

Planetary Health Report Card (Medicine):

Norton College of Medicine, SUNY Upstate Medical University



2024-2025 Contributing Team:

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Land acknowledgment: We recognize with respect the Onondaga and Oneida Nations. Where I live and work in Central New York is their ancestral land. I also recognize with respect the Black community of Syracuse, which has been disrupted and dislocated throughout this city's history.

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Summary of Findings

Overall Grade B

Curriculum C+

- Norton College of Medicine integrates planetary health into the medical school curriculum longitudinally; though integrations could continue to be expanded in the medical school's recently renovated curriculum.
 The Climate Crisis and Clinical Medicine elective, as well as modules in Health Systems Science Weeks, discuss climate change impacts on health extensively.
- Recommendations: There continues to be deficits in particular areas in the preclinical units, such as neurological/mental health and reproductive health topics, where student officers and committees are acting to modify other integration of topics in Norton College of Medicine's newly implemented curriculum. It would also be beneficial to add faculty members whose job role is specifically focused on incorporating, updating, and integrating environmental factors and their impacts on and relationship with healthcare into the medical school curriculum.

Interdisciplinary Research

B-

- Upstate Medical University employs environmental health researchers, with emphasis on infectious disease and vector borne disease research. The institution has built collaborations with the SUNY College of Environmental Science. Upstate's Global Health Institute hosts a multitude of research projects and symposiums (Tick Borne disease and Dengue).
- **Recommendations**: Upstate Medical University researchers that focus on planetary health at our institution could establish a centralized resource page to streamline research opportunities and projects. This may be preferred to having students search for opportunities through multiple web pages.

Community Outreach and Advocacy

A

- Upstate Medical University has multiple partnerships with clinical centers and a variety of local groups promoting sustainability and environmental justice. Upstate has a robust lead poisoning program with abundant educational resources. Beyond this, New York State Prescriptions for Prevention are commonly used resources for patients regarding education on exposures and climate change related health impacts.
- **Recommendations**: The medical school could potentially take part in public climate education courses specifically. Educational resources through the hospital website in particular could also be expanded upon.

Support for Student-Led Initiatives

A-

- Norton College of Medicine has had persistent student involvement with its Environmental Justice and Sustainability Club. Exciting academic opportunities and committees have been initiated this past year, for instance in quality improvement and for additional institutional changes (ex. centralized Steering Committee with several working groups). The institution maintains a community wellness garden. Student-led initiatives are supported by faculty mentors and sustainability faculty.
- **Recommendations**: Many developments have been made in regards to student and faculty involvement. There are no grants or specific fellowships for sustainable healthcare projects through the institution, despite recent expansion of leadership roles and committees, which could be more strongly pursued in alignment with the SUNY action plan.

Campus Sustainability

 \mathbf{C}

• Norton College of Medicine operates within Upstate Medical University and the University Hospital. This may have hindered independent decision-making on behalf of our medical school to enact drastic change

- towards sustainability. The medical school employs an active sustainability manager.
- Recommendations: Our university is developing plans for large capital projects that will move operations toward carbon neutrality and increased use of renewable energy.. In addition to recycling and composting developments, improvements to waste auditing and food services are being pursued through student efforts and through the work of Upstate's sustainability manager and office. Increased buy in and support from leadership is needed to improve development and implementation of sustainability initiatives.

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 schools' 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, 4) community outreach centred on environmental health impacts, and 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 (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 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 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).

Other considerations:

• If there is more than one "track" 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 <u>Literature Review by Metric</u> 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 <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 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:

Score explanation: SUNY Upstate Medical University offers three electives related to social responsibility of physicians: 1. Physicians and Social Responsibility I, 2. Physicians and Social Responsibility II, and 3. Physicians and Social Responsibility III. The material in each of these electives varies year-to-year, but each includes either a lecture on environmental issues in health or service learning opportunities that students can gear towards planetary health topics. Additionally, the elective Food as Medicine discusses at length the topic of dietary change and health. This course includes lectures regarding environmental impact of certain diets, but planetary health is not the main focus of the elective course.

