



Planetary Health Report Card (Medicine) 2026: *Rowan-Virtua School of Osteopathic Medicine*



Virtua Health College
of Medicine & Life Sciences
of Rowan University

2025-2026 Contributing Team:

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Land acknowledgment: Rowan University's campuses were built on Lenapehoking, the ancestral lands of the Nanticoke Lenni-Lenape tribal nation. We acknowledge the history of genocide, forced displacement, and cultural erasure carried out against the Indigenous people of our region; and, we celebrate the vibrance, persistence, and ongoing project of sovereignty of the Lenni-Lenape people today. For more, please visit Rowan University's [full land acknowledgment](#) from the School of Earth and Environment.

Summary of Findings

| | |
|--|-----------|
| Overall Grade | C |
| Curriculum | C |
| <ul style="list-style-type: none"> ● Currently, Rowan Virtua SOM provides an expansive health equity curriculum that expands on the disparities experienced by marginalized populations. Topics of environmental exposures and their effects on health are explored in lectures during multiple courses, including pulmonology, gastroenterology, and endocrinology. ● However, there is not much discussion of planetary health and environmental risks and benefits with respect to these components beyond an optional external lecture series that was hosted by the International Association of Medical Science Educators (IAMSE) ● Recommendations: <ul style="list-style-type: none"> ○ Expand the health equity curriculum to further discuss environmental health. Specifically, the cardiology or health equity modules could be modified to talk about extreme heat effects on vulnerable patients. ○ Include lecture material that explores the environmental benefits of non-pharmaceutical interventions in addition to the health benefits that are already discussed in depth. | |
| Interdisciplinary Research | D+ |
| <ul style="list-style-type: none"> ● No dedicated interdisciplinary planetary health research initiatives, centers, or structured collaborations were identified at Rowan-Virtua SOM. While the broader university may engage in sustainability-related programming, there is no clear evidence of interdisciplinary research efforts specifically focused on planetary health or healthcare sustainability within Rowan-Virtua SOM. ● Recommendations: RowanSOM could strengthen this area by establishing formal interdisciplinary collaborations that integrate medicine, public health, environmental science, and community stakeholders around planetary health research. Developing a dedicated working group, research consortium, or institutional affiliation with planetary health organizations may help formalize and expand interdisciplinary engagement. | |
| Community Outreach and Advocacy | B- |
| <ul style="list-style-type: none"> ● Rowan University does incorporate the community in planetary health outreach and advocacy work. ● Rowan-Virtua SOM and its affiliate hospitals do offer patient and specialty appropriate resources. ● Recommendations: There is space to generate and digitally distribute planetary health and sustainable healthcare education at the hospital and university level. Rowan-Virtua SOM could further improve by offering students and post-graduate providers courses relating to sustainable healthcare with a primary focus of planetary health. | |
| Support for Student-Led Initiatives | B |
| <ul style="list-style-type: none"> ● Rowan University has a diverse offering of sustainability and planetary health majors, research, programs, and student organizations at the undergraduate level. Students are encouraged to become involved in advocacy for the planet by participating in quality improvement programs, both in academic and extracurricular endeavors. ● Rowan-Virtua SOM has recently established a chapter of Medical Students for a Sustainable Future, a US-based organization for planetary health, which has increased awareness of planetary health at the medical student level. The organization has provided opportunities for learning, volunteering, and community building. ● Recommendations: Support for student-led initiatives is primarily a product of the wider Rowan | |

University rather than the Rowan-Virtua SOM. We recommend that the medical school offer increased support for students interested in sustainable initiatives, for example, by creating dedicated grant funding for planetary health projects.

Campus Sustainability

D

- The establishment of the Rowan University Sustainability Council (RUSC) and strong sustainable dining initiatives are positive steps. However, evaluation reveals critical gaps: there is no current actionable plan for carbon neutrality, minimal use of renewable energy, a lack of enforced green building standards, and no sustainability policies for labs, events, or endowment investment.
- The Rowan-Virtua SOM campuses currently lack a composting program for students and staff, falling behind broader university recycling and compost efforts.
- **Recommendations:** We strongly recommend Rowan University develop and publish an updated, funded carbon neutrality strategic plan. Furthermore, the university should institutionalize sustainability by mandating LEED certification for new buildings, creating enforceable laboratory and event sustainability guidelines, and initiating a review of fossil fuel divestment. Rowan-Virtua SOM would also benefit from incorporating compost bins on its campus.

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 health professional 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 health professional training. It is imperative that we hold our institutions accountable for educating health professional 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) 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 health professional 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 (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 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 the 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 organisations:** For most institutions, there are existing groups that are not directly affiliated with the university and exist as a product of what the community the institution exists in cares about or needs. These specific community organisations relevant to this report include those that are focused around some aspect of climate and health preservation. These community organisations can include but are not limited to local mutual aid initiatives, underserved-resource distribution groups, clean-up and nature conservation groups, community gardeners, and other environmental-related organisations. If your institution does not have access to local volunteerships with community groups, please report any community organisations your institution or school has collaborated with.
- **Climate justice:** The idea that certain population groups and geographical locations which are disproportionately more impacted by climate change are already economically and socially disadvantaged. This double vulnerability sits alongside pre-existing social justice concerns and should therefore shift policy and practice to mitigate the inequitable effects of the climate crisis.
- **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).

