



Planetary Health Report Card (Medicine):



RUTGERS

Robert Wood Johnson
Medical School

2022-2023 Contributing Team:

- Students: Sukrut Sonty, Daniel Scalia
- Faculty Mentors: Dr. Catherine Chen
- *Primary Contact: Sukrut Sonty, sukrut.sonty@rwjms.rutgers.edu

Summary of Findings

Overall	C
<u>Curriculum</u>	D
<ul style="list-style-type: none"> Robert Wood Johnson Medical School does include planetary health in the curriculum, but it lacks integration longitudinally. In first and second year, various aspects of planetary health are discussed in lectures. Recommendations: While student-initiatives are underway to incorporate planetary health concepts into the necessary sections of the curriculum, there is a lack of direct clinical teaching. For example, how students may discuss climate-related topics with their patients. This could be introduced during an OSCE (Objective Structured Clinical Exam). 	
<u>Interdisciplinary Research</u>	A
<ul style="list-style-type: none"> Rutgers University has had several climate-related symposiums and showcases in the past year. However, they were not directly aimed at medical students therefore engagement was limited. Recommendations: Robert Wood Johnson Medical School could organise a conference or showcase directly related to Planetary Health. We also encourage RWJMS to join the Planetary Health Alliance. 	
<u>Community Outreach and Advocacy</u>	D-
<ul style="list-style-type: none"> Robert Wood Johnson Medical School’s community outreach and advocacy relating to planetary health has been limited in a direct capacity. However, there are programs and groups at the institution that work with community organisations in assessing and building resilience to the impacts of climate change. Recommendations: We recommend the medical school develop direct outreach to the local community as well as partner with organisations that are already connected to the community. 	
<u>Support for Student-Led Initiatives</u>	B
<ul style="list-style-type: none"> Robert Wood Johnson Medical School has a funded student interest group dedicated to the topic of planetary health or climate change related health outcomes called Medical Students for a Sustainable Future. The school has supported students directly adding to the core curriculum through this organisation. Recommendations: We recommend that planetary health options be incorporated into the experiential learning portion of the core curriculum to help provide opportunities for students to engage in environmental justice and learn about sustainable healthcare. 	
<u>Campus Sustainability</u>	C-
<ul style="list-style-type: none"> Campus sustainability is incorporated via the University-wide climate action plan to become carbon neutral by 2040. This does include the medical school’s main affiliated hospital. Recommendations: We recommend efforts to incorporate the Robert Wood Johnson University Hospital into the Climate Action Plan set forth by Rutgers University. At the medical school level, we recommend developing sustainability guidelines for events and begin efforts to make lab spaces and supply procurement more sustainable. 	

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, 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 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 civilization 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 last year, 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. Did your <u>medical school</u> offer elective courses (student selected modules) to engage students in Education for Sustainable Healthcare or Planetary Health in the last year?	
3	Yes, the medical school has offered 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.

As part of the Medical Milestones Non-credit Elective (NCE), students attend lectures hosted by several different faculty and guests describing milestone moments in the history of medicine. One of these lectures focus on [One Health](#) and the cross section of environmental health with human health.

Curriculum: Health Effects of Climate Change

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

As part of the core curriculum for M1 students, the lecture on “Kidney Stones” discusses in one slide the increasing incidence of kidney stones as a reflection of hot weather and changing climate. The lecture “Asthma” for M1 students features a slide that describes temperature as an aggravating factor for asthma.

3. Does your medical school 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.

The medical school curriculum does not address this information.

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.

The medical school curriculum does not address this information.

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.

At RWJMS there is a lecture on "Environmental & Occupational Medicine in Clinical Practice" in the core curriculum which briefly describes risk factors for asthma including environmental pollution.

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.
The medical school curriculum does not address this information.	

7. Does your <u>medical school</u> 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.
The medical school curriculum does not address this information.	

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 medical school curriculum does not address this information.	

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 medical school curriculum does not address this information.	

10. Does your <u>medical school</u> curriculum address the unequal regional health impacts of climate change globally?	
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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.