"The Impacts of the Climate Crisis on Health and Clinical Medicine" elective is in its second year of being offered, through Spring of 2025. In this elective course, students learn about the global impact that the climate crisis is having on health systems, health equity, health justice, patient populations, and disease incidence and prevalence. Students are also taught about how healthcare professionals are addressing the climate crisis, challenges they're facing, application of climate-based research, communication about climate change and health, and how climate change will impact the students in their future clinical practice. As part of the course, students take part in weekly education material, assessments, in-class activities, discussion group presentations, and final projects on sustainability and health topics.

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 curr	riculum. (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: SUNY Upstate Medical University's curriculum includes a lecture titled "Climate Change, Sustainability, and the Health Care Sector" in one of the week-long Health Systems Science Intensives (MHSS2:Population Health and Preventive Medicine) which discusses the impacts of climate change on weather patterns and climate, including the Greenhouse Effect, as well as the effects of extreme temperature on health outcomes.		

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:	2	

Score explanation: SUNY Upstate Medical University's curriculum includes a lecture titled "Climate Change, Sustainability, and the Health Care Sector" in one of the week-long Health Systems Science Intensives (MHSS2:Population Health and Preventive Medicine) which discusses the impacts on health outcomes from climate change patterns like extreme temperature, severe storms, fog, wildfires, and winter weather. There was one slide in this lecture that discussed the impacts extreme weather can have on accessing health care and multiple slides discussing health care's influence on climate change.

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: Students received a lecture entitled "Global Health. One Health. and Planetary"

Score explanation: Students received a lecture entitled "Global Health, One Health, and Planetary Health" which in part described the increase in zoonotic disease transmission as a result of climate change. The lecture described both direct interaction with humans and vectors as a result of changes to climate, but also the resultant changes in the ecosystem more broadly that alter infectious disease dynamics.

1.5. Does your medica	al school curriculum	address the respiratory	health effects of clin	mate
change and air pollut	tion?			

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: SUNY Upstate Medical University's curriculum includes a lecture titled "Climate Change, Sustainability, and the Health Care Sector" in one of the week-long Health Systems Science Intensives (MHSS2:Population Health and Preventive Medicine) which discussed in multiple slides the impacts of climate change on air pollution and respiratory health outcomes. The slides discussed how Fog, Wildfire, Air Pollution, and Increasing Allergens all impact respiratory health outcomes. In addition, within the Respiratory System unit in Semester 2, respiratory irritants including particulates, and factors attributing to asthma, are addressed as well.

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:

Score explanation: SUNY Upstate Medical University's curriculum included a lecture titled "Climate Change, Sustainability, and the Health Care Sector" in one of the week-long Health Systems Science Intensives (MHSS2:Population Health and Preventive Medicine) which discussed the impacts of climate change on weather patterns, including extreme heat, and the associated health outcomes that may result from extreme heat: including heat stroke, heat-related illness, exacerbated cardiovascular outcomes, cardiovascular failure, and death.

1.7. Does your medical school curriculum address the mental health and neuropsychologi	ical
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 the neuroanatomy and clinical neuroscience curricula at Upstate does not cover the mental health impacts of climate change and environmental degradation, "The Impacts of the Climate Crisis on Health and Clinical Medicine" elective does touch upon these topics.

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. (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 lecture entitled "Climate Change, Sustainability, and the Health Care Sector," there was one slide that describes the impact of changing weather events, and resultant climate change ramifications, on food production systems. Additionally the "Global Health, One Health, and Planetary Health" lecture included a brief discussion of the ways climate change and urbanisation can impact food security, and called on students to take a One Health approach to tackling food safety and security. In the students' second year, during the Gastrointestinal unit, two lectures on Nutrition are given that include discussion about various diets such as Vegan, Ketogenic, Diabetic, Cardiac, and Renal diets. The lectures also look at nutrient acquisition from animal products versus from plants and plant-based foods.

1.9. Does your <u>medical school</u> curriculum address the outsized impact of climate change on
marginalised populations such as those with low SES, women, communities of colour,
Indigenous communities, children, homeless populations, and older adults?

