Planetary Health Report Card (Medicine):

Cooper Medical School of Rowan University

2024-2025 Contributing Team:

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Land acknowledgment: *Lenapehoking*, the ancestral lands of the Nanticoke Lenni-Lenape tribal nation

Summary of Findings

Overall Grade	B+

Curriculum	B

- Cooper Medical School of Rowan University has made significant strides in integrating climate change, health, and sustainability topics into its curriculum. While these subjects were previously limited to elective coursework, they are now being increasingly incorporated into the core curriculum. Notably, courses like Foundations in Medical Practice have begun addressing the impact of climate change on health, offering students a broader perspective.
- **Recommendations:** Gaps still remain, particularly regarding the intersection of climate change and its disproportionate effects on marginalized populations both locally and globally. Additionally, topics regarding how the healthcare system plays a role in climate change as a whole- for instance, the waste cycle and energy system- could be further integrated into the core curriculum.

Interdisciplinary Research	A

- Cooper Medical School of Rowan University has a robust research department focused on climate change and sustainability, offering numerous opportunities for involvement in these projects. However, there is currently no initiative to engage the local community as stakeholders in these research efforts.
- **Recommendations**: CMSRU could collaborate with the community by conducting surveys through the student-run clinic or partnering with local organizations, for instance the Center for Family Services. This approach would help identify community concerns about climate change and its impact on health.

Community Outreach and Advocacy	B

- Cooper Medical School of Rowan University actively engages in community outreach and advocacy for planetary health. Through partnerships with community organizations, it promotes environmental health and provides accessible climate-related resources.
- **Recommendations**: CMSRU should continue hosting community events to raise awareness, introduce a recurring newsletter on planetary health, and promote educational materials for patients.

Support for Student-Led Initiatives	A

- Cooper Medical School of Rowan University supports student-led planetary health initiatives by providing funding, fellowships, programming, and student group opportunities. Students can engage in research, QI projects, and climate-focused organizations.
- **Recommendations**: CMSRU should create a webpage highlighting planetary health projects and mentors. Encourage student-led events to engage with local environmental justice communities and address climate challenges. Partnering with Camden Community Partnerships or the NJ environmental Justice Alliance would be a great start!

Campus Sustainability	C+

- Cooper Medical School of Rowan University has made good progress towards becoming a more sustainable campus. These initiatives include partnerships with food vendors dedicated to sustainability, creation of the Office of Sustainability, and environmentally-friendly transportation options.
- **Recommendations**: There is still much to improve with the campus sustainability. We recommend establishing specific sustainability guidelines in lab spaces, school events, and in future building renovations. The medical school should additionally put pressure on the Rowan University Foundation to divest from fossil fuel companies.

Statement of Purpose

Planetary health is human health.

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

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

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

Definitions & Other Considerations

Definitions:

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

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

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

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

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

specifically targeted for medical students, can meet this metric.

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

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

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

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

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

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

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

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

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

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

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

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

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

- **Anthropogenic:** Created through human activity

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

Other considerations:

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

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

Planetary Health Curriculum

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

Curriculum: General

1.1. Did your medical school offer elective courses (student selected modules) to engage students in Education for Sustainable Healthcare or Planetary Health in the last year?	
Yes, the medical school has offered **more than one** elective whose primary focus is ESH/planetary health in the past year. (3 points)	
Yes, the medical school has offered **one** elective whose primary focus is ESH/planetary health in the past year. (2 points)	
The medical school does **not** have any electives whose primary focus is ESH/planetary health, but there are one or more electives that include a **lecture** on planetary health. (1 points)	
No, the medical school has **not** offered any electives on planetary health or electives that include ESH/planetary health topics in the past year. (0 points)	
Score Assigned:	3
Score explanation: CMSRU currently offers an elective course titled "Health and Climate Change" for one full fall or spring semester. The course objectives include 1)Discuss climate and health topics in a respectful and collegial manner 2)Recognize how climate change can affect patient health 3)Possess greater knowledge of climate change and its relationship to health impacts and outcomes 4)Develop strategies to advocate with colleagues, patients and the public 5)Use communications strategies to identify conflicts of interests and biases 6)Create strategies to incorporate professionalism into discussions of climate change with colleagues, patients and public and 7)Expand The Knowledge Of social determinants of health related climate and health.By the end of the course,students are required to produce communication pieces tailored to use with patients including an infographic and a podcast. CMSRU also offers an elective "Scholarly Concentration in Climate Health". Students who pursue this concentration undertake additional studies in environment and health, health policy, advocacy, and sustainability practices with goals to describe a range of climate impacts on specific medical conditions relation to individual and population health, to understand how environmental justice communities can be impacted by climate factors, to understand how the social determinants of health are amplified by climate risks, to appreciate how climate disasters can affect patient care delivery, to become more empowered to advocate for climate and environmental initiatives that can positively impact health., to develop the skills to conduct quality improvement projects in the healthcare sector, and to describe the role of advocacy in patient care and population health.	

Curriculum: Health Effects of Climate Change

1.2. Does your <u>medical school</u> curriculum address the relationship between extreme heat, health risks, and climate change?	
This topic was explored **in depth** by the **core** curriculum. (3 points)	
This topic was **briefly** covered in the **core** curriculum. (2 points)	
This topic was covered in **elective** coursework. (1 point)	
This topic was **not** covered. (0 points)	
Score Assigned:	3
Score explanation: CMSRU has a mandatory lecture called "Climate Health Medical Interviewing and Physical Exam" that discusses Extreme Heat, Mental health (ecoanxiety, climate distress, solastalgia, etc), Air pollution, Water-borne illness, Vector-borne illness, Disaster management, Emerging zoonosis and other infectious diseases, Nutritional issues and plant based diets, Refugee health, Advocacy, Equity/health justice, and Sustainable clinical practice. Extreme heat is also discussed in several other lectures in the Foundations of Medical Practice course in regards to cardiovascular health, pulmonary health, and neurological health.	