Scoring Matrix

- Elective coursework (1 point): This score applies to material that is actively selected by the students such as a module choice, or additional lecture series. By implication, only a given proportion of the cohort will receive this taught material.
- Brief coverage in the core curriculum (2 points): This score applies where a topic is covered only briefly in a core curriculum session. This implies that the entire cohort receives the same material. At minimum brief inclusion would qualify as inclusion in a single lecture slide in a single year.
- In depth coverage in the core curriculum (3 points): This score applies where a topic is taught in significant detail or where a topic is repeatedly brought up in different years. This might look like several dedicated lecture slides, or inclusion of the same topic in different lectures and teaching formats.

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.

Updated in 2025, a complete literature review by metric is available for the 2024/25 Medicine Report Card Template. This largely translates across disciplines although we are hoping to expand this process across all of our covered disciplines. A link to the 2025 literature review by metric is available [here](#).

Planetary Health Curriculum

Section Overview: *This section evaluates the integration of relevant planetary health topics into the medical school curriculum. Today's health professional students will be on the frontlines of tackling the health effects of climate and other environmental changes. Therefore, it is critical that 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 <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? | |
| 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 point) | |
| 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: | 0 |
| <i>Score explanation: There are no current elective courses offered at Rowan-Virtua SOM that engage students with planetary health or sustainability healthcare topics. Students will soon be able to participate in an area of distinction (AOD), a program of elective coursework that enables students to concentrate on a specific topic of lifestyle medicine. While not explicitly focused on planetary health, this AOD will incorporate learning on plant-based diets and preventative medicine.</i> | |

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: | 0 |

Score Explanation: In the health systems and science course (HSS) there was reading on discharging patients to a heat island and how to mitigate the risks. This presents an opportunity to connect the climate crisis with health risks.

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

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

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

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

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

Score Assigned:

2

Score explanation: Rowan-Virtua SOM addresses the impact of extreme weather events in the following ways:

- *The curriculum includes discussions within corresponding pathology lectures about the impact of natural disasters and extreme weather events on human health. These discussions acknowledge the role of climate change in increasing the frequency and severity of such events. For example, the microbiology course explores the link between heavy rainfall and high temperatures and the increased incidence of waterborne diseases.*
- *Although not offered in the core curriculum, there was a lecture series hosted by the IAMSE in fall of 2025 that discussed Hurricane Helene's impact in the area via the talks "Environmental Crisis and Disasters...Surviving the Storm and After," and "Challenges in rebuilding: Lessons learned after major storms"*

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

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

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

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

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

Score Assigned:

2

Score explanation: The microbiology curriculum block discusses the impact of climate change on the natural habitat of specific infectious vectors and how this impacts human health during their pertinent lectures. While this was not an expansive discussion, there was mention of the reduviid bug's role in transmitting Trypanosoma cruzi in the lecture on Chagas disease.

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

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: Rowan- Virtua SOM addresses the respiratory health effects of climate change and air pollution in the following ways:

- *The topic of air pollution is briefly touched on during the biochemistry course in the lecture “Reactive Oxygen Species,” which discusses how the free radical nitrogen dioxide is produced in smog, organic smoke and cigarette smoke and can be breathed in to ultimately interact and form more unstable nitrogen oxide species in the body. Nitrogen dioxide exposure from indoor stoves is also discussed as a link to asthma in a separate lecture, “Asthma,” during the pulmonology block.*
- *The pulmonology block extensively explores the impact of environmental and occupational hazards on lung health. This includes in-depth discussions on pneumoconiosis, asthma, the health consequences of smoking, and other occupational exposures. These discussions align with the block’s overarching goal of providing students with a comprehensive understanding of pulmonary medicine, encompassing normal respiratory function, disease pathophysiology, and the management of these conditions.*
- *The health equity curriculum includes a module examining the health disparities faced by the Marshallese population. This module highlights their increased risk of chronic diseases, such as tuberculosis, resulting from the long-term consequences of nuclear testing after World War II. The module emphasizes how the displacement from their native lands, disruption of their culture, and limited access to healthy food options have contributed to high population density and exacerbated the transmission of tuberculosis, significantly impacting the overall health of the Marshallese people.*

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

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

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

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

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

Score Assigned:

2

Score explanation: In the required health equity module for the cardiovascular block, lecturers discuss the zip code factor, stating that a patient’s zip code is a better predictor of cardiorenal health than their genetic code.

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

This topic was explored **in depth** by the **core** curriculum. (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:

1

Score explanation: While not specifically covered in the core curriculum, Rowan-Virtua SOM did offer a campus talk, available to all medical students, entitled "Impact of Nigral and Extranigral Neurodegeneration on Aerodigestive Discoordination in a Pesticide Model of Parkinson's Disease, National Institutes of Health, Cell Biology & Neuroscience."

1.8. Does your medical school 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. (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 is explored in the gastroenterology section of the health equity curriculum. The module discusses how ecology and tradition shape patients' diets and overall health by having students watch Michael Polland's "In Defense of Food." Throughout, there is discussion on the impact of a traditionally Western diet on human health as it relates to larger unsustainable food and environmental systems. Additionally, a health equity module in the gastrointestinal unit included a documentary called "Bridging the Great Health Divide" which discussed food deserts and clean water issues for people in the Appalachia and Mississippi Delta region.