This topic was explored in depth by the core curriculum. (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: Students received an entire lecture entitled "Environmental and Climate Justice" which described disparities in asthma rates, exposure to heavy metals, and historic activism in the field. The learning objective was to recognize how environmental factors influence individual and population health and health equity. The lecture included historic context for environmental activism. Students also engaged in applied learning activities where they interacted with an EPA web-mapping tool to explore different environmental and climate justice issues in locations across the United States, focusing on historically marginalized populations' proximity to known environmental hazards and pollutants.

${\bf 1.10.\ Does\ your\ \underline{medical\ school}\ curriculum\ address\ the\ unequal\ regional\ health\ impacts\ of\ climate\ change\ globally?}$

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:

1

Score explanation: Discussion of the regional impacts of climate change globally is scarcely referred to in preclinical health systems science lectures. Within the "The Impacts of the Climate Crisis on Health and Clinical Medicine" elective, the class structure naturally prompts discussion of the impacts of displaced immigrants and refugees on health systems, given the class emphasis on climate justice and healthcare systems. There is flexibility as far as the extent of these discussions and are largely based on collective student interest.

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. (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: There are no lecture slides related to the maternal and fetal health effects due to reproductive environmental toxins and air pollution in our current reproductive units. Discussion of teratogens, as it relates to medications are discussed; however, other environmental and occupation agents are scarcely mentioned.		
"The Impacts of the Climate Crisis on Health and Clinical Medicine" elective will touch upon these topics in the coming year.		

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. (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: At Upstate Medical University, first-year medical students begin their		

Score explanation: At Upstate Medical University, first-year medical students begin their Community Engaged Learning (CEL) journey with a Syracuse Community Orientation, which explores the social, political, and environmental factors shaping health in the city. Through community narrators, students learn about historical injustices like the destruction of the 15th Ward due to the I-81 highway, ongoing lead poisoning disparities affecting low-income and POC

communities, and broader environmental threats impacting community health. This experience not only provides context for health disparities in the area but also introduces students to CEL opportunities, guiding their engagement in community-centered, justice-oriented care throughout medical school.

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. (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: The current curriculum does not incorporate information regarding Indigenous knowledge as an essential component of planetary health solutions.

"The Impacts of the Climate Crisis on Health and Clinical Medicine" elective will touch upon these topics in the coming year.

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. (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: Students prepared for and participated in a case-based learning session in small groups where participants considered sources of lead exposure, associated adverse health outcomes, and disproportionate population exposures as related to the experience of a young boy with high blood lead levels. The case was explored through numerous sociodemographic variables and social determinants of health, such as geographic location, housing access, and family dynamics. The child in this case was also a person of color with little education, which the case directly tied to increased lead exposure. First year students also received lectures on pneumoconioses and metal toxicities that disproportionately affect individuals of low SES and minority individuals.

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. (3 points)
This topic was briefly covered in the core curriculum. (2 points)
This tonic was covered in elective coursework (1 point)

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

Score Assigned:

0

Score explanation: Upstate Medical University brings up Cancer and Nutrition in the MSII curriculum in the Hematology and Oncology Unit. The lecture describes how plant-based diets are preventative for certain cancers. This lecture does not, however, focus on the environmental impact of plant-based diets. Additionally, in the students' second year, during the Gastrointestinal unit, two lectures on Nutrition are given that include discussion about various diets such as Vegan, Ketogenic, Diabetic, Cardiac, and Renal diets. The lectures also look at nutrient acquisition from animal products versus from plants and plant-based foods. An elective is available for students to take called Food as Medicine, Diabetes SPECIAL elective, highlighting the impact of plant-based diet on health and the environment.

1.16. Does your medical school cur	riculum address the c	arbon 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:

3

Score explanation: SUNY Upstate Medical University curriculum included a lecture titled "Climate Change, Sustainability, and the Health Care Sector" in one of the week-long Health Systems Science Intensives (MHSS2:Population Health and Preventive Medicine) which discussed in multiple slides the impacts health care has on climate change. The slides discuss the U.S. healthcare system's greenhouse gas emissions relative to the rest of the world, what specific factors of the health care system contribute to climate change and how (direct vs. indirect emissions), as well as provides a slide discussing the benefits of improving sustainability in the health care sector. This content has also been extensively covered in the Climate Crisis on Health and Clinical Medicine elective.