1.3. Does your <u>medical school</u> curriculum address the impacts of extreme weather events on individual health and/or on healthcare systems?	
This topic was explored **in depth** by the **core** curriculum. (3 points)	
This topic was **briefly** covered in the **core** curriculum. (2 points)	
This topic was covered in **elective** coursework. (1 point)	
This topic was **not** covered. (0 points)	
Score Assigned:	3
Score explanation: CMSRU has a mandatory lecture called "Climate Health Medical Interviewing and Physical Exam" that discusses Extreme Heat, Mental health (ecoanxiety, climate distress, solastalgia, etc), Air pollution, Water-borne illness, Vector-borne illness, Disaster management, Emerging zoonosis and other infectious diseases, Nutritional issues and plant based diets, Refugee health, Advocacy, Equity/health justice, and Sustainable clinical practice. CMSRU has a testable Learning Objective during the Gastroenterology block to discuss the possible effect of climate change on the progression of esophageal diseases, for example, Gastroesophageal Reflux Disease (GERD).	

1.4. Does your <u>medical school</u> curriculum address the impact of climate change on the changing patterns of infectious diseases?
This topic was explored **in depth** by the **core** curriculum. (3 points)

This topic was **briefly** covered in the **core** curriculum. (2 points)	
This topic was covered in **elective** coursework. (1 point)	
This topic was **not** covered. (0 points)	
Score Assigned:	3
Score explanation: This topic was covered in the Infectious Diseases block during the preclinical years. A lecture titled "Travel and Geographic-related infections" covered vector ecology including the pattern changes of mosquito borne illnesses like malaria which are trending to increase in areas of stale water and tropical ecosystems. It was also covered in the mandatory lecture called "Climate Health Medical Interviewing and Physical Exam".	

1.5. Does your <u>medical school</u> curriculum address the respiratory health effects of climate change and air pollution?	
This topic was explored **in depth** by the **core** curriculum.	
This topic was **briefly** covered in the **core** curriculum.	
This topic was covered in **elective** coursework.	
This topic was **not** covered.	
Score Assigned:	3
Score explanation: CMSRU has multiple lectures on this topic. CMSRU has a mandatory lecture called "Climate Health Medical Interviewing and Physical Exam" that discusses Extreme Heat, Mental health (ecoanxiety, climate distress, solastalgia, etc), Air pollution, Water-borne illness, Vector-borne illness, Disaster management, Emerging zoonosis and other infectious diseases, Nutritional issues and plant based diets, Refugee health, Advocacy, Equity/health justice, and Sustainable clinical practice. Air pollution and respiratory health effects were thoroughly covered in this lecture. The lecture "Immunology of Hypersensitivities" has an objective to "Discuss the risk factors for the development of asthma: genetics, ethnicity, family history of atopy, maternal asthma, atopic dermatitis, prematurity, viral and bacterial respiratory tract infections, tobacco smoke, pollution, aeroallergen exposure, obesity and lifestyle and the Hygiene Hypothesis, sensitization to aeroallergens and infection especially Rhinovirus C". The lecture titled "Asthma" has a learning objective to "Discuss the current understanding of the genetics and epidemiology of allergy, and possible explanations for the rise of allergic diseases in industrialized countries ("hygiene hypothesis",role of environmental factors such as pollution and nutrition)". The lecture entitled "Occupational Lung Disease" has a learning objective to"Discuss the effects of air pollution on the lung" and covers pathological development of ILD from asbestos, lung cancer, and mesothelioma.	

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

change, including increased heat?	
This topic was explored **in depth** by the **core** curriculum.	
This topic was **briefly** covered in the **core** curriculum.	
This topic was covered in **elective** coursework.	
This topic was **not** covered.	
Score Assigned:	2
Score explanation: CMSRU has a mandatory lecture called "Climate Health Medical Interviewing and Physical Exam" that discusses Extreme Heat, Mental health (ecoanxiety, climate distress, solastalgia, etc), Air pollution, Water-borne illness, Vector-borne illness, Disaster management, Emerging zoonosis and other infectious diseases, Nutritional issues and plant based diets, Refugee health, Advocacy, Equity/health justice, and Sustainable clinical practice. Cardiovascular effects were briefly discussed in this lecture, as it discussed the association between PM2.5 and CVA and MI. It also discussed how a patient suffering from heat related illness might present on a CV physical exam.	

1.7. Does your <u>medical school</u> curriculum address the mental health and neuropsychological effects of environmental degradation and climate change?	
This topic was explored **in depth** by the **core** curriculum.	
This topic was **briefly** covered in the **core** curriculum.	
This topic was covered in **elective** coursework.	
This topic was **not** covered.	
Score Assigned:	2
Score explanation: CMSRU has a mandatory lecture called "Climate Health Medical Interviewing and Physical Exam" that discusses Extreme Heat, Mental health (ecoanxiety, climate distress, solastalgia, etc), Air pollution, Water-borne illness, Vector-borne illness, Disaster management, Emerging zoonosis and other infectious diseases, Nutritional issues and plant based diets, Refugee health, Advocacy, Equity/health justice, and Sustainable clinical practice. Mental health and neuropsychological effects of environmental degradation and climate change were thoroughly discussed in this lecture. It discussed that increases in temperatures are associated with an increase in the risk of death, dementia, or substance use. It also discussed that heat is associated with suicides among patients with psychosis, interpersonal violence (including homicides), exacerbation of mental illnesses (such as schizophrenia, depression, and anxiety), overall brain dysfunction, and learning impairment.	

1.8. Does your <u>medical school</u> curriculum address the relationships between health, individual patient food and water security, ecosystem health, and climate change?

This topic was explored **in depth** by the **core** curriculum.	
This topic was **briefly** covered in the **core** curriculum.	
This topic was covered in **elective** coursework.	
This topic was **not** covered.	
Score Assigned:	2
Score explanation: This topic was covered in the Infectious Diseases block during the preclinical years. A lecture titled "Travel and Geographic-related infections" covered vector ecology including the pattern changes of mosquito borne illnesses like malaria which are trending to increase in areas of stale water and tropical ecosystems.	

1.9. Does your medical school curriculum address the outsized impact of climate change on marginalised populations such as those with low SES, women, communities of colour, Indigenous communities, children, homeless populations, and older adults?	
This topic was explored **in depth** by the **core** curriculum.	
This topic was **briefly** covered in the **core** curriculum.	
This topic was covered in **elective** coursework.	
This topic was **not** covered.	
Score Assigned:	1
Score explanation: This is covered in the "Health and Climate Change" elective course. Students discussed the disparities in the impacts of climate change across populations with a focus on vulnerable populations such as those with low SES, women, communities of colour, Indigenous communities, children, homeless populations, and older adults.	