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. (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 is explored in depth by the health equity curriculum, the Community Service Leadership and Learning (CSLL) course, and the Health Systems Science course:

- *CSLL is a three year longitudinal course designed to create “culturally humble, responsive, and competent physician leaders that are skilled to work with unrecognized populations.” CSLL includes a curriculum that covers the fundamentals of healthcare disparities taught to students through case studies, interactive panels, lectures, and group projects.*
- *Specific to the impact of climate change, CSLL has a lecture titled “Understanding Power, Privilege, and Oppression” that discusses the different access that social groups have to healthcare resources and opportunities. This lecture highlighted the environmental injustice to these social groups, such as the air pollution and hazardous waste exposure, along with limited green space.*
- *The Health Systems Science course speaks to how climate change can lead to a decreased food supply, specifically through exploitation of fisheries and loss of agricultural land. Additionally, it discusses the relationship between climate change and rising food prices impacting marginalized populations. A video within this course covers environmental toxins on populations with low SES, women, and communities of color.*

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. (3 points)

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

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

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

Score Assigned:

2

Score explanation: This topic is covered briefly in the health equity section of the gastroenterology block. Students read the paper “Food security: The Challenge of Feeding 9 Billion People,” which talks about how some regions of the world were expected to see more harvests while others were expected to see drops as well as the interplay between demand due to a rising population and economics with food prices. With regards to climate change, the paper specifically highlights the

loss of agricultural land and exploitation of fisheries as potential issues leading to a decreased food supply.

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

1.11. Does your medical school curriculum address the reproductive health effects of industry-related environmental toxins (e.g. air pollution, pesticides, microplastics)?

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

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

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

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

Score Assigned:

2

Score explanation: This topic is covered briefly during the endocrine and reproductive block in the following ways:

- *There is a required health equity article, "Disparities in Environmental Exposures to Endocrine-Disrupting Chemicals and Diabetes Risk in Vulnerable Populations" as well as a video "The Great Invasion - Documentary on endocrine disruptors" that discussed PCBs, pesticides, BPA, air pollution and phthalates effect on reproductive health. The health equity assignments carry minimal weight on the student's grades and rarely entail more than a couple of hours.*
- *In the lecture titled "Prenatal and Antenatal Care" the importance of prenatal care, vitamins, vaccines, and lifestyle factors that contribute to maternal and fetal health are discussed in detail. While environmental toxins, specifically those generated by human actions, such as air pollution or pesticides, are not covered in this lecture, it may be an opportunity to explore such details in the future.*

1.12. Does your medical school 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. (3 points)

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

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

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

Score Assigned:

2

Score explanation: This topic is covered briefly in the curriculum's health equity modules during the gastrointestinal and pulmonary blocks:

- *Students are required to watch the video "Climate Change and Agriculture in the Garden State" that discusses some of the threats being faced by New Jersey farmers as well as*

some strategies they are using to try and adapt to the upcoming challenges. The material is tested in a short, low weight quiz.

- For the pulmonology block, students watch a video called “collateral damage” that discusses the unintended consequences of nuclear testing on the environment, economy, and individuals' health. This video also illustrated how a disproportionate disease burden fell on the most vulnerable populations.

1.13. To what extent does your medical school 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. (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:

0

Score explanation: This topic is not covered. Our report card team recommends this topic can be introduced in a health equity module exposing the health disparities on reservations that segways into an interview with an Indigenous person sharing practices supporting planetary health that either are or can no longer be practiced.

1.14. Does your medical school 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. (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: At Rowan-Virtua SOM, the topic is covered in depth both as a part of the health equity module, as well as a couple of lectures in the endocrine unit:

- *Students watch the video “Bad Sugar” as part of the documentary series Unnatural Causes: Is Inequality Making Us Sick? produced by James M Fortier. The video talks about how Native American Pima tribe of Arizona were impacted by dams to the Gila river in terms of their diet and how they advocated for water rights in order to be able to bring back some of their food practices. Students also read the article “Disparities in environmental exposures to endocrine-disrupting chemicals and diabetes risk in vulnerable populations,” (Ruiz et al.) which talks about how members of the low SES background were more likely to be exposed to persistent organic pollutants (POPs) and at greater risk of getting diabetes.*

- The lecture “Insulin and Glucagon” also devotes some time to discuss the potential link between exposure to POPs and developing diabetes, as well as the outsized impact of the western diet on Pima Indians compared to other groups through the evolutionary mismatch hypothesis.
- In the lecture “Hypothyroidism and Hyperthyroidism,” ionizing radiation is discussed as a major risk factor toward the development of thyroid carcinoma, particularly in the first two decades. It cites the increase in incidence of papillary thyroid carcinomas among the population affected by the Chernobyl nuclear reactor explosion.

Curriculum: Sustainability

1.15. Does your medical school curriculum address the environmental and health co-benefits of a plant-based diet?

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

Score Assigned:

2

Score explanation: This topic is covered briefly in the gastrointestinal block during the lecture “Small and Large Intestine Physiology,” which briefly covers animal-based diets and their risk of including concentrated amounts of environmental toxins, as well as potential links between red meat and colorectal cancer. The lecture also discusses the benefits of plant-based diets on potentially decreasing a patient’s risk of developing diabetes mellitus.

1.16. Does your medical school curriculum address the carbon footprint of 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:

1

Score explanation: In the health systems science course a chapter discusses global carbon emissions from the healthcare system and opportunities to reduce these by modifying “low value care” such as unnecessary tests, overimaging, and redundant procedures. It also spoke to unnecessary resource use like excessive PPE or single use plastic in low risk scenarios. Additionally, it advocated for reducing the use of desflurane in anesthesia.