1.17. Does your <u>medical school</u> curriculum cover these components of sustainable clinical practice in the <u>core</u> curriculum? (points for each)	
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)	
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)	
Score Assigned:	2

Score explanation: While students did receive a lecture that included a few slides about healthcare contributions to climate change, there were fewer mentions in the core curriculum that reference the above topics. However, links were provided throughout and at the end of the presentation that allowed students to explore these specific topics in greater detail if they chose. Students received a lecture on alternatives to pharmaceuticals for psychiatric illnesses such as meditation and mindfulness, discussing how these practices may also be effective for illnesses such as Type 2 Diabetes. The mention of anesthetics, surgical healthcare, inhalers on carbon footprint, and waste production as topics were additionally expanded upon in the Climate Crisis on Health and Clinical Medicine elective.

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: Within the current longitudinal curriculum, developments have been made in discussing strategies to converse with patients about the health impacts due to climate change. In the Climate Crisis on Health and Clinical Medicine elective, there is a dedicated module addressing communication about the health effects of climate change and tips for doing so.

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: Upstate Medical University incorporates physiologic effects of environmental exposures to asthma and pneumoconiosis in the MSI Cardio and Respiratory Units, as well as effects of metal toxicities and environmental exposures in the MSII GI Unit. Additionally, asking about environmental exposures is part of training for students when learning how to take a patient history in the Practice of Medicine clinical skills course. Lastly, students are given an Environmental Pathology lecture in which students learn how to elicit a detailed environmental exposure history, including work 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: At Upstate Medical University, the new elective course, where students learn about the global impact that the climate crisis is having on health systems, health equity, health justice, patient populations, and disease incidence and prevalence, has garnered interest amongst students, expanding enrollment to students at multiple Upstate health professions schools and across medical school years. At Upstate Medical University, the Environmental Justice and Sustainability club has appointed curriculum chairs to work with faculty, Dr. Augusta Williams, ScD, MPH and Dr. Travis Hobart, MD, MPH. Curriculum chairs identify touch points throughout the core curriculum where aforementioned topics can be included in body system units, Practice of Medicine course, as well as Foundations in Reasoning in Medicine course. Upstate Medical University also has a newly developed Steering Committee composed of faculty, staff, and students to additionally aid in improvements to environmental health education amongst other institutional sustainability efforts. The Steering Committee is made up of 4 working groups, each of which are tasked with specific goals that will improve campus-wide sustainability efforts. The Public Health and Outreach working group is specifically tasked with implementing or improving Education for Sustainable Healthcare (ESH)/planetary health education into the medical school curriculum.

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

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

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

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

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

Score Assigned:

2

Score explanation: While students did receive several stand alone lectures on climate change content, it was not a longitudinal course. Most of the content was also incorporated into only a single week of the new curriculum focused on social determinants of health. This single week is a

mandatory requirement for all students to attend, thus all students received this lecture material. The content has not since been incorporated into any body system units in the new curriculum.

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

Score explanation: Upstate Medical University has an appointed sustainability manager and two faculty members, who voluntarily advocate for curricular integration of planetary health. Expanding upon these efforts and creating a department of sustainability in which an employee or faculty member has a job description specifying their responsibility of incorporating planetary health and sustainable healthcare into the school curriculum is needed.

Section Total (41 out of 72)

56.94%

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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 <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

Score explanation: SUNY Upstate Medical University has several researchers who work on interdisciplinary research focused on the climate and healthcare. The Global Health Institute and the Center for Vector Borne Diseases contain over 20 faculty members and 17 affiliate faculty researchers from SUNY Upstate and SUNY ESF that focus their research on topics related to vector-borne disease as well as global change, environmental health, and public health. The Department of Public Health and Preventative Medicine also includes researchers focused on environmental and community health, alongside other topics.