1.10. Does your medical school curriculum address the unequal regional health impacts of climate change globally?	
This topic was explored **in depth** by the **core** curriculum.	
This topic was **briefly** covered in the **core** curriculum.	
This topic was covered in **elective** coursework.	
This topic was **not** covered.	
Score Assigned:	2
Score explanation: This was briefly discussed in the mandatory lecture called "Climate Health Medical Interviewing and Physical Exam". It discussed the role of geographical location and associated disparities in the health of patients as a consequence of climate change.	

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

1.11. Does your <u>medical school</u> curriculum address the reproductive health effects of industry-related environmental toxins (e.g. air pollution, pesticides)?	
This topic was explored **in depth** by the **core** curriculum.	
This topic was **briefly** covered in the **core** curriculum.	
This topic was covered in **elective** coursework.	
This topic was **not** covered.	
Score Assigned:	3
Score explanation: During CMSRU's research course, there is instruction regarding the history of DES as well as other pesticides that cause hormonal imbalances. There is a group activity regarding using journals to find more information on this topic as well. The OBGYN clerkship also has lectures and further instruction on risk factors of adenocarcinoma that discusses DES as well. The objective for this clerkship lists: "assess a patient's environmental hazards in pregnancy, with consideration of social and economic determinants of risk exposure."	

1.12. Does your <u>medical school</u> curriculum address important human-caused environmental threats that are relevant to the university's surrounding community?	
This topic was explored **in depth** by the **core** curriculum.	
This topic was **briefly** covered in the **core** curriculum.	
This topic was covered in **elective** coursework.	
This topic was **not** covered.	
Score Assigned:	3
Score explanation: Within the pediatric rotation, a significant emphasis is placed on lead testing, driven by the urban location and aged infrastructure prevalent in schools and residences in Camden, NJ. The ambulatory clerkship addresses the notable absence of green spaces attributable to the urban environment. In the chronic diseases clerkship, a focal point is the challenge of food deserts arising from limited accessibility to surrounding farms, compounded by elevated temperatures. These considerations underscore the nuanced influence of environmental factors on health outcomes across diverse clerkship settings at CMSRU.	

1.13. To what extent does your <u>medical school</u> emphasise the importance of Indigenous knowledge and value systems as essential components of planetary health solutions?
This topic was explored **in depth** by the **core** curriculum.

This topic was **briefly** covered in the **core** curriculum.	
This topic was covered in **elective** coursework.	
This topic was **not** covered.	
Score Assigned:	0
Score explanation: This topic was not covered in CMSRU curriculum	

1.14. Does your <u>medical school</u> curriculum address the outsized impact of anthropogenic environmental toxins on marginalised populations such as those with low SES, women, communities of colour, children, homeless populations, Indigenous populations, and older adults?	
This topic was explored **in depth** by the **core** curriculum.	
This topic was **briefly** covered in the **core** curriculum.	
This topic was covered in **elective** coursework.	
This topic was **not** covered.	
Score Assigned:	2
Score explanation: CMSRU's Scholars Workshop course delves into historical environmental disasters like the Love Canal disaster in NY and explores contemporary concerns related to toxic wastewater dumping in communities of lower socioeconomic status, fostering a comprehensive understanding of the intersections between environmental justice and public health in marginalized populations.	

Curriculum: Sustainability

1.15. Does your <u>medical school</u> curriculum address the environmental and health co-benefits of a plant-based diet?	
This topic was explored **in depth** by the **core** curriculum.	
This topic was **briefly** covered in the **core** curriculum.	
This topic was covered in **elective** coursework.	
This topic was **not** covered.	
Score Assigned:	2
Score explanation:CMSRU has a lecture during its Life Stages course titled "Adolescence and the Elderly." The topic of blue zones is introduced as "regions in the world where people are claimed to	

live longer than average." The reasons behind this phenomenon were explored, including the primarily plant-based diet in these areas.

1.16. Does your medical school curriculum address the carbon footprint of healthcare systems?	
This topic was explored **in depth** by the **core** curriculum.	
This topic was **briefly** covered in the **core** curriculum.	
This topic was covered in **elective** coursework.	
This topic was **not** covered.	
Score Assigned:	1
Score explanation: This was covered in the elective "Health and Climate Change" where students discuss the contribution of healthcare systems to climate change.	

1.17. Does your medical school curriculum cover these components of sustainable clinical practice in the core curriculum? (points for each)	**Score**
The health **and** environmental **co-benefits** of **avoiding** over-medicalisation, over-investigation and/or over-treatment (2 points)	0
The environmental impact of **pharmaceuticals** and over-prescribing as a cause of climate health harm. Alternatively teaching on **deprescribing** where possible and its environmental and health co-benefits would fulfil this metric. (2 points) .	0
The health **and** environmental **co-benefits** of **non-pharmaceutical management** of conditions where appropriate such as exercise or yoga classes for type 2 diabetes; social group activities such as gardening for mental health conditions; active transport such as bicycle schemes. This is commonly known as social prescribing in the UK. (1 point)	1
Environmental impact of **surgical** healthcare on planetary health and the climate crisis, and how can it be mitigated. (1 point)	0
The impact of **anaesthetic** gases on the healthcare carbon footprint and ways to reduce anaestheisa's environmental impacts, such as total intravenous anaesthesia or choosing less environmentally harmful anaesthetic gas options with reduced greenhouse gas emissions. (1 point)	0
The impact of **inhalers** on the healthcare carbon footprint and the environmental benefit of dry powdered inhalers over metered dose inhalers. (1 point)	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) (1 point)	1

Score explanation: CMSRU's course in chronic conditions of diseases discusses the importance of teaching patients about at-home, easily accessible exercises for cardiovascular health as well as plant-based diets. The course also teaches students how to properly inform patients of the pros of such exercises, including less financial burden, environmental sustainability with decreased use of cars to physically drive to the gym, and the ability to easily access vegetables in the backyard and help the natural ecosystem there grow healthier. Furthermore, there is brief mention of the wastefulness of products such as masks, PPE, and gloves in non-clinical or unwarranted clinical settings, especially during COVID, during the ambulatory clerkship.