At Robert Wood Johnson Medical School (US) the unequal health impacts of climate change globally were briefly covered in several PowerPoint presentations. For example, in a lecture titled “Hypersensitivity” a slide on Ragweed pollen discussed how certain areas have a longer pollen season, with a trend of higher changing climates in higher latitudes. Since around 15% of Americans are allergic to ragweed this can result in longer seasons and increase risk to asthma attacks and hay fever.

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

11. Does your <u>medical school</u> curriculum address the reproductive health effects of industry-related environmental toxins (e.g. air pollution, pesticides)?	
3	This topic was explored in depth by the core curriculum.
2	This topic was briefly covered in the core curriculum.
1	This topic was covered in elective coursework.
0	This topic was not covered.

The medical school curriculum does not address this information.

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.

During a lecture on “Environmental & Occupational Medicine,” the core curriculum covers a significant history of local superfund sites in NJ and toxic waste dump sites in the wake of 9/11 and their impact on human health. A lecture titled “Global Issues in Diseases Related to Food and Water” there are several slides that discuss lead poisoning in Newark, NJ as a result of poor plumbing resulting in contaminated tap water. It also discusses the health impact of petroleum in Highland Park (a town adjacent to the medical school) tap water as a result of industrial solvents.

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?	
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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 medical school does not discuss indigenous knowledge and value systems as components of planetary health solutions.	

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.
A lecture titled "Microcytic Anemias" discusses how lead poisoning is increased among black children due to redlining. A lecture titled "Environmental Effects on Development," covers the outsized impact of lead on low-income communities. It also discusses how folk remedies of many cultures in New Jersey also contain lead and may result in poisoning.	

Curriculum: Sustainability

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 medical school curriculum does not address this information.	

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.

At RWJMS, the carbon footprint of healthcare systems was discussed in lunch lectures: an optional activity in which guest lecturers on a specific topic present to interested medical students during lunchtime. Concepts including sustainable treatment options to green architecture were discussed in the context of reducing the carbon footprint of the healthcare industry.

17. Does your <u>medical school</u> curriculum cover these components of sustainable clinical practice in the <u>core</u> curriculum? (points for each)	
2	The health 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 anaesthesia 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)

The medical school curriculum does not cover any of these components of sustainable clinical practice.

Curriculum: Clinical Applications

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?	
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 medical school curriculum does not introduce strategies to discuss this information.	

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.
At RWJMS, there is a lecture conducted by medical faculty at the Environmental and Occupational Health Sciences Institute dedicated to environmental/occupational hazards that are relevant to the local area and discusses strategies to take an environmental history when seeing a patient. Concepts on environmental history taking from this lecture are then used to test students during an objective standardized clinical exam.	

Curriculum: Administrative Support for Planetary Health

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 curriculum coordinators at Robert Wood Johnson Medical School have accepted many student-made climate health education slides into the curriculum across multiple subjects. While the majority of the work has been student-led, the faculty have supported these efforts and incorporated this work into their lectures. Further improvements could include development of education for sustainable healthcare led by the faculty and staff, implementing climate health related clinical training or creating elective programs for students to pursue in sustainable healthcare education.	

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.
<p>At RWJMS, planetary health principles integration is limited to content primarily sourced by students and introduced into standalone slides with permission from the faculty. These slides contain a brief connection between the content and planetary health. There is one dedicated lecture and objective standardised clinical exam that covers environmental health history taking and exposures. This coverage is not fully integrated into all preclinical blocks at this point and therefore not enough to award more points.</p>	

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 medical school does not have an appointed staff member to facilitate this curricular integration.	

Section Total (x out of 72)	19
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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. No further comment.