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 points)

There is no dedicated department or institute. (0 points)	
Score Assigned:	3

Score explanation: The <u>Global Health Institute</u> is focused on issues of local and global health that include environmental health factors. Affiliated with SUNY Upstate Medical University, SUNY Environmental School of Forestry, and The Global Health Institute at SUNY Upstate Medical University is also the <u>Center for Vector-Borne Disease</u> which aims to sponsor interdisciplinary research and a One Health approach to disease and includes researchers from varied fields including environmental health, virology, public health, and medicine. Research topics include vector-borne disease, environmental contaminants, public health impacts, and more. SUNY Upstate additionally has an <u>Occupational Health Clinical Center</u>.

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:

Score explanation: SUNY Upstate does not have a process for this and to our knowledge does not have plans to implement a process.

0

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:

1

Score explanation: SUNY Upstate Medical University has a webpage for the <u>Office of Sustainability</u> that contains some resources related to health and the environment.

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:

3

Score explanation: SUNY Upstate Medical University hosts small symposiums on narrow topics encompassed within or related to planetary health. The Dengue Endgame is annually sponsored and hosted by the Global Health Institute brings together researchers and experts from various fields to address strategies for ending and addressing Dengue from a One Health lens involving environmental considerations, vector control, public health, and new therapeutics. The Lyme and Tick Borne Disease Symposium is also held annually and sponsored by the Global Health Institute at SUNY Upstate Medical University and brings together medical professionals, public health workers, researchers, and patients to learn and discuss strategies for combating tick-borne disease and to learn the patient perspective. This conference invites people from varied fields and disciplines.

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 points)

No, the institution is **not** a member of such an organisation. (0 points)

Score Assigned:

1

Score explanation: SUNY Upstate Medical University is a member of <u>Practice GreenHealth</u> and SUNY Upstate Medical University College of Medicine Department of Public Health is a member of the <u>Global Consortium on Climate and Health Education</u>.

Section Total (11 out of 17)	64.71%
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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 <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

Score explanation: SUNY Upstate as a parent institution has numerous partnerships, along with its medical school. SUNY Upstate partners with Practice Greenhealth, an organization built around building sustainable healthcare practices. Upstate is also a Bee Campus USA affiliate, allowing Upstate to limit pesticide and herbicide use for campus landscaping and promote education of pollinators. Opportunities also extend to the Onondaga Environmental Institute. Upstate has a historical partnership with The Onondaga County Resource Recovery Agency (OCRRA) for campuswide community recycling and waste reduction initiatives. In regards to its hospitals and patient care centers, the Children's Environmental Health Center is also very active, partnering with the Central and Eastern New York Lead Poisoning Resource Center, Clean and Healthy, Home Headquarters and Green and Healthy Homes.

At the medical school, students are required to participate through the Center for Community Engaged Learning to partner with local sustainability groups of their choosing. There is also an opportunity to pursue a <u>micro-credential certification</u>, such as the 'Physician Advocacy' track. The medical school also collaborates with the <u>Eastern Farm Workers Association</u>, which allows students to interface directly with low-income farmers and migrant workers on a volunteer basis to help bridge the health gap between rural and urban communities, also giving the opportunity for students to secondarily promote sustainability and planetary health.

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)

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:

2

Score explanation: Upstate Medical University hosts the <u>Informed Patient podcast</u>, which explores various topics related to planetary health, including climate change, sustainable infrastructure for hospitals and medical schools, and other related subjects. While the university does not offer courses or events exclusively for community audiences, it provides several opportunities for engagement in sustainability initiatives. These include student-led groups like the <u>Upstate Environmental Justice and Sustainability Club</u> and the <u>Upstate Community & Wellness Garden</u>. The Public Health program also organizes hybrid events that combine education with activities such as clean-ups and gardening. Additionally, the university produces community-oriented publications such as the <u>Upstate Health Magazine</u> and the <u>HealthLink Seminar Series</u>, which may occasionally address planetary health topics based on participant feedback and community interests. The <u>Upstate Health Justice Conferences</u> also feature environmental justice topics, despite them not being the primary focus.