Curriculum: Clinical Applications

1.18. In training for patient encounters, does your <u>medical school's</u> curriculum introduce strategies to have conversations with patients about the health effects of climate change?	
Yes, there are strategies introduced for having conversations with patients about climate change in the **core** curriculum. (2 points)	
Yes, there are strategies introduced for having conversations with patients about climate change in **elective** coursework. (1 points)	
No, there are **not** strategies introduced for having conversations with patients about climate change. (0 points)	
Score Assigned:	1
Score explanation: CMSRU currently offers an elective course titled "Health and Climate Change" for one full fall or spring semester. Objectives of this course include: develop strategies to advocate with colleagues, patients, and the public; use communication strategies to identify conflicts of interest and biases; and create strategies to incorporate professionalism into discussions of climate change with colleagues, patients, and the public. Students are required to also make infographics and podcasts to practice conversing with patients about these topics. Furthermore, one week of the course is specifically dedicated to communicating and advocating about climate change and health to the patient panel and community.	

1.19. In training for patient encounters, does your <u>medical school's</u> curriculum introduce strategies for taking an environmental history or exposure history?	
Yes, the **core** curriculum includes strategies for taking an environmental history. (2 points)	
Only **elective** coursework includes strategies for taking an environmental history. (1 point)	
No, the curriculum does **not** include strategies for taking an environmental history. (0 points)	
Score Assigned:	2
Score explanation: CMSRU students are trained to take a full history, which includes asking about environmental exposure (e.g., through travel, home environment, etc.) and occupational exposure, during their Fundamentals of Medical Practice longitudinal course. This was reinforced during the	

mandatory lecture called "Climate Health Medical Interviewing and Physical Exam", as students were walked through a detailed climate-centered medical history.

Curriculum: Administrative Support for Planetary Health

1.20. Is your <u>medical school</u> currently in the process of implementing or improving Education for Sustainable Healthcare (ESH)/planetary health education?	
Yes, the medical school is currently in the process of making **major** improvements to ESH/planetary health education. (4 points)	
Yes, the medical school is currently in the process of making **minor** improvements to ESH/planetary health education. (2 points)	
No, there are **no** improvements to planetary health education in progress. (0 points)	
Score Assigned:	4
Score explanation: CMSRU is implementing several updates to integrate planetary health into its curriculum. A new subcommittee has been established to develop medical education program objectives focused on climate health content. This subcommittee will initially meet biweekly to map out plans, brainstorm strengths and weaknesses, and identify existing climate health content within the curriculum. Additionally, a Vertical Integration Group (VIG), consisting of faculty and student advocates, has been formed to conduct a thorough internal curriculum assessment alongside a comparative review of peer institutions.	

1.21. How well are the aforementioned planetary health/Education for Sustainable Healthcare topics integrated longitudinally into the <u>core</u> curriculum?	
Planetary health/ESH topics are **well integrated** into the core medical school curriculum. (6 points)	
Some planetary health/ESH topics are appropriately integrated into the core medical student curriculum. (4 points)	
Planetary health/ESH is not integrated and is primarily addressed in **(a) standalone lecture(s).** (2 points)	
There is **minimal/no** education for sustainable healthcare. (0 points)	
Score Assigned:	6
Score explanation: CMSRU has a plan to integrate the topics of planetary health as a common theme throughout the medical school curriculum. Below is a list of competencies and proposed objectives: <u>*Medical Knowledge:*</u> *- Recognize the determinants of health, understanding that climate change functions as a "risk amplifier," augmenting effects of existing social determinants of health and structural racism.*	

- Apply current knowledge of public health to patient care
- Demonstrate an understanding of various specific health impacts from environmental and climate change sources, such as air pollution, heat-related illness, toxic exposures, infectious disease, natural disasters, food insecurity, water scarcity, mental health, and forced migration as well as health co-benefits such as plant-based diets, biophilia, and active transport.
Patient Care:
- Acknowledge the role of preventive and public health in optimizing patient outcomes
- Tailor climate health risks to the individual patient
- Recognize that environmental justice communities and other vulnerable populations experience greater risk with climate change and environmental factors
Professionalism:
- Continually identify and acknowledge our knowledge gaps, skill deficits, and attitudes on climate health to improve medical education and promote public health
- Become engaged in professional development activities regarding climate health
Interpersonal and Communication Skills:
- Model effective communication skills around climate health topics with patients and communities with patients, families and healthcare professionals
- Counsel patients regarding risks of climate and environmental factors on health
Systems-Based Practice:
- Recognize the inequitable systems that disproportionately affect individuals directly and indirectly in various communities
- Understand the history and prevalence of institutional and structural racism in medicine and how it contributes directly to health disparities and transgenerational trauma
- Recognize and address issues in diversity in medical education, patient care, and beyond and demonstrate leadership in diversity, equity, and inclusion in the medical profession
- Understand the climate impact of health systems as we produce 8.5% of US greenhouse gas emissions and second largest producer of waste.
Scholarly inquiry
- Recognize the ecological determinants of health
- Appraise the impact of the environmental context on healthcare delivery
Learning and working in teams
- Understand the current landscape of climate health policies and laws
- Advocate for new policies and laws supporting climate health and environmental justice

1.22. Does your medical school employ a member of faculty to specifically oversee and take responsibility for the incorporation of planetary health and sustainable healthcare as a theme throughout the course?

Yes, the **medical school** has a specific faculty/staff member responsible for overseeing curricular integration of planetary health and sustainable healthcare. (1 point)

No, the **medical school** does **not** have a specific faculty/staff member responsible for overseeing curricular integration of planetary health and sustainable healthcare. (0 points)

Score Assigned:	1
Score explanation: CMSRU has a Director of Environmental Health in the Department of Sustainability. She spearheads efforts to incorporate planetary health and sustainable healthcare throughout the curriculum. She also started the Climate Health selective which is an 8 week course discussing climate change and medicine.	