| 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) | 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 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 anaesthesia's environmental impacts, such as total intravenous anaesthesia or choosing less environmentally harmful anaesthetic gas options with reduced greenhouse gas emissions. (1 point) | 0 |
| The impact of inhalers on the healthcare carbon footprint and the environmental benefit of dry powdered inhalers over metered dose inhalers. (1 point) | 0 |
| Waste production within healthcare clinics and strategies for reducing waste in clinical activities (e.g. single use items in the inpatient or outpatient setting) (1 point) | 0 |
| <p><i>Score explanation:</i></p> <p><i>Rowan-Virtua SOM is a DO medical school and examining the patient holistically is one of the core tenants of the curriculum. Students are taught lifestyle and pharmaceutical interventions for conditions.</i></p> <ul style="list-style-type: none"> ● <i>The school also has a longitudinal osteopathic manipulative medicine (OMM) course, a treatment in which the physician engages with the patient's muscle, articular processes, and/or fascia to correct muscle pain without the need for a prescription.</i> ● <i>The topic of overmedicating is also covered in the health equity module during the neurology unit. Students watch the video "Drugging our Kids" which discusses how foster kids were being overprescribed antipsychotics in response to bad behavior. However, the module does not cover the environmental impacts of such practices.</i> <p><i>Rowan-Virtua SOM also has various lectures that discuss the health benefits of non-pharmaceutical interventions, although these areas do not discuss the environmental benefits of such interventions</i></p> <ul style="list-style-type: none"> ● <i>In the Neurology block, the lecture "Complementary Alternative Psychiatry" discusses the benefits of the Mediterranean diet on reducing symptoms in patients who have major depressive disorder (MDD) as well as the benefits of mindfulness meditation and daily exercise (exercise being mentioned as potentially having a stronger positive effect on patient health than SSRIs alone).</i> | |

- *Nonpharmacological interventions are also discussed in the lecture “Best Practices- Opioid Treatment and Management” which brings up exercise, heat, and OMM as potential alternatives for patients who may have complaints relating to myofascial pain.*

Curriculum: Clinical Applications

1.18. In training for patient encounters, does your medical school’s curriculum introduce strategies to have conversations with patients about the health effects of climate change?

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 point)

No, there are **not** strategies introduced for having conversations with patients about climate change. (0 points)

Score Assigned: 0

Score explanation: This topic is not covered.

1.19. In training for patient encounters, does your medical school’s 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: This topic is covered in the history and physical longitudinal course and briefly during the lecture “Pediatric Growth and Development” in the lifespan block. Students learn how to systematically obtain a patient's history, which includes questions relating to exposure either directly via the review of systems, or indirectly through the social history by asking the patient about their occupation, diet, exercise, and home environment. Students have the opportunity to practice asking these questions to each other during lab sessions and may be tested on these concepts in standardized patient encounters.

Curriculum: Administrative Support for Planetary Health

1.20. Is your medical school 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: Rowan-Virtua SOM has been implementing the following changes:

- *Rowan-Virtua SOM has received a Health Resources and Services Administration (HRSA) grant to integrate learning for about 20 students interested in pursuing a career in primary care. These students will receive additional training in community health care, including issues that impact the health of local New Jersey residents. The issues pertinent to New Jersey residents include planetary health care and sustainability topics, such as care for environmental refugees and migrants, food insecurity and obesity management, air and water pollution, extreme weather events, and mental healthcare.*
- *Additionally, there is a student-led push to include further coverage of planetary health and sustainability topics in the core curriculum.*

1.21. How well are the aforementioned planetary health/Education for Sustainable Healthcare topics integrated longitudinally into the core curriculum?

Planetary health/ESH topics are **well integrated** into the core medical school curriculum. (6 points)

Some planetary health/ESH topics are appropriately integrated into the core medical student curriculum. (4 points)

Planetary health/ESH is not integrated and is primarily addressed in **(a) standalone lecture(s)**. (2 points)

There is **minimal/no** education for sustainable healthcare. (0 points)

Score Assigned:

4

Score explanation: The Rowan-Virtua SOM health equity curriculum integrates elements of planetary health and ESH throughout its core pre-clerkship components. Designed to foster cultural competency and equip future clinicians to address health disparities, this curriculum explores the intricate connections between environmental factors, social determinants of health, and healthcare outcomes. Key objectives include:

- *Examining how dietary shifts and environmental changes disproportionately impact marginalized communities.*
- *Analyzing the role of socioeconomic status in shaping health outcomes and access to care.*
- *Understanding the global diversity of care models and the influence of healthcare access and affordability.*

Delivered through a blend of readings, assignments, online videos, and tutorials, the health equity curriculum is woven into most learning blocks during the first and second years of medical education.

| | |
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| 1.22. Does your <u>medical school</u> employ a member of faculty to specifically oversee and take responsibility for the incorporation of planetary health and sustainable healthcare as a theme throughout the course? | |
| Yes, the medical school has a specific faculty/staff member responsible for overseeing curricular integration of planetary health and sustainable healthcare. (1 point) | |
| No, the medical school does not have a specific faculty/staff member responsible for overseeing curricular integration of planetary health and sustainable healthcare. (0 points) | |
| Score Assigned: | 0 |
| <i>Score explanation: Rowan-Virtua SOM does not have a specific faculty/staff member responsible for overseeing planetary health curricula.</i> | |

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| 1.23. Does your health professional curriculum include teaching on civic engagement/advocacy to address the environmental and structural determinants of health? | |
| 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: | 0 |
| <i>Score explanation: Although not covered in the curriculum, the school did promote a lecture series hosted by the IAMSE in 2025 that covered topics in sustainability, as well as how physicians could advocate for these practices in their institutions, specifically in the lectures "Are we there yet? Climate Change and Health in Medical Education," "Educating for Change: Education's Role in Addressing the Climate and Health Crisis," and "Preparing Physicians for Planetary Change." Additionally, the HSS course speaks to data driven advocacy. For instance identifying patterns in populations like high asthma in certain zip codes can help students advocate for policy change regarding local environmental toxins and housing quality. It also spoke to patient centered discharge planning to account for patients' environment such as being discharged to a "heat island."</i> | |

