health effects of climate change and air pollution?

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

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, as discussed in 1.2, also discusses the impacts of environmental toxins on respiratory health through case-based learning. The case on respiratory illnesses aims to explore the relationship between asthma incidence and environmental pollution, such as from cars, wildfires, and ground-level ozone.

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

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

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, as discussed in 1.2, also discusses the impacts of extreme weather events on cardiovascular health through case-based learning. The case on cardiovascular health demonstrates how elevated temperatures lead to higher rates of myocardial infarctions and increased risk of heat stroke in patients with heart failure.

1.7. Does your medical school curriculum address the mental health and neuropsychological effects of environmental degradation and climate change?

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

In the Rush Medical College's M1 Brain, Behavior, and Cognition block, the self-study guide for Case 8: Mario Gomez has a single bullet point listing one of the triggers for migraines as "environmental triggers (change in weather)" but does not specify environmental toxins or climate change.

The new M4 core curriculum session, as discussed in 1.2, also discusses the impacts of climate change on mental health through case-based learning. The case on mental health discusses the long-term mental health impacts of patients exposed to extreme weather and widespread emotional distress due to climate change perceptions.

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

The elective course Health Equity and Social Justice Leadership Program (HESJLP) had a lecture that was dedicated to food insecurity and health. It 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, as discussed in 1.2, also briefly discusses the impacts of climate change on food and water security during the lecture portion of the session. 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 marginalized populations such as those with low SES, women, communities of color, Indigenous communities, children, homeless populations, and older adults?	
3	This topic was explored **in depth** by the **core** curriculum.
2	This topic was **briefly** covered in the **core** curriculum.
1	This topic was covered in **elective** coursework.
0	This topic was **not** covered.

The Health Equity and Social Justice Leadership Program (HESJLP) 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, as discussed in 1.2, 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 medical school curriculum address the unequal regional health impacts of climate change globally?	
3	This topic was explored **in depth** by the **core** curriculum.
2	This topic was **briefly** covered in the **core** curriculum.
1	This topic was covered in **elective** coursework.
0	This topic was **not** covered.

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, as discussed in 1.2, briefly explores the disproportionate impacts of climate change on global communities. During the lecture portion of the class, students learn that low- and middle-income countries (LMICs) 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 medical school curriculum address the reproductive health effects of industry-related environmental toxins (e.g. air pollution, pesticides)?	
3	This topic was explored **in depth** by the **core** curriculum.
2	This topic was **briefly** covered in the **core** curriculum.
1	This topic was covered in **elective** coursework.
0	This topic was **not** covered.

The new M4 core curriculum session, as discussed in 1.2, explores the impacts of environmental toxins and extreme weather events on reproductive health through case-based learning. The case on reproductive health demonstrates the harmful effects of high temperatures and air pollutants on pregnancy 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?	
3	This topic was explored **in depth** by the **core** curriculum.
2	This topic was **briefly** covered in the **core** curriculum.
1	This topic was covered in **elective** coursework.
0	This topic was **not** covered.

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, as discussed in 1.2, briefly discusses climate injustices unique to Chicago during the lecture portion of the class. These include 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> emphasize the importance of Indigenous knowledge and value systems as essential components of planetary health solutions?	
3	Indigenous knowledge and value systems are **integrated throughout** the medical school's planetary health education
2	Indigenous knowledge and value systems as essential components of planetary health solutions are included **briefly** in the core curriculum.
1	Indigenous knowledge and value systems as essential components of planetary health solutions are included in **elective** coursework.
0	This topic was **not** covered.

The Health Equity and Social Justice Leadership Program (HESJLP) elective, as discussed in 1.1, 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, as discussed in 1.2, briefly discusses the importance of preserving Indigenous values in climate initiatives during the lecture portion of the class. 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 marginalized populations such as those with low SES, women, communities of color, children, homeless populations, Indigenous populations, and older adults?	
3	This topic was explored **in depth** by the **core** curriculum.
2	This topic was **briefly** covered in the **core** curriculum.
1	This topic was covered in **elective** coursework.
0	This topic was **not** covered.
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, as discussed in 1.2, 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.*	

Curriculum: Sustainability

1.15. Does your <u>medical school</u> curriculum address the environmental and health co-benefits of a plant-based diet?	
3	This topic was explored **in depth** by the **core** curriculum.
2	This topic was **briefly** covered in the **core** curriculum.
1	This topic was covered in **elective** coursework.
0	This topic was **not** covered.
The new M4 core curriculum session, as discussed in 1.2, briefly covers the benefits of a plant-based diet on both individual and planetary health during the lecture portion of the session. 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?