Section Total (51 out of 72)	**70.8%**

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Interdisciplinary Research

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

2.1. Are there researchers engaged in planetary health research and healthcare sustainability research at your institution?	
Yes, there are faculty members at the **institution** who have a **primary** research focus in planetary health **or** sustainable healthcare/vetcare. (3 points)	
Yes, there are individual faculty members at the **institution** who are conducting research **related** to planetary health or healthcare sustainability, OR are part of a national/international sustainability working group, but it is not their primary research focus. (2 points)	
There are sustainability researchers at the **institution**, but not specifically associated with healthcare/vetcare. (1 point)	
No, there are **no** planetary health and/or sustainability researchers at the **institution** at this time. (0 points)	
Score Assigned:	3
Score explanation: CMSRU's Department of Sustainability includes a Director of Environmental Health who plays a pivotal role in advancing climate change education and research. She organizes Grand Rounds on diverse climate-related topics, offers elective courses that allow students to earn a concentration in climate medicine, and spearheads curriculum mapping initiatives to enhance climate change education in healthcare. She also conducts research on how heat, air pollution, and ozone changes impact chronic health conditions	

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

There is **no** dedicated department or institute. (0 points)	
Score Assigned:	3
Score explanation: CMSRU's Department of Sustainability is led by a Director of Environmental Health. Our affiliated Cooper University Healthcare has a Green Team which spearheads numerous QI sustainability projects within the hospital. All members of the healthcare system are involved in these projects including medical students, nurses, physicians, and other staff.	

2.3. Is there a process by which communities disproportionately impacted by climate change and environmental injustice give input or make decisions about the research agenda at your <u>institution</u>?	
Yes, there is a process in which community members impacted by climate and environmental injustice have **decision-making power** in the climate + environmental research agenda. (3 points)	
Yes, there is a process in which community members impacted by climate and environmental injustice **advise** the climate + environmental research agenda. (2 points)	
No, but there are **current efforts** to establish a process for community members to advise or make decisions on the research agenda. (1 points)	
There is **no** process, and **no** efforts to create such a process. (0 points)	
Score Assigned:	2
Score explanation: There are a few channels for local nonprofits to give input about the research agenda at the institution and get grants based on community needs. For instance, Dr. Cerceo has started several research projects with collaboration from: Neighborhood Community Collaborative Gardens, Social Responsibility Through Me (led by Shaneka Boucher, a former Camden Councilwoman), National Institute of Health Human Spaces (led by Rev Jones). Dr. Cerceo is also a part of Camden County Air Quality Committee and with their collaboration, started the non-profit Camden County Air Quality. The hospital also has a close relationship with the Center for Family (C4FS) services which has a community engagement department. Through this department, community members are able to provide feedback about local needs. For instance, community members have come to C4FS and relayed that many community members do not have proper air conditioning to combat the heat. C4FS did research and was able to secure funding to provide free air conditioning units to anyone in the community. In the future, we hope that this channel for patients to provide their feedback will be strengthened.	

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

There is a website that **attempts to centralise** various campus resources related to health and the environment, but it is hard-to-use, not updated, or not adequately comprehensive. (2 points)	
The **institution** has an **Office of Sustainability website** that includes **some** resources related to health and the environment. (1 point)	
There is **no** website. (0 points)	
Score Assigned:	3
Score explanation: CMSRU offers a comprehensive library guide, accessible through this link, featuring information and resources on climate change. It includes access to a variety of prominent journals, such as Nature Climate Change, Climatic Change (Springer), Advances in Climate Change Research, Global and Planetary Change (Elsevier), Journal of Climate (American Meteorological Society), Anthropocene (Elsevier), Climate Dynamics (Springer), International Journal of Climate Change Strategies and Management, Journal of Advances in Modeling Earth Systems (Wiley), and Climate Change (Wiley Interdisciplinary Reviews). The guide also offers search strategies to help users locate recent articles on environmental health and other related topics of interest.	

2.5. Has your institution recently hosted a conference or symposium on topics related to planetary health?	
Yes, the **institution** has hosted at least one conference or symposium on topics related to planetary health in the past year. (4 points)	
Yes, the **institution** has hosted at least one conference or symposium on topics related to sustainable healthcare/vetcare in the past year. (3 points)	
Yes, the **institution** has hosted a conference on topics related to planetary health / sustainable healthcare/vetcare in the past three years. (2 points)	
The **institution** has not hosted any conferences directly, but they have provided financial support for a local planetary health event. (1 point)	
No, the **institution** has not hosted a conference on topics related to planetary health in the past three years. (0 points)	
Score Assigned:	4
Score explanation: Cooper University Hospital offers a 12-part lecture series on climate health for internal medicine residents as part of GME and hosts biannual Grand Rounds for faculty on related topics. All of these sessions are open for medical students to attend. Each spring, there is a climate health symposium which focuses on healthcare sustainability. There are plans underway for another symposium dedicated to climate health education for clinicians, though the date has yet to be finalized.	

2.6. Is your institution a member of a national or international planetary health or ESH/ESV organisation?	
Yes, the institution is a member of a national or international planetary health **or** ESH/ESV organisation. (1 points)	
No, the institution is **not** a member of such an organisation. (0 points)	
Score Assigned:	1
Score explanation: CMSRU is a member of the Global Consortium on Climate and Health Education	

Section Total (16 out of 17)	**94%**

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Community Outreach and Advocacy

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

3.1. Does your institution partner with community organizations to promote planetary and health?	
Yes, the **institution** meaningfully partners with **multiple** community organizations to promote planetary and environmental health. (3 points)	
Yes, the **institution** meaningfully partners with **one** community organization to promote planetary and environmental health. (2 points)	
The **institution** does not partner with community organizations, but has participated in community focused events relating to planetary health. (1 point)	
No, there is **no** such meaningful community partnership. (0 points)	
Score Assigned:	3
Score explanation: CMSRU collaborates with various community organizations to advance planetary and environmental health through the Camden Collaborative Initiative. This brings together government, non-profit, private, and community stakeholders to develop and implement strategies to enhance the environment and overall quality of life in Camden, New Jersey. The Green Committee of the medical school and Cooper Sprouts both partner with the NJ Tree Foundation to provide students the opportunity to volunteer to plant trees and vegetation throughout the community, helping to mitigate carbon emissions from local businesses. Such collaborations also support the cultivation of vegetables that are distributed to individuals in need within the community.	