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.*

1. Are there researchers engaged in planetary health research and healthcare sustainability research at your <u>medical school</u> ?	
3	Yes, there are faculty members at the medical school who have a primary research 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.
<p>The RWJMS faculty advisor for Medical Students for a Sustainable Future (a student group involved in climate advocacy) conducts research related to planetary health and healthcare sustainability, however with a primary focus in education.</p>	

2. Is there a dedicated department or institute for interdisciplinary planetary health research at your <u>institution</u> ?	
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.
<p>Adjacent to Robert Wood Johnson Medical School, there is the Environmental and Occupational Health Sciences Institute. Medical faculty from this institute give lectures on the environmental health impacts of occupational and toxic hazards relevant to the local area.</p> <p>The Rutgers Office of Climate Action is an organisation dedicated to interdisciplinary research across Rutgers campuses and school. Its mission statement includes 4 objectives:</p> <ol style="list-style-type: none"> 1. Advocate for climate action and sustainability at the highest levels of University leadership. 	

2. Provide oversight and accountability for and, where necessary, facilitate Climate Action Plan implementation
3. Communicate about and engage internal and external stakeholders in the University's climate action and sustainability efforts
4. Oversee regular updating of the Climate Action Plan

The [Rutgers Climate Institute](#) is a University-wide effort to address one of the most important issues of our time through research, education and outreach. The Institute draws upon strengths in many departments at Rutgers by facilitating collaboration across a broad range of disciplines in the natural, social and policy sciences. The Rutgers Climate Institute is guided by the following goals:

1. To understand the mechanisms that drive global and regional climate change;
2. To understand the human and social dimensions of climate change, including how social, economic, political, cultural, and behavioural factors drive climate change, shape vulnerabilities, and condition response strategies;
3. To study the impacts of climate change, particularly its effects on densely populated, coastal regions;
4. To inform and educate society about the causes and consequences of climate change.

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 medical school?

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.

[The Rutgers NJ Climate Change Resource Center](#), [Rutgers NJ Climate Change Alliance](#), [The Rutgers Office of Climate Action](#) are the three organisations that are a part of Rutgers University's efforts to implement community feedback into their research agenda.

The Climate Change Alliance is a network of public, private and non-governmental organisations from sectors including environmental justice, health, energy, transportation and more. This alliance is facilitated by the Rutgers Climate Institute and facilitates the connection between the local community impacted by climate change and research. One project that the alliance requested Rutgers undertake was a Science and Technical Panel on Sea Level Rise for NJ which culminated in a report published by Rutgers University. Other work by this group has been expressly designed to create "usable science" directly for stakeholders who may even help co-produce knowledge. Members of Rutgers Biomedical Health Sciences, the broader organisation which governs the medical school, are also a part of this working group.

The Rutgers Office of Climate action also seeks local stakeholders in jurisdictions of the university campus to provide input into their work in creating a more sustainable Rutgers.

4. Does your institution 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.

The [Rutgers Climate Institute website](#) centralizes all publications related to planetary health on the website. This website is easy to use and comprehensive, however the latest publications it includes are from 2019.

The [Office of Climate Action](#) also includes student groups that are involved in planetary health and details the climate goals of the institution in detail. However, parts of the website are not fully up-to-date such as the events section.

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.

The Rutgers Climate Institute holds the Rutgers Climate Institute Symposium annually. This year it was held on November 9, 2022 with a goal to foster collaboration among natural and social science researchers and students interested in climate change from institutions in the NJ, NY, and Philadelphia region.

The Environmental and Occupational Health Sciences Institute held the Regional Symposium on Climate Change, Planetary, and Human Health on October 28, 2022 in conjunction with New Jersey Institute of Technology, Princeton University, and Stevens Institute of Technology. The goal of this symposium was to learn what each of our respective institutions are engaged with in research, innovation and implementation to address climate change, and to identify potential areas of collaboration that would benefit the population of New Jersey and beyond. This event was jointly

sponsored by Rutgers Biomedical and Health Sciences (RBHS) and RWJBarnabas Health Center for Climate Change, Health, and Healthcare; RBHS Environmental and Occupational Health Sciences Institute; Rutgers Climate Institute; Rutgers Office for Research

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

RWJMS is a member of the [Global Consortium on Climate and Health Education](#).