3	This topic was explored **in depth** by the **core** curriculum
2	This topic was **briefly** covered in the **core** curriculum.
1	This topic was covered in **elective** coursework.
0	This topic was **not** covered.
There are no specific classes in the medical school curriculum that identify the carbon footprint of the healthcare system.	

1.17. Does your medical school curriculum cover these components of sustainable clinical practice in the core curriculum? (points for each)	
2	The health **and** environmental **co-benefits** of **avoiding** over-medicalisation, over-investigation and/or over-treatment
2	The environmental impact of **pharmaceuticals** and over-prescribing as a cause of climate health harm. Alternatively teaching on **deprescribing** where possible and its environmental and health co-benefits would fulfill this metric.
1	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	Environmental impact of **surgical** healthcare on planetary health and the climate crisis, and how can it be mitigated
1	The impact of **anaesthetic** gases on the healthcare carbon footprint and ways to reduce anesthesia environmental impacts, such as total intravenous anaesthesia or choosing less environmentally harmful anaesthetic gas options with reduced greenhouse gas emissions
1	The impact of **inhalers** on the healthcare carbon footprint and the environmental benefit of dry powdered inhalers over metered dose inhalers.
1	**Waste production** within healthcare **clinics** and strategies for reducing waste in clinical activities (e.g. single use items in the inpatient or outpatient setting)
	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 medical school's curriculum introduce strategies to have conversations with patients about the health effects of climate change?

2	Yes, there are strategies introduced for having conversations with patients about climate change in the **core** curriculum.
1	Yes, there are strategies introduced for having conversations with patients about climate change in **elective** coursework.
0	No, there are **not** strategies introduced for having conversations with patients about climate change

The new M4 core curriculum session, as discussed in 1.2, aims to give students skills to have conversations with patients about the effects of climate change on health through case-based learning. 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?	
2	Yes, the **core** curriculum includes strategies for taking an environmental history.
1	Only **elective** coursework includes strategies for taking an environmental history.
0	No, the curriculum does **not** include strategies for taking an environmental history.

In the M1 Host Defense and Host Response (HDHR) 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, as discussed in 1.2, 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?	
4	Yes, the medical school is currently in the process of making **major** improvements to ESH/planetary health education.

2	Yes, the medical school is currently in the process of making **minor** improvements to ESH/planetary health education.
0	No, there are **no** improvements to planetary health education in progress.
The new planetary health courses in the M4 core curriculum and the HESJLP elective were developed for this academic year and are standalone improvements to planetary health education. There are future plans to include more topics related to climate change and health in the Basic Science curriculum in the M1-M2 year.	

1.21. How well are the aforementioned planetary health/Education for Sustainable Healthcare topics integrated longitudinally into the <u>core</u> curriculum?	
6	Planetary health/ESH topics are **well integrated** into the core medical school curriculum.
4	**Some** planetary health/ESH topics are appropriately integrated into the core medical student curriculum.
2	Planetary health/ESH is not integrated and is primarily addressed in **(a) standalone lecture(s).**
0	There is **minimal/no** education for sustainable healthcare.
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. However, the new M4 session on climate change and health (discussed in 1.2) 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?	
1	**Yes,** the **medical school** has a specific faculty/staff member responsible for overseeing curricular integration of planetary health and sustainable healthcare
0	**No**, the **medical school** does **not** have a specific faculty/staff member responsible for overseeing curricular integration of planetary health and sustainable healthcare.
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 (HESJLP) 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 (48 out of 72)	**66.67%**

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

Interdisciplinary Research

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

2.1. Are there researchers engaged in planetary health research and healthcare sustainability research at your medical school?	
3	Yes, there are faculty members at the **medical school** who have a **primary r**esearch focus in planetary health **or** healthcare sustainability.
2	Yes, there are individual faculty members at the **medical school** who are conducting research **related** to planetary health or healthcare sustainability, but it is not their primary research focus.
1	There are planetary health and/or healthcare sustainability researchers at the **institution**, but none associated with the medical school.
0	No, there are **no** planetary health and/or healthcare sustainability researchers at the **institution** or **medical school** at this time.
Dr. Ami Shah and Dr. Brian Gulack have appointments within Rush Medical College and have primary research focuses in healthcare sustainability. They study methods to improve the environmental impact of the operating room and have multiple publications on this topic. *Here are some links to publications from these authors:* *Environmental Impact and Cost Savings of Operating Room Quality Improvement Initiatives: A Scoping Review* *Exploring Barriers and Facilitators to Reducing the Environmental Impact of the Operating Room* *Operating Room Recycling: Opportunities to Reduce Carbon Emissions Without Increases in Cost*	

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

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>medical school</u>?