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| Section Total (41 out of 75) | 54.67% |
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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.*

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| 2.1. Are there researchers engaged in planetary health research and healthcare sustainability research at your <u>institution</u>? | |
| 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 |
| <p><i>Score explanation: Rowan University has several faculty members within the School of Earth and Environment that are investigating the intersection of planetary health and public health.</i></p> <p><i>Additionally, there is ongoing research at the Shreiber Veterinary School that is investigating the effects of microplastics in the canine microbiome and assessing the lead exposure in backyard chickens.</i></p> | |

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| 2.2. Is there a dedicated department or institute for interdisciplinary planetary health research at your <u>institution</u>? | |
| 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 point) | |

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| There is no dedicated department or institute. (0 points) | |
| Score Assigned: | 1 |
| <p><i>Score explanation: While the broader Rowan University does have sustainability efforts in place at the School of Earth and Environment that houses education and research concerning climate change, sea level rise, ocean destabilization, environment and biodiversity, urbanization, and Earth through space and time. The School of Earth and Environment does not specifically include interdisciplinary planetary health research but there are courses, such as HLT 00303: Environmental Issues and Health, dedicated to planetary health.</i></p> <p><i>Beginning in the fall of 2026, students at the Shreiber Veterinary School will be able to complete a Masters in Science in One Health in order to “address complex health challenges at the intersection of human, animal, and environmental health”.</i></p> | |

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| 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 point) | |
| There is no process, and no efforts to create such a process. (0 points) | |
| Score Assigned: | 0 |
| <p><i>Score explanation: A score of 0 was assigned because no formal process or documented efforts were identified at Rowan through which communities disproportionately impacted by climate change or environmental injustice provide input into or participate in decision-making related to the institution’s climate or environmental research agenda.</i></p> | |

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| 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) | |

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| There is no website. (0 points) | |
| Score Assigned: | 2 |
| <i>Score explanation: Rowan University compiles all things sustainable on their Sustainable@Rowan page. The site is not regularly maintained, but does link to many student resources including career information, faculty research, and current/future plans for sustainable initiatives.</i> | |

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| 2.5. Has your <u>institution</u> 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: | 0 |
| <i>Score explanation: A score of 0 is assigned as no evidence could be found that Rowan hosted a conference on topics related to planetary health within the past 3 years.</i> | |

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| 2.6. Is your <u>institution</u> 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 point) | |
| No, the institution is not a member of such an organisation. (0 points) | |
| Score Assigned: | 0 |
| <i>Score explanation: A score of 0 is assigned as no evidence could be found that Rowan is a member of a national or international planetary health organization.</i> | |

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| Section Total (6 out of 17) | 35.29% |
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Community Outreach and Advocacy

Section Overview: This section evaluates a school's 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.

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| 3.1. Does your <u>institution</u> partner with community organisations to promote planetary and health? | |
| Yes, the institution meaningfully partners with multiple community organisations to promote planetary and environmental health. (3 points) | |
| Yes, the institution meaningfully partners with one community organisation to promote planetary and environmental health. (2 points) | |
| The institution does not partner with community organisations, but participates in community focused events relating to planetary health. (1 point) | |
| No, there is no such meaningful community partnership. (0 points) | |
| Score Assigned: | 3 |
| <p><i>Score explanation: Rowan University and Rowan-Virtua SOM both have community gardens that are managed by students and provide fresh produce to their respective local communities. Additionally, Rowan University's main campus hosts the West Campus Farm where tens of thousands of pounds of fresh fruit and produce are distributed to Rowan's on-campus food pantry and local community organizations</i></p> <p><i>South Jersey Climate News is a collaborative journalism initiative involving Rowan University students from the Department of Journalism and Atlantic Cape Community College. Since 2019, this student staffed project has been producing content about regional climate change impacts in southern New Jersey. Students develop and report on original stories covering issues ranging from sustainability at Rowan University, rising sea levels, regional droughts, forest fires, and expanding construction in nearby communities. Students are able to take an active part in keeping their communities informed while filling gaps in news deserts that lack traditional media coverage.</i></p> | |

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| 3.2. Does your <u>institution</u> 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) | |

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| The institution has promoted community-facing courses or events, but was not involved in planning those courses or events. (1 point) | |
| The institution has not offered such community-facing courses or events. (0 points) | |
| Score Assigned: | 3 |
| <p><i>Score explanation: Rowan University's School of Earth and Environment offers many events accessible to the community relating to planetary health, including the annual BioBlitz in celebration of Earth Day. BioBlitz allows students and community members to help identify biodiversity on the Rowan campus. Rowan student researchers and the facilities team then use the data to better understand and care for the local habitat. Other annual "Earth Week" events include Planetary Crisis Communication and Eco-Fest. Planetary Crisis Communication is a roundtable discussion in response to cuts in scientific research funding and environmental justice initiatives. Eco-Fest is led by the professor of the Design & Environments course and is a week-long recognition of student-led projects related to creative climate advocacy, environmental education, and sustainability.</i></p> | |

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| 3.3. Does your <u>institution</u> 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 |
| <p><i>Score explanation: Rowan University sends all students and faculty a daily communication that includes information regarding sustainability practices, opportunities, and student organizations. A recent example includes a link to contribute articles for South Jersey Climate News.</i></p> <p><i>Rowan-Virtua SOM communicates with students about planetary health and current climate events as appropriate. Recent examples include communication about local fires and the Los Angeles fires and how we can support any Rowan-Virtua members or families in the neighborhood impacted by the devastations.</i></p> | |