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

The **institution** has promoted community-facing courses or events, but was not involved in planning those courses or events. (1 point)
The **institution/medical school** have not offered such community-facing courses or events. (0 points)

Score Assigned:	1

Score explanation: Rowan University has a well-known School of Earth & Environment which offers a few lectures and courses for the community. While CMSRU is not involved with this, CMSRU recently has provided different community-facing events that address climate medicine. In the Fall 2024, the "Climate Health: An Evolving Threat Requiring Novel Approaches" Medical Education Grant Rounds examined the intersection of climate and health in the context of public health concerns such as respiratory and cardiac illnesses. Another Grand Rounds, titled "Renal Disease and Climate Health" focused on the climate crisis impact on the kidneys. Students, residents, faculty, and staff are all invited to attend as flexible virtual options are accommodated.

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

Score Assigned:	1

Score explanation: In the CMSRU update, a weekly email is sent out to all students and faculty. Planetary health and/or sustainable healthcare opportunities and topics through Grand Rounds are occasionally included in the update.

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

Score Assigned:	2
Score explanation: At Cooper University Hospital, the Director of Environmental Health runs a 12 part lecture series for the medical residents about climate change and health. Grand rounds are also centred around planetary health issues biannually. This provides an opportunity for post-graduate medical providers to learn more about the intersection of planetary health and sustainable healthcare. There is also a plan in place to set up a faculty development course focused on climate and environmental health as well as a symposium bringing in experts to highlight their experiences and advice for how to tackle such a challenging issue.	

3.5. Does your institution or its affiliated teaching hospitals have accessible educational materials for patients about environmental health exposures?	
Yes, the **medical school** or **all affiliated hospitals** have accessible educational materials for patients. (2 points)	
Some affiliated hospitals have accessible educational materials for patients. (1 point)	
No affiliated medical centers have accessible educational materials for patients. (0 points)	
Score Assigned:	2
Score explanation: There are materials available for patients and providers about environmental health exposures. There is a Rowan library guide about air quality and respiratory health found here. Many of the library's subscription databases offer patient handouts on topics related to environmental health including lead exposure, sick building syndrome, and asbestos related illnesses. Although accessible, these resources could be advertised more to patients. The guide is intended for the residents of Camden - "This guide is intended to inform and empower Camden residents and visitors on the dangers, health effects, and environmental health justice issues that exist in the city of Camden, New Jersey."	

3.6. Does your institution or its affiliated teaching hospitals have accessible educational materials for patients about the health impacts of climate change?	
Yes, the **medical school** or **all affiliated hospitals** have accessible educational materials for patients. (2 points)	
Some affiliated hospitals have accessible educational materials for patients. (1 point)	
No affiliated hospitals have accessible educational materials for patients. (0 points)	
Score Assigned:	1
Score explanation: Rowan University has a library guide centered around climate change. Patients and providers can find resources like websites, journals, and books about updated research pertaining to climate change. Although accessible, these resources could be advertised more to patients.	

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

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Support for Student-Led Planetary Health Initiatives

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

4.1. Does your institution offer support for students interested in enacting a sustainability initiative/QI project?	
Yes, the **institution** *either* offers grants for students to enact sustainability initiatives/QI projects *or* sustainability QI projects are part of the core curriculum. (2 points)	
The **institution** encourages sustainability QI projects (to 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. (1 point)	
No, **neither** the medical school or the institution offer opportunities or support for sustainability initiatives or QI projects. (0 points)	
Score Assigned:	2
Score explanation: Rowan University's Catalyst for Sustainability program offers medical students the opportunity to enact sustainability initiatives and QI projects by providing grants for students. Cooper Health Care's Green Team also has opportunities for medical students to complete sustainability projects. Several students a few years ago completed a Waste Walk through Cooper Hospital finding several areas that needed improvement. Through this audit, the pharmacy was able to revise their labeling and transportation system in order to cut back on paper and plastic use.	

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

Sustainability. Many medical students are currently writing medical education studies, systematic or narrative reviews, and cross-sectional studies with patients and clinicians. We are also partnering with Rowan University's Catalysts for Sustainability to have our medical students work with PhD researchers on Rowan's campus. CMSRU offers a Climate Medicine Scholarly Concentration for students who are deeply interested in planetary health/sustainable healthcare, and these students are able to receive more opportunities about research, grant funding, or fellowships if they are interested.

4.3. Does the institution have a webpage where students can find specific information related to planetary health and/or sustainable healthcare/vetcare activities and mentors within the institution? For example, projects achieved, current initiatives underway at the medical school and/or contact of information of potential mentors.

The institution has a webpage with specific information related to planetary health or sustainable healthcare/vetcare that includes up-to-date information on relevant initiatives and contact information of potential mentors. (2 points)

There is an institution webpage that features some information on projects and mentors within planetary health and sustainable healthcare within the medical school, but it lacks key information. (1 point)

There is **no institution** specific webpage for locating planetary health and/or sustainable healthcare projects or mentors. (0 points)

Score Assigned:	1

Score explanation: There are some resources for students to be connected to mentors, however, there is not a succinct webpage where this information is easily accessible and specific to sustainable healthcare initiatives and CMSRU. For example, students can learn more about projects underway at Cooper via the Cooper researcher connections page, however this is not specific to planetary health. Additionally, there is a university-wide sustainability email list which is designed to connect faculty and student researchers on cross-disciplinary sustainability projects. CMSRU has also partnered with Rowan's Catalysts for Sustainability which has their own website that include projects achieved, current initiatives, and potential mentors. Students in the Climate Medicine Scholarly Concentration have a page of information that connects students with the main faculty lead, but there is no specific webpage that includes the most up-to-date information on relevant planetary health initiatives, contact information of mentors on current projects, a database of all the planetary health projects completed, etc.

4.4. Does your institution have registered student groups dedicated towards fostering a culture of planetary health engagement, scholarship, and advocacy on campus, supported by faculty advisors?