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

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

3	There is an **easy-to-use, adequately comprehensive** website that **centralizes** various campus resources related to health and the environment including all of the following: upcoming events, leaders in planetary health at your institution, and relevant funding opportunities.
2	There is a website that **attempts to centralize** various campus resources related to health and the environment, but it is hard-to-use, not updated, or not adequately comprehensive.
1	The **institution** has an **Office of Sustainability website** that includes **some** resources related to health and the environment.
0	There is **no** website.
There is not a centralized internal nor publicly available external website with resources for research projects in planetary health. There is a website in progress to centralize individual research efforts in this space, however it is not yet published. Currently, Rush University as an institution has a webpage to address the efforts and awards the institution has received in relation to environmental sustainability and includes general resources related to health and the environment. You can find this webpage here.	

2.5. Has your institution recently hosted a conference or symposium on topics related to planetary health?	
4	Yes, the **medical school** has hosted at least one conference or symposium on topics related to planetary health in the past year.
3	Yes, the **institution** has hosted at least one conference or symposium on topics related to planetary health in the past year.
2	Yes, the **institution** has hosted a conference on topics related to planetary health in the past three years.
1	The **institution** has not hosted any conferences directly, but they have provided financial support for a local planetary health event.
0	No, the **institution** has not hosted a conference on topics related to planetary health in the past three years.
Rush University hosted a student-led conference for Earth Day in 2023 in order to showcase planetary health research and educate interested students and staff on climate change. This is a yearly event that started in 2022. While medical students presented at this year's event, it was not directly organized by the medical school.	

2.6. Is your medical school a member of a national or international planetary health or ESH organization?	
1	Yes, the medical school is a member of a national or international planetary health **or** ESH organization
0	No, the medical school is **not** a member of such an organization
Rush Medical College is not a member of such a national or international organization. Rush Health System is a member of Practice Greenhealth which includes membership for all faculty and students;	

however, the medical college is not a member individually and this resource is not advertised to students. Rush University is also a member of the Consortium of Universities for Global Health (CUGH), which is involved with work on healthcare sustainability. However, CUGH does not have medical school memberships specifically. There are plans for Rush Medical College to become a member of Planetary Health Alliance within the coming year.

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

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

Community Outreach and Advocacy

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

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

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

3.3. Does your medical school have regular coverage of issues related to planetary health and/or

sustainable healthcare in university update communications?	
2	Yes, all students **regularly** receive communication updates dedicated to planetary health and/or sustainable healthcare.
1	Yes, planetary health and/or sustainable healthcare topics are **sometimes** included in communication updates.
0	Students **do not** receive communications about planetary health or sustainable healthcare.
Students at Rush Medical College receive intermittent emails regarding issues related to planetary health and sustainability. Rush's Environmental Sustainability Team contributed to RUSH News and University News 36 times over the past year. Examples of excerpts include clothing drives, tree planting, employee sustainability guides, and the impact our operating rooms have on the environment and how Rush researchers are working to reduce this.	

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?	
2	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.
1	Yes, the **institution** or **main affiliated hospital trust** offers one course relating to planetary health and/or sustainable healthcare for post-graduate providers
0	There are **no** such accessible courses for post-graduate providers
Rush University does not offer any courses related to planetary health and sustainable healthcare for post-graduate providers.	

3.5. Does your medical school or its affiliated teaching hospitals have accessible educational materials for patients about environmental health exposures?	
2	Yes, the **medical school** or **all affiliated hospitals** have accessible educational materials for patients.
1	**Some** affiliated hospitals have accessible educational materials for patients.
0	**No** affiliated medical centres have accessible educational materials for patients.
RUSH University System for Health utilizes Patient Pass for diagnosis-specific supplemental educational material that can be provided to patients as a part of the After Visit Summary following discharge from inpatient admissions, Emergency Department visits, and ambulatory clinic visits at all health system clinical sites. Certain diagnoses, such as asthma and COPD, describe environmental factors of concern that may exacerbate the illness. The library of diagnosis-specific educational materials can also be accessed by patients through their MyChart portals. However, these are not universally received by all patients.	