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| 3.4. Does the <u>institution</u> or <u>main affiliated hospital trust</u> 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) | |

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| 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: | 0 |
| <i>Score explanation:</i> There are no professional education activities covering planetary health and sustainable healthcare. | |

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| 3.5. Does your <u>institution</u> or its <u>affiliated teaching hospitals</u> have accessible educational materials for patients about environmental health exposures? | |
| Yes, the institution or all affiliated hospitals have accessible educational materials for patients. (2 points) | |
| Some affiliated hospitals have accessible educational materials for patients. (1 point) | |
| No affiliated medical centres have accessible educational materials for patients. (0 points) | |
| Score Assigned: | 0 |
| <i>Score explanation:</i> Rowan-Virtua SOM and its affiliates provide patient and specialty-specific educational materials as appropriate, however no environmental or climate change specific materials currently exist. | |

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| 3.6. Does your <u>institution</u> or its <u>affiliated teaching hospitals</u> have accessible educational materials for patients about the health impacts of climate change? | |
| Yes, the institution 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: | 2 |
| <i>Score explanation:</i> Rowan University has a library research guide specific to climate change that is accessible by students, faculty, providers, and patients. | |

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| Section Total (9 out of 14) | 64.29% |
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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.*

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| 4.1. Does your <u>institution</u> offer support for students interested in enacting a sustainability initiative/QI project? | |
| Yes, the institution <i>either</i> offers grants for students to enact sustainability initiatives/QI projects or sustainability QI projects are part of the core curriculum. (2 points) | |
| The institution encourages sustainability QI projects (to fulfil clerkship or longitudinal requirements) and offers resources to help students succeed in these projects, but there is no student funding available and there is no requirement to participate. (1 point) | |
| No, the institution does not offer opportunities or support for sustainability initiatives or QI projects. (0 points) | |
| Score Assigned: | 2 |
| <p><i>Score explanation: Rowan University has a variety of undergraduate degrees, minors, and graduate degrees that incorporate sustainability learning outcomes, including enacting sustainability initiatives or QI projects. A non-comprehensive list of these include: Civil and Environmental Engineering, Community and Environmental Planning, Environmental & Sustainability Studies, Environmental Science, Geographical Information Science (GIS), Geography, Health and Science Communication, Health Promotion & Wellness Management, Public Health and Wellness, and BS Management – Sustainability Management Concentration.</i></p> <p><i>There are additional opportunities for sustainability initiatives and QI projects through Rowan University student groups including the Rowan Environmental Action League (REAL), GEO Club, South Jersey Climate News, Rowan University Student Planning Organization, Net Impact, US Green Building Council, and Rowan Progressives Environmental Working Group. These organizations all participate in their own unique sustainability initiatives ranging from helping students become LEED Green Associates to running a community garden.</i></p> <p><i>At the medical student level, all third and fourth year students are required to participate in a capstone research project that can incorporate sustainability or planetary health. Additionally, all first and second year students complete scholarly work that can incorporate sustainability or planetary health topics. Medical students are also eligible for participation in the Summer Medical Research Fellowship (SMRF) program which awards students \$2500 for the completion of a project of student design. Students have used this grant to participate in sustainability research in the past.</i></p> | |

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 them out and carry them out in their spare time. (1 point)

There are **no opportunities** for students to engage in planetary health/sustainable healthcare research. (0 points)

Score Assigned:

1

Score explanation: Rowan University has a variety of undergraduate degrees, minors, and graduate degrees that incorporate planetary health and or sustainable healthcare. A non-comprehensive list of these include: Civil and Environmental Engineering, Community and Environmental Planning, Environmental & Sustainability Studies, Environmental Science, Geographical Information Science (GIS), Geography, Health and Science Communication, Health Promotion & Wellness Management, Public Health and Wellness, and BS Management – Sustainability Management Concentration.

There are additional opportunities for research in this field at the Rowan Shreiber School of Veterinary Medicine; many research faculty adopt the “One Health” approach which combines planetary, human and animal health to research topics in this field. One such program is the Veterinary Summer Scholars Program where students are paired with research faculty to work on research topics during the summer.

Rowan-Virtua SOM offers many opportunities for medical students to perform research in any category. One such program includes the six week Summer Medical Research Fellowship (SMRF) where students are encouraged to perform clinical or basic-science research. Students can choose to dedicate research to planetary and or sustainable healthcare but are required to identify a mentor and project on their own.

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 institution, 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)

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| Score Assigned: | 1 |
| <p><i>Score explanation: Rowan University compiles all things sustainable on their Sustainable@Rowan page. The site is regularly maintained, connecting students to many resources including career information, faculty research, and current/future plans for sustainable initiatives. While a helpful tool, the Sustainable@Rowan site lacks information for planetary health initiatives as well as mentors or opportunities for health professional students.</i></p> | |