Yes, there is a student organization **with faculty support** at my medical school dedicated to planetary health or sustainability in healthcare. (2 points)

Yes, there is a student organization at my medical school dedicated to planetary health or sustainability in healthcare but it **lacks faculty support.** (1 point)

No, there is **not** a student organization at my institution dedicated to planetary health or sustainability in healthcare. (0 points)	
Score Assigned:	2
Score explanation: CMSRU has the Green Committee which is a student society dedicated to improving sustainability practices at the medical school. They run events like clothing swaps and initiate sustainability practices at the school, such as new composting systems. They also complete projects in the Camden community to promote planetary health. This team is run with the support of the head of Environmental Health at Cooper University Hospital. The medical school also has student groups like Cooper Sprouts and Wilderness Medicine that are dedicated to promoting sustainable practices in the community. CMSRU's Green Committee has recently affiliated their student group with Medical Students for a Sustainable Future as well.	

4.5. Is there a student liaison representing sustainability interests who serves on a department or institutional decision-making council to advocate for curriculum reform and/or sustainability best practices?	
Yes, there is a student representative that serves on a department or institutional decision-making council/committee. (1 points)	
No, there is no such student representative. (0 points)	
Score Assigned:	1
Score explanation: CMSRU has a medical school student representative, who is part of the Green Committee, that is tasked with advocating for curriculum reform and sustainability practices annually at an interdisciplinary leadership committee.	

4.6. In the past year, has the institution had one or more co-curricular planetary health programs or initiatives in the following categories? (1 point each)	**Score**
Projects where students are able to gain experience in organic agriculture and sustainable food systems, such as gardens, farms, community supported agriculture (CSA), fishery programs, or urban agriculture projects.	1
Panels, speaker series, or similar events related to planetary health that have students as an intended audience.	1
Events in which students learn directly from members of a local environmental justice community about the climate and environmental challenges they face, and how health professionals can partner with their community to address these exposures and impacts.	0
Cultural arts events, installations or performances related to planetary health that have students as an intended audience.	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)	1

Score explanation: CMSRU has several of these programs:

1) *The Office of Sustainability at CMSRU is partnering with Catalysts for Sustainability at Rowan University to provide a program for students to engage in projects centered around sustainable food projects and best practices.*
2) *At Cooper University Hospital, the Director of Environmental Health, runs a 12 part lecture series for the medical residents about climate change and health. Grand rounds are also centered around planetary health issues biannually that are open to all students who want to learn more.*
3) *CMSRU's Office of Sustainability partners with local performing arts schools to put on performances centered around planetary health and climate change that have the students as the intended audience. There are plans in the works for a performance on Earth Day and sometime in October of this year.*
4) *CMSRU's Green Committee sets up community events centered on sustainability practices like clothing swaps, food drives, and so much more. Cooper Sprouts and CMSRU's Green Committee partner with the NJ Tree Foundation to plant new trees in the community to offset the pollution from surrounding businesses.*
5) *CMSRU has a Wilderness Club that offers students a way to combine their love for outdoors, adventure, and awe-inspiring yet sometimes inhospitable environments of the world with their skills and love for medicine. The organization sets up trips for hiking and rock-climbing.*

Section Total (13 out of 15)	**86.67%**

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Campus Sustainability

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

5.1. Does your institution have an Office of Sustainability?	
Yes, there is an Office of Sustainability with multiple full-time staff dedicated to campus sustainability. If the Office of Sustainability serves the entire campus, there is **at least one designated staff member** for sustainability at the hospital. (3 points)	
There is an Office of Sustainability with one or more full-time staff dedicated to campus sustainability, but **no specific staff member** in charge of hospital sustainability. (2 points)	
There are **no salaried sustainability staff,** but there is a sustainability task force or committee. (1 point)	
There are **no** staff members **or** task force responsible for overseeing campus sustainability. (0 points)	
Score Assigned:	3
Score explanation: CMSRU has an Office of Sustainability currently led by the Director of Sustainability, who is responsible for all sustainability endeavours at the medical school and Cooper Hospital. She leads Rowan's university-wide Catalysts for Sustainability Program as well as sustainability committees that include students and salaried staff at CMSRU and Cooper Hospital.	

5.2. How ambitious is your institution's plan to reduce its own carbon footprint?	
The institution has a **written and approved plan** to achieve carbon neutrality by **2030** (5 points)	
The institution has a **written and approved plan** to achieve carbon neutrality by **2040** (3 points)	
The institution has a stated goal of carbon neutrality by **2040** but has **not created a plan** to reach that goal or the **plan is inadequate** (1 point)	
The institution/medical school does **not** meet any of the requirements listed above (0 points)	
Score Assigned:	5

Score explanation: Rowan University is committed to achieving carbon neutrality by 2029. This is clearly outlined in their Carbon Neutrality Report from 2018, which does not include CMSRU. This report needs to be updated so that it includes the medical school and demonstrates how close the university is achieving their goal. In an updated sustainability roadmap from 2020, Rowan University is still committed to their goal of carbon neutrality, which includes CMSRU

5.3. Do buildings/infrastructure used by the institution for teaching (not including the hospital) utilize renewable energy?	
Yes institution buildings are **100%** powered by renewable energy. (3 points)	
Institution buildings source **>80%** of energy needs from off-site and/or on-site renewable energy. (2 points)	
Institution buildings source **>20%** of energy needs from off-site and/or on-site renewable energy. (1 point)	
Institution buildings source **<20%** of energy needs from off-site and/or on-site renewable energy. (0 points)	
Score Assigned:	0
Score explanation: CMSRU does not have the space for renewable energy outlets. It utilizes technology to reuse energy already created by recovering energy and putting it back into operation. This energy recycling system significantly reduces the total amount of energy needed for the building. The main source of energy is from the Camden County power grid which does include renewable energy from solar, wind, and biomass. NJ electricity profile	

5.4. Are sustainable building practices utilised for new and old buildings on the institution's campus, with design and construction of new buildings and remodelling of old buildings conforming to a published sustainability rating system or building code/guideline?	
Yes, sustainable building practices are utilised for new buildings on the institution's campus and the **majority** of old buildings **have been retrofitted** to be more sustainable. (3 points)	
Sustainable building practices are utilised for new buildings on the institution's campus, but most old buildings have **not been retrofitted.** (2 points)	
Sustainable building practices are **inadequately or incompletely** implemented for new buildings. (1 point)	
Sustainability is **not considered** in the construction of new buildings. (0 points)	
Score Assigned:	2
Score explanation: CMSRU is located primarily in one building, which was constructed in 2013 and is LEED Gold certified. Reasons for this certification include the installation of a green roof,	

use of natural light for indoor spaces, recycling of construction materials, and use of sustainable materials in the building, including furniture. Other sustainable building practices include the installation of bike racks, access to public transportation, and use of regional materials.