Section Total (x out of 17)

15

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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. No further comment.

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.*

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 organisations, but the medical school is not part of that partnership.
0	No, there is no such meaningful community partnership.
<ul style="list-style-type: none"> As mentioned previously, The Rutgers Climate Change Alliance is a network of public, private and non-governmental organisations from sectors including environmental justice, health, energy, transportation and more. This alliance is facilitated by the Rutgers Climate Institute and facilitates the connection between community organisations to promote planetary and environmental health throughout NJ. While members of Rutgers Biomedical and Health Sciences (the organisation containing the medical school) are part of this working group, the work is not directly supported by the medical school. 	

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.
<p>At Rutgers, the Climate Change Alliance, Climate Institute and Office of Climate action have engaged with the community through events held to share information with the public as well as conferences that the public may attend. The medical school is not directly involved in these events.</p>	

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.

The medical school curriculum does not cover this information in university updates.

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

The RWJMS main affiliated hospital is the Robert Wood Johnson University Hospital in New Brunswick. This hospital offers weekly grand rounds, which serve as a method to train residents and offer information as continuing medical education to all faculty interested. One of these grand round lectures focused on planetary health education.

5. Does your medical school or its primary affiliated hospital have accessible educational materials for patients about environmental health exposures?

2	Yes, all affiliated hospitals have accessible educational materials for patients.
1	Some affiliated hospitals have accessible educational materials for patients.
0	No affiliated medical centers have accessible educational materials for patients.

There are no available educational materials for environmental health exposures.

6. Does your medical school or its primary affiliated hospital have accessible educational materials for patients about climate change and health impacts?

2	Yes, all affiliated hospitals have accessible educational materials for patients.
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1	Some affiliated hospitals have accessible educational materials for patients.
0	No affiliated hospitals have accessible educational materials for patients.
There are no available educational materials for the health impacts of climate change.	

Section Total (x out of 14)	3
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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. i No further comment.

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.

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 <i>either</i> offers grants for students to enact sustainability initiatives/QI projects <i>or</i> 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.

The Rutgers [IDEA innovation grant program](#) targeted at Rutgers Biomedical and Health Sciences, the department containing the medical school, funds research and scholarly activities. One of the accepted categories for project topics includes climate.

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.

The [RWJMS Distinction program](#) offers students opportunities to conduct research in a field of their interest. Examples include “Distinction in Research” or “Distinction in Bioethics.” While there is no specific distinction for planetary health, several students pursuing, for example, a Distinction in Medical Education have applied their research related in planetary health education towards this goal. These programs are optional and depend heavily on student initiative.

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	
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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.
The medical school does not have a specific webpage for this purpose.	

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.
<ul style="list-style-type: none"> At RWJMS, there is a student group affiliated with Medical Students for a Sustainable Future that receives funding from the medical school student government. It seeks to promote planetary health education materials in the core curriculum and provide opportunities for students to learn more about sustainable healthcare. This group is supported by a faculty advisor with a research interest in sustainable healthcare. 	

5. Is there a student liaison representing sustainability interests who serves on a medical school or institutional 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.
<ul style="list-style-type: none"> At RWJMS, the Office of Climate Action Student Advisory Board advocates for the implementation of sustainable practices across campus in conjunction with the University's climate action plan. Members of this board are drawn from each Rutgers Campus. Two members on the board represent RBHS and are medical students. 	

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)
<ol style="list-style-type: none"> 1. The Rutgers Coop extension is an accessible and hands-on way for students to learn about agriculture and sustainable food systems. Other examples of locations that students can gain experience about the topics listed are the Rutgers Gardens and Rutgers Farm. 2. There are a number of climate panels, conferences and symposiums held across campus related to planetary health that are primarily student-facing held by the several climate organisations on campus. 3. The Mason Gross School of Arts at Rutgers engages in Environmental Arts for both students, faculty and the public. Further, students have developed art installations for climate symposiums held on campus, an example including a dance interpretation of climate change made with ice. 4. Several Rutgers Climate organisations engage with the community and connect students with opportunities to volunteer in resilience programs. One example is the Living Shorelines project. The Climate Change Alliance, more recently held a symposium on building community resilience to climate change in December as well. Details can be found here. 5. The Rutgers Outdoors Club is a free club available to all students that organises hiking trips, climbing, kayaking and other outdoors activities. The club also supplies all the gear students would need for free, including tents, sleeping bags, snow shoes, kayaks, etc. 	