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| <p>4.4. Does your <u>institution</u> have registered student groups dedicated towards fostering a culture of planetary health engagement, scholarship, and advocacy on campus, supported by faculty advisors?</p> | |
| <p>Yes, there is a student organisation with faculty support at my institution dedicated to planetary health or sustainability in healthcare. (2 points)</p> | |
| <p>Yes, there is a student organisation at my institution dedicated to planetary health or sustainability in healthcare but it lacks faculty support. (1 point)</p> | |
| <p>No, there is not a student organisation at my institution dedicated to planetary health or sustainability in healthcare. (0 points)</p> | |
| Score Assigned: | 1 |
| <p><i>Score explanation: Rowan University has the GEO Club and the Rowan University Student Planning Organization (RUSPO). The GEO club is connected to the School of Earth and Environment and connects students with diverse environmentally focused interests, including planetary health. RUSPO focuses more on students interested in the intersection of urban planning and sustainability. Both organizations have faculty support, however, these are not located at the medical or veterinary school. Additionally, neither group's primary focus is climate changes' impact on human health.</i></p> <p><i>Rowan-Virtua SOM has recently started a chapter of Medical Students for a Sustainable Future (MS4SF-Rowan-Virtua Chapter) as a student interest group. MS4SF-Rowan-Virtua Chapter is eligible for club status, where it will be assigned a faculty advisor, in April of 2027.</i></p> <p><i>Additionally, RV-SOM has Rowan Roots, a non-funded volunteer based club with faculty support that boasts a 100ft 2 garden that works to grow and donate vegetables to local Camden County food banks, where many residents struggle with food insecurity and food deserts.</i></p> | |

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| 4.5. Is there a student liaison representing sustainability interests who serves on a <u>department or institutional</u> decision-making council to advocate for curriculum reform and/or sustainability best practices? | |
| Yes, there is a student representative who serves on a department or institutional decision-making council/committee. (1 point) | |
| No, there is no such student representative. (0 points) | |
| Score Assigned: | 1 |
| <i>Score explanation: Rowan-Virtua SOM has a medical student representative that is involved with Rowan University's Sustainability Council. The Sustainability Council is led by Rowan University's sustainability fellow and aims to connect the greater university in sustainable efforts outlined by Rowan's Roadmap to Sustainability Masterplan.</i> | |

| 4.6. In the past year, has the <u>institution</u> had one or more co-curricular planetary health programs or initiatives in the following categories? (1 point each) | Score |
|---|--------------|
| Projects where students are able to gain experience in organic agriculture and sustainable food systems, such as gardens, farms, community supported agriculture (CSA), fishery programs, or urban agriculture projects. | 1 |
| Panels, speaker series, or similar events related to planetary health that have students as an intended audience. | 1 |
| Events in which students learn directly from members of a local environmental justice community about the climate and environmental challenges they face, and how health professionals can partner with their community to address these exposures and impacts. | 0 |
| Cultural arts events, installations or performances related to planetary health that have students as an intended audience. | 0 |
| Local volunteer opportunities related to building community resilience to anthropogenic environmental impacts. | 1 |
| Wilderness or outdoors programs (e.g., that organise hiking, backpacking, kayaking, or other outings for students) | 1 |
| <i>Score explanation: Rowan University and Rowan-Virtua SOM both have community gardens that are managed by students and provide fresh produce to their respective local communities. Additionally, Rowan University's main campus hosts the West Campus Farm where tens of thousands of pounds of fresh fruit and produce are distributed to Rowan's on-campus food pantry and local communities organizations. The produce from the West Campus Farm is also used to produce hot sauce which is for sale to raise funds for student emergency scholarships.</i> | |
| <i>There are several examples of panels, speakers, and events in which students are encouraged to attend. A recent example is the talk "Impact of Nigral and Extranigral Neurodegeneration on Aerodigestive Discoordination in a Pesticide Model of Parkinson's Disease" held at Rowan-Virtua SOM. In addition, MS4SF-Rowan-Virtua Chapter and the Student Pediatric Medical Association</i> | |

hosted a collaborative event where an attending pediatrician ran a case-based learning experience about the impact of climate change on pediatric patients.

Student organizations at the University are involved in community based events, including [volunteering](#), [community hikes](#), and other [outdoor adventures](#).

Section Total (10 out of 15)

66.67%

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Campus Sustainability

Section Overview: *This section evaluates the support and engagement in sustainability initiatives by the institution. The healthcare industry is a major contributor to greenhouse gas emissions as well as pollution that harms local, regional, and global ecosystems. While healthcare is, by nature, a resource-intensive endeavour, the healthcare sector is well poised to lead the world to a more sustainable future. This will involve scrutinising every aspect of how our systems operate, from where we source our energy, to how we build our infrastructure, to what companies we invest in. Our institutions, 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 <u>institution</u> have an Office of Sustainability? | |
|---|---|
| Yes, there is an Office of Sustainability with multiple full-time staff dedicated to campus sustainability. If the Office of Sustainability serves the entire campus, there is at least one designated staff member for sustainability at the hospital. (3 points) | |
| There is an Office of Sustainability with one or more full-time staff dedicated to campus sustainability, but no specific staff member in charge of hospital sustainability. (2 points) | |
| There are no salaried sustainability staff , but there is a sustainability task force or committee. (1 point) | |
| There are no staff members or task force responsible for overseeing campus sustainability. (0 points) | |
| Score Assigned: | 1 |
| <p><i>Score explanation: In 2025, the Rowan University Sustainability Council (RUSC) was launched under the direction of Dr. Garrett Broad, Provost Fellow for Sustainability. This body's mission is to serve as the primary mechanism for coordinating, advancing, and auditing sustainability protocols across the university. However, to the reporting team's knowledge there is no specific office of sustainability with full time staff members at Rowan University or at any associated hospitals.</i></p> | |

| 5.2. How ambitious is your <u>institution's</u> 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 does not meet any of the requirements listed above (0 points) | |
| Score Assigned: | 0 |

Score explanation: Rowan University instilled a [framework](#) to achieve carbon neutrality by 2029 in 2009. This plan was mentioned as needing updating in the 2020 [Road Map](#) confirming that this plan is now out of date. There is a current push to reevaluate and update a plan for carbon neutrality, however, no current actionable plan is in place.