3.6. Does your medical school or its affiliated teaching hospitals have accessible educational materials for patients about the health impacts of climate change?	
2	Yes, the **medical school** or **all affiliated hospitals** have accessible educational materials for patients.
1	**Some** affiliated hospitals have accessible educational materials for patients.
0	**No** affiliated hospitals have accessible educational materials for patients.
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 climate crisis.	

Section Total (6 out of 14)	**42.86%**

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

Support for Student-Led Planetary Health Initiatives

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

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 a research project currently underway (with advising from principal investigator). Students receive a stipend and are largely free to pursue whatever topic interests them. While 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 (and sometimes inadequately supported) nature, and lastly, the project's existence contingent on 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 medical students to do research related to planetary health and/or sustainable healthcare?	
2	The **institution** has a **specific** research program or fellowship for students interested in doing planetary health/sustainable healthcare research.

1	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.
0	There are **no opportunities** for students to engage in planetary health/sustainable healthcare research.
Rush Medical College offers the Dean's Fellowship in the summer between the M1 and M2 years as discussed in metric 4.1. 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 medical school have a webpage where medical students can find specific information related to planetary health and/or sustainable healthcare activities and mentors within the medical school? For example, projects achieved, current initiatives underway at the medical school and/or contact of information of potential mentors.	
2	The **medical school** has a webpage with specific information related to planetary health or sustainable healthcare that includes up-to-date information on relevant initiatives and contact information of potential mentors.
1	There is a **medical school** webpage that features some information on projects and mentors within planetary health and sustainable healthcare within the medical school, but it lacks key information.
0	There is **no medical-school** specific webpage for locating planetary health and/or sustainable healthcare projects or mentors.
Rush University Medical Center's Environmental Sustainability Team (EST) has an internal webpage that highlights sustainability initiatives at Rush. The website contains educational articles on topics such as public health and climate change. It has resources for repurposing at Rush and details other programs such as the mask recycling initiative. It also provides links to outside resources for further education on sustainability in healthcare. This is accessible by any student or faculty in the Rush system, however it is not accessible to the general public. It does not list available mentors conducting research in sustainable healthcare at Rush. *There is also a webpage within the Rush University public website detailing the EST's efforts to improve campus sustainability. There are plans to create a formal webpage for current planetary health research in the future after the Rush website is finished with its current overhaul that has been ongoing for the past 6 months.*	

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

1	Yes, there is a student organization at my medical school dedicated to planetary health or sustainability in healthcare but it **lacks faculty support.**
0	No, there is **not** a student organization at my institution dedicated to planetary health or sustainability in healthcare.
There is currently no active student organization dedicated to planetary health or sustainability in healthcare.	

4.5. Is there a student liaison representing sustainability interests who serves on a <u>medical school</u> or <u>institutional</u> decision-making council to advocate for curriculum reform and/or sustainability best practices?	
1	Yes, there is a student representative that serves on a medical school or institutional decision-making council/committee.
0	No, there is no such student representative.
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. She also is a member of the Dean's Advisory Council that meets monthly with the medical school dean to discuss changes that should be made to the medical college as a whole.	

4.6. In the past year, has the <u>institution</u> had one or more co-curricular planetary health programs or initiatives in the following categories? (1 point each)	
1	Projects where students are able to gain experience in organic agriculture and sustainable food systems, such as gardens, farms, community supported agriculture (CSA), fishery programs, or urban agriculture projects.
1	Panels, speaker series, or similar events related to planetary health that have students as an intended audience.
1	Events in which students learn directly from members of a local environmental justice community about the climate and environmental challenges they face, and how health professionals can partner with their community to address these exposures and impacts.
1	Cultural arts events, installations or performances related to planetary health that have students as an intended audience.
1	Local volunteer opportunities related to building community resilience to anthropogenic environmental impacts.
1	Wilderness or outdoors programs (e.g., that organize hiking, backpacking, kayaking, or other outings for students)
Score explanation: 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 Rush Environmental Sustainability Team held a planetary health symposium with students as the intended audience this past year on Earth Day. The symposium consisted of presentations about different research projects in medical sustainability that Rush faculty and students were conducting. Additionally, there is an annual Global Health symposium that Rush University hosts for students and faculty. This year, the theme was the global impact of climate change. Speakers focused on public health threats of climate change and how healthcare professionals can care for patients during climate disasters.*
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. *There are no specific volunteer opportunities held for building community resilience to anthropogenic environmental impacts. During Earth Month, the Rush Environmental Sustainability Team has hosted volunteer opportunities, such as a Tree Planting Day etc, with plans to continue annually.*
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 (7 out of 15)	**46.67%**