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

Score explanation: The sustainability manager, Paul Corsi, periodically updates students on Upstate relevant sustainability initiatives and action plans through campus communications. Upstate also runs a <u>community garden</u> that gets mentioned through emails, in regards to efforts to get student volunteers.

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)

Yes, the **institution** or **main affiliated hospital trust** offers one course relating to planetary health and/or sustainable healthcare for post-graduate provider. (1 point)

There are **no** such accessible courses for post-graduate providers. (0 points)

Score Assigned:

2

Score explanation: Upstate Medical University offers their annual Lyme and Tick-Borne Disease Summit to educate healthcare practitioners about the epidemiological patterns of tick-borne diseases. The 2024 summit took place September 19-20 at the CNY Biotech Accelerator, and the 2025 summit is already scheduled for September 18 & 19, 2025 at the CNY Biotech Accelerator in Syracuse, NY. Additionally, on Aug 12-14, the Institute for Global Health and Translational Sciences hosted their 2nd annual Dengue Endgame Summit focused on imagining a world with dengue control. The event discussed recent developments in dengue research and strategies to combat the spread and featured Upstate medical faculty and the Onondaga County Health Commissioner. The hospital also has an ECHO program (Environmental Influences on Child Health Outcomes) for remote education that also occasionally covers planetary health.

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 <u>all</u> affiliated hospitals have accessible educational materials for patients. (2 points)

Some affiliated hospitals have accessible educational materials for patients. (1 point)

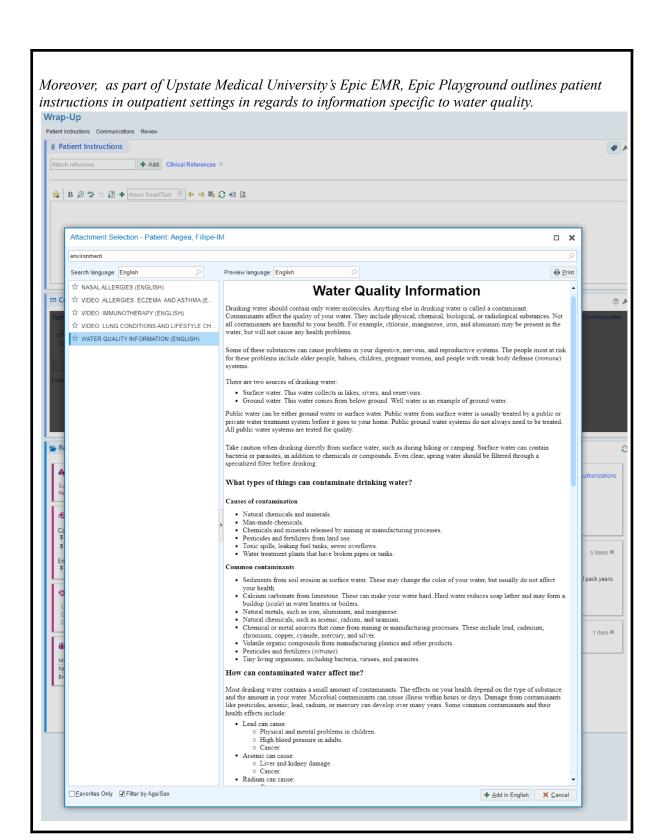
No affiliated hospitals have accessible educational materials for patients. (0 points)

Score Assigned:

2

Score explanation: SUNY Upstate clinic facilities have environmental health exposure resources readily available for patient access. Upstate Golisano Children's hospital has on its web page a tab on <u>Family Support & Resources</u>, along with a <u>'lead poisoning' page</u>, linking brochures and additional webpages for families and healthcare professionals. Additionally, '<u>Upstate News</u>' releases the latest research advancements from the Institute of Global Health and publishes recommendations from the Upstate Poison Center regarding chemical toxins.

<u>New York State Prescriptions for Prevention</u> also abundantly outlines various environmental health exposures and provides numerous action plan guidelines for families. The Medical Toxicology department utilizes resources that can be found online through the Upstate New York Poison Center webpage under the <u>"Public Education Materials