In efforts to move towards an actionable plan, the University has contracted Siemens to perform an energy evaluation to initiate energy savings and begin developing a renewable energy strategy. Additionally, the Provost's Fellow in the Catalysts for Sustainability is working to complete the Sustainability Tracking, Assessment, and Rating System ([STARS](#)) [Report](#) to help provide a framework for future sustainability efforts.

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: While a few campus buildings do have solar panels, their contribution is relatively low and the overall institutional buildings source a minimal amount of energy from renewable sources. Expansion buildings completed this year also do not prioritize the use of renewable energy through the inclusion of solar panels, use of recyclable materials, or methods of sustainable construction.

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: | 1 |
| <p><i>Score explanation: Rowan University buildings are always designed to latest codes, however, there is no definitive sustainability goal considered. Buildings designed after 2020 were designed to meet LEED standards, but the certification was not applied for or granted.</i></p> | |

| | |
|---|---|
| <p>5.5. Has the <u>institution</u> implemented strategies to encourage and provide environmentally-friendly transportation options for students and reduce the environmental impact of commuting?</p> | |
| <p>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)</p> | |
| <p>The institution has implemented some strategies to provide environmentally-friendly transportation options, but the options are unsatisfactorily accessible or advertised. (1 point)</p> | |
| <p>The institution has not implemented strategies to encourage and provide environmentally-friendly transportation options. (0 points)</p> | |
| Score Assigned: | 1 |
| <p><i>Score explanation: Score explanation: Rowan-Virtua’s Stratford campus is located near the PATCO, a public transportation option in and out of Philadelphia and the surrounding NJ suburbs. While there are no travel stipends, incentives, or discounts, Rowan-Virtua SOM does advertise and encourage students to utilize this as a transportation option. Students are still expected to be able to travel to multiple campuses and clinical sites, which does require a car, throughout their medical education. Through Rowan University, students are able to purchase discounted monthly NJ Transit (New Jersey public transit) passes.</i></p> | |

| | |
|---|---|
| <p>5.6. Does your <u>institution</u> have an organics recycling program (compost) and a conventional recycling program (aluminium/paper/plastic/glass)?</p> | |
| <p>Yes, the institution has both compost and recycling programs accessible to students and faculty. (2 points)</p> | |
| <p>The institution has either recycling or compost programs accessible to students and faculty, but not both. (1 point)</p> | |
| <p>There is no compost or recycling program at the institution. (0 points)</p> | |
| Score Assigned: | 2 |
| <p><i>Score explanation: Score explanation: Rowan University does offer both compost and recycling programs, however, Rowan-Virtua SOM only offers recycling bins on campus with no composting.</i></p> | |

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 **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. (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: Rowan University uses Gourmet Dining for all catering and dining contracts. Gourmet Dining has a [clearly outlined commitment to sustainability](#) including sustainable disposable products, responsible sourcing, sustainable seafood, a 30% reduction in beef across all menus (as compared to 2015), fair trade and eco certified coffee, local produce, and plant based meat alternatives offered at every station across campus. Additionally, Gourmet Dining works with the Food Recovery network to help reduce food waste.

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:

3

Score explanation: Rowan University engages in [Green Procurement Procedures](#), also known as environmentally preferable purchasing (EPP), in compliance with [New Jersey's Executive Order #76](#). The Rowan Office of Contracting & Procurement encourages sustainable processes including consolidating orders, purchasing recycled or renewable items where possible, and buying locally.

Additionally, Rowan University has consistently made environmentally conscious decisions in housekeeping and dining. The director of housekeeping has switched all products to Green Seal or EcoLogo certified cleaning products. The dining contractors, Gourmet Dining, have a [pledge to sustainability](#) that has eliminated plastic products and focuses on locally sourced dining options.

| 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 |
| <i>Score explanation: There are no current guidelines for event sustainability.</i> | |

| 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 |
| <i>Score explanation: There are not any current guidelines at the University or SOM level that enforce sustainable lab initiatives. However, there are many individual leaders of labs and student organizations that do actively engage in green initiatives including using reusable materials, making reagents, reducing their waste, and properly disposing of laboratory waste.</i> | |

| 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: | 0 |
| <i>Score explanation: Rowan University's endowment is managed by the Rowan University Foundation which has investments in index funds that include fossil fuel companies. At the time of publication, there have been no known efforts to divest from fossil fuel companies.</i> | |

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

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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% |

Planetary Health Grades for the Rowan-Virtua School of Osteopathic Medicine.

The following table presents the individual section grades and overall institutional grade for the Rowan-Virtua School of Osteopathic Medicine on this Planetary Health Report Card.

| Section | Raw Score % | Letter Grade |
|---|--|--------------|
| Planetary Health Curriculum (30%) | $(41/75) \times 100 = 54.67\%$ | C |
| Interdisciplinary Research (17.5%) | $(6/17) \times 100 = 35.29\%$ | D+ |
| Community Outreach and Advocacy (17.5%) | $(9/14) \times 100 = 64.29\%$ | B- |
| Support for Student-led Planetary Health Initiatives (17.5%) | $(10/15) \times 100 = 66.67\%$ | B |
| Campus Sustainability (17.5%) | $(11/32) \times 100 = 34.38\%$ | D |
| Institutional Grade | $(A \times 0.3 + B \times 0.175 + C \times 0.175 + D \times 0.175 + E \times 0.175) = 51.91\%$ | C |

Report Card Trends

Section Overview

This graph demonstrates trends in overall and section grades for the years in which Rowan-Virtua School of Osteopathic Medicine has participated in the Planetary Health Report Card initiative.

Planetary Health Report Card Trends for Rowan-Virtua SOM