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

Campus Sustainability

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

5.1. Does your medical school and/or institution have an Office of Sustainability?	
3	Yes, there is an Office of Sustainability with multiple full-time staff dedicated to campus sustainability. If the Office of Sustainability serves the entire campus, there is **at least one designated staff member** for sustainability at the hospital and/or medical school.
2	There is an Office of Sustainability with one or more full-time staff dedicated to campus sustainability, but **no specific staff member** in charge of medical school and/or hospital sustainability.
1	There are **no salaried sustainability staff,** but there is a sustainability task force or committee
0	There are **no** staff members **or** task force responsible for overseeing campus sustainability
Rush has an Environmental Sustainability Team, consisting of a core Sustainability Department with currently two full time employees (EST Manager and 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/medical school plan to reduce its own carbon footprint?	
5	The institution/medical school has a **written and approved plan** to achieve carbon neutrality by **2030**
3	The institution/medical school has a **written and approved plan** to achieve carbon neutrality by **2040**
1	The institution/medical school has a stated goal of carbon neutrality by **2040** but has **not created a plan** to reach that goal or the **plan is inadequate**
0	The institution/medical school does **not** meet any of the requirements listed above
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 <u>medical school</u> for teaching (not including the hospital) utilize renewable energy?	
3	Yes medical school buildings are **100%** powered by renewable energy
2	Medical school buildings source **>80%** of energy needs from off-site and/or on-site renewable energy.
1	Medical school buildings source **>20%** of energy needs from off-site and/or on-site renewable energy.
0	Medical school buildings source **<20%** of energy needs from off-site and/or on-site renewable energy.
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 utilized for new and old buildings on the <u>medical school</u> campus, with design and construction of new buildings and remodeling of old buildings conforming to a published sustainability rating system or building code/guideline?	
3	Yes, sustainable building practices are utilized for new buildings on the medical school campus and the **majority** of old buildings **have been retrofitted** to be more sustainable.
2	Sustainable building practices are utilized for new buildings on the medical school campus, but most old buildings have **not been retrofitted.**
1	Sustainable building practices are **inadequately or incompletely** implemented for new buildings.
0	Sustainability is **not considered** in the construction of new buildings.
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 majority of buildings have some form of retrofitting, however, it is not sufficient to meet 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). Rush was awarded ComEd's MBCx Project of the Year for over $200,000 saved with an annual energy reduction of 2,213,924 kWh in 2023.	

5.5. Has the <u>medical school</u> or <u>institution</u> implemented strategies to encourage and provide environmentally-friendly transportation options for students and reduce the environmental impact of commuting?	
2	Yes, the medical school or institution has implemented strategies to encourage and provide **environmentally-friendly transportation options** such as safe active transport, public transport,

	or carpooling and these options are well-utilized by students. Alternatively, the campus location is not amenable to unsustainable forms of transportation by default.
1	The medical school or institution has implemented **some** strategies to provide environmentally-friendly transportation options, but the options are **unsatisfactorily** accessible or advertised.
0	The medical school or institution has **not** implemented strategies to encourage and provide environmentally-friendly transportation options.
Rush University Medical Center offers multiple options for students to reduce the environmental impact of commuting. Students are offered a Ventra UPass which provides free use of Chicago CTA Buses and Transit. RUMC is also a Divvy bike campus where students are offered a discounted annual membership. In addition to these services, RUMC has shuttle services to and from Union Station and the campus. Ride sharing/carpooling is also encouraged through the use of LUUM for commuting.	