5.5. Has the institution implemented strategies to encourage and provide environmentally-friendly transportation options for students and reduce the environmental impact of commuting?	
Yes, the institution has implemented strategies to encourage and provide **environmentally-friendly transportation options** such as safe active transport, public transport, or carpooling and these options are well-utilised by students. Alternatively, the campus location is not amenable to unsustainable forms of transportation by default. (2 points)	
The institution has implemented **some** strategies to provide environmentally-friendly transportation options, but the options are **unsatisfactorily** accessible or advertised. (1 point)	
The institution has **not** implemented strategies to encourage and provide environmentally-friendly transportation options. (0 points)	
Score Assigned:	2
Score explanation: CMSRU is located two blocks from the PATCO and NJ Transit in Camden where students are able to take a train or a bus back to their homes in Philadelphia or surrounding towns in New Jersey. Rowan University also provides free shuttle services between Camden and their main campus in Glassboro.	

5.6. Does your institution have an organics recycling program (compost) and a conventional recycling program (aluminium/paper/plastic/glass)?	
Yes, the institution has **both** compost **and** recycling programs accessible to students and faculty. (2 points)	
The institution has **either** recycling **or** compost programs accessible to students and faculty, but not both. (1 point)	
There is **no** compost or recycling program at the medical school. (0 points)	
Score Assigned:	1
Score explanation: There are several trash and recycling bins around CMSRU's campus accessible to students and faculty, but no dedicated composting program. Cooper Sprouts is working to set up compost bins at the community garden.	

5.7. Does the institution apply sustainability criteria when making decisions about the campus food and beverage selections (e.g. local sourcing, reduced meat, decreased plastic packaging)?

Yes, the institution has a**dequate s**ustainability requirements for food and beverages, including meat-free days or no red-meat, and **is engaged** in efforts to increase food and beverage sustainability. (3 points)
There are sustainability guidelines for food and beverages, but they are **insufficient or optional**. The institution **is engaged** in efforts to increase food and beverage sustainability. (2 points)
There are sustainability guidelines for food and beverages, but they are **insufficient or optional.** The institution is **not** engaged in efforts to increase food and beverage sustainability. (1 point)
There are **no** sustainability guidelines for food and beverages. (0 points)

Score Assigned:	3

Score explanation: Sustainable food purchasing requirements are included in the contract with Rowan University's food provider, Gourmet Dining. Specifics include Fair Trade coffee, seafood that is rated 'Best Choice' (Green) or 'Good Alternative' (Yellow) sustainable by the Seafood Watch Program, and sourcing ingredients from local (within 250 miles) and regional (within 400 miles) sources as a first choice.

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

Score Assigned:	2

Score explanation: CMSRU coordinates procurements through Rowan University's Office of Contracting & Procurement, adhering to their guidelines which now includes green procurement. Some ways in which they are becoming more sustainable is through electronic purchase orders, recycled furniture, and bid inclusions. These sustainable guidelines are only optional at this time, however, the Office of Contracting & Procurement encourages departments to increase demand for greener products.

5.9. Are there sustainability requirements or guidelines for events hosted at the institution?
Every event hosted at the institution **must** abide by sustainability criteria. (2 points)

The institution **strongly recommends or incentivizes** sustainability measures, but they are **not required.** (1 point)	
There are **no** sustainability guidelines for institution events. (0 points)	
Score Assigned:	0
Score explanation: There are no sustainable guidelines for medical school events.	

5.10. Does your <u>institution</u> have programs and initiatives to assist with making lab spaces more environmentally sustainable?	
Yes, the institution has **programs** and **initiatives** to assist with making lab spaces more environmentally sustainable. (2 points)	
There are **guidelines** on how to make lab spaces more environmentally sustainable, but not programs or initiatives. (1 point)	
There are **no** efforts at the institution to make lab spaces more sustainable. (0 points)	
Score Assigned:	0
Score explanation: Labs at CMSRU do have reusable equipment, make their own reagents, and properly sort their waste. However, these guidelines are not on any website and there is no school wide program to assist in making labs more sustainable. These guidelines are internal to the labs.	

5.11. Does your <u>institution's</u> endowment portfolio investments include fossil-fuel companies?	
The institution is **entirely divested** from fossil fuels **and** has made a **commitment to reinvest divested funds** into renewable energy companies or renewable energy campus initiatives. (4 points)	
The institution is **entirely divested** from fossil fuels. (3 points)	
The institution has **partially divested** from fossil fuel companies **or** has made a **commitment to fully divest**, but **currently** still has fossil fuel investments. (2 points)	
The institution has **not divested** from fossil-fuel companies, but faculty and/or students are **conducting organised advocacy** for divestment. (1 point)	
Yes, the institution has investments with fossil-fuel companies and there have been **no efforts** to change that. (0 points)	
Score Assigned:	1
Score explanation: CMSRU's endowment is managed by the Rowan University Foundation. Per the Foundation Administrator, Rowan University Foundation has investments in index funds that include fossil fuel companies. There is pushback from student groups and CMSRU's Dean Reboli	

who are advocating for more sustainable practices and divestment from these companies. Rowan University has taken steps towards environmental sustainability, including actively promoting clean energy initiatives like partnering with the Mid-Atlantic Clean Hydrogen Hub (MACH2), but no commitment has been made to divest.

Section Total (19 out of 32)	**59.38%**

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Grading

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

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

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

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

Section	Raw Score %	Letter Grade
Planetary Health Curriculum (30%)	(51/72) x 100 = 70.83%	B
Interdisciplinary Research (17.5%)	(16/17) x 100 = 94.12%	A
Community Outreach and Advocacy (17.5%)	(10/14) x 100 = 71.43%	B
Support for Student-led Planetary Health Initiatives (17.5%)	(13/15) x 100= 86.67%	A
Campus Sustainability (17.5%)	(19/32) x 100 = 59.38%	C+
Institutional Grade	**(70.83x0.3 + 94.12x0.175 + 71.43x0.175 + 86.67x0.175 + 59.38x0.175) = 75.78%**	**B+**

Report Card Trends

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