Section Total (x out of 15)	11
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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. No further comment.

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 endeavour, 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.

1. Does your <u>medical school</u> and/or <u>institution</u> 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
At RWJMS, the Office of Climate Action has dedicated staff to advocate for sustainability on campus and facilitate implementation of the University's climate action plan. There is no specific staff member in charge of the medical school.	

2. How ambitious is your <u>institution/medical school</u> 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
Rutgers University is committed to carbon neutrality by 2040 and has created a written and approved Climate Action Plan detailing the method of achieving this.	

3. Do buildings/infrastructure used by the <u>medical school</u> for teaching (not including the hospital)
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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.
Medical school building sources less than 20% of energy from renewable sources.	

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 remodelling 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.
New buildings built on the Rutgers University Campus are at a minimum LEED silver standard. A project is in progress to audit and retrofit old buildings via the PSEG programs Engineered Solutions and Direct Install, however, this has not been completed on the majority of buildings to date.	

5. Has the <u>medical school</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 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 has implemented some strategies to provide environmentally-friendly transportation options, but the options are unsatisfactorily accessible or advertised.
0	The medical school has not implemented strategies to encourage and provide environmentally-friendly transportation options.
At RWJMS, there is a free bus that transports students from the medical school campus to the affiliated hospital. The bus is not advertised, not often used and it runs infrequently.	

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.

RWJMS buildings each contain recycling bins that are easily accessible. There is no compost available on the medical school campus.

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 adequate sustainability 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.

RWJMS food and beverage selections are facilitated by the Rutgers Dining Services. The Rutgers Dining Services operates on the [Menus of Change Principles](#). Details of the sustainability operations are included in this [document](#) and details about the sustainable menu program to offer greater than 50% plant-based or low carbon footprint meal options by 2024 are included [here](#). Highlights of Rutgers Dining Services sustainability requirements include purchasing greater than 80% of food locally (defined as within 250 miles), emissions tracking of food sources and reducing high carbon footprint foods such as red meat.

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.
The medical school does not apply sustainability criteria	

9. Are there sustainability requirements or guidelines for events hosted at the <u>medical school</u> ?	
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.
There are no guidelines for events.	

10. Does your <u>medical school</u> 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.
No initiatives or programs are available.	

11. Does your <u>institution's</u> 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.
Rutgers committed to divest from fossil fuels as of March 2021, as described here , however currently still has investments in fossil fuels. The commitment includes ceasing all new investments in fossil fuels, divesting from index funds with fossil fuel investments in favor of renewable energy and exiting all fossil fuel investments within 10 years.	

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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. No further comment.

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 the Robert Wood Johnson School of Medicine

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

Section	Raw Score %	Letter Grade
Planetary Health Curriculum (30%)	$(19/72) \times 100 = D$	D
Interdisciplinary Research (17.5%)	$(15/17) \times 100 = A$	A
Community Outreach and Advocacy (17.5%)	$(3/14) \times 100 = D-$	D-
Support for Student-led Planetary Health Initiatives (17.5%)	$(11/15) \times 100 = B$	B

Campus Sustainability (17.5%)	$(14/32) \times 100 = C-$	C-
Institutional Grade	$(A \times 0.3 + B \times 0.175 + C \times 0.175 + D \times 0.175 + E \times 0.175) = C$	C

Report Card Trends

Section Overview

This graph demonstrates trends in overall and section grades for the years in which Robert Wood Johnson Medical School has participated in the Planetary Health Report Card initiative.

Planetary Health Report Card Trends for Robert Wood Johnson Medical School