5.6. Does your medical school have an organics recycling program (compost) and a conventional recycling program (aluminum/paper/plastic/glass)?	
2	Yes, the medical school has **both** compost **and** recycling programs accessible to students and faculty.
1	The medical school has **either** recycling **or** compost programs accessible to students and faculty, but not both.
0	There is **no** compost or recycling program at the medical school.
Rush University Medical Center currently does not have a composting program accessible to students, but there is a recycling program that has been implemented in the medical school buildings with new recycling bins placed in exterior spaces across the school. Although composting is not yet available for students on campus, Rush has begun a Kitchen Organic Waste Composting program, so far collecting more than 19.6 tons of organic waste to be taken offsite to commercial composting facilities and an anaerobic digester facility.	

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

Sustainable food purchasing at Rush University Medical Center includes local businesses but not necessarily locally sourced material. RUMC is currently following Sustainability guidelines that Healthcare Without Harm have put forth regarding food purchasing. These efforts are further being amplified through the Healthcare Anchor Network - Impact Purchasing Commitment (HAN-IPC) sustainable food targets. This target was initially 20% Sustainable food spend by 2025, however that goal has already been met and has since been increased to 25%. There are discussions to revisit and increase the goal. In 2023 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. RUMC also 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.

5.8. Does the medical school or institution apply sustainability criteria when making decisions about supply procurement?	
3	Yes, the medical school has **adequate** sustainability requirements for supply procurement **and** is **engaged** in efforts to increase sustainability of procurement.
2	There are sustainability guidelines for supply procurement, but they are **insufficient or optional.** The medical school is **engaged** in efforts to increase sustainability of procurement.
1	There are sustainability guidelines for supply procurement, but they are **insufficient or optional.** The medical school is **not engaged** in efforts to increase sustainability of procurement.
0	There are **no** sustainability guidelines for supply procurement.

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. There are currently no protocols to be followed regarding Sustainable procurement – only guidelines and recommendations. These recommendations are in line with HAN-IPC goals, and developed through working with Vizient and the Rush Supply Chain Team to identify medical products that are free of chemicals of concern, as well as being environmentally preferred sourced. In 2023, the Sustainability department and procurement team joined the Vizient "Go Green: Healthcare Sustainability Optimization Collaborative" to begin building a stronger, more embedded sustainable procurement program.

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

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.

5.10. Does your medical school have programs and initiatives to assist with making lab spaces more environmentally sustainable?	
2	Yes, the medical school has **programs** and **initiatives** to assist with making lab spaces more environmentally sustainable.
1	There are **guidelines** on how to make lab spaces more environmentally sustainable, but not programs or initiatives.
0	There are **no** efforts at the medical school to make lab spaces more sustainable.
The Rush University Medical Center human anatomy lab has replaced all overhead fluorescent lights with low energy LED bulbs on dimmable switches, and they are in the process of converting the ventilation system to a higher efficiency one which will have the ability to lower its energy use when the lab is not being actively used. For the last two years, they have 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 Environmental Sustainability Team 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?	
4	The institution is **entirely divested** from fossil fuels **and** has made a **commitment to reinvest divested funds** into renewable energy companies or renewable energy campus initiatives.
3	The institution is **entirely divested** from fossil fuels.
2	The institution has **partially divested** from fossil fuel companies **or** has made a **commitment to fully divest**, but **currently** still has fossil fuel investments.
1	The institution has **not divested** from fossil-fuel companies, but faculty and/or students are **conducting organized advocacy** for divestment.
0	Yes, the institution has investments with fossil-fuel companies and there have been **no efforts** to change that.
Rush University Medical Center has investments with fossil fuel companies and has not made a formal effort to divest from these companies. There is an Environmental Sustainability Team and an investment committee to oversee the institution's endowment portfolio but formal efforts to divest from fossil fuel companies have not been made.	

Section Total (14 out of 32)	**43.75%**

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

Grading

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

Letter Grade*	Percentage
A	80% - 100%
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 the Rush Medical College on this medical-school-specific Planetary Health Report Card.

Section	Raw Score %	Letter Grade
Planetary Health Curriculum (30%)	(48/72) x 100 = 66.67%	B
Interdisciplinary Research (17.5%)	(9/17) x 100 = 52.94%	C
Community Outreach and Advocacy (17.5%)	(6/14) x 100 = 42.86%	C-
Support for Student-led Planetary Health Initiatives (17.5%)	(7/15) x 100= 46.67%	C
Campus Sustainability (17.5%)	(14/32) x 100 = 43.75%	C-
Institutional Grade	**(Ax0.3 + Bx0.175 + Cx0.175 + Dx0.175 + Ex0.175) = 52.59%**	**C**

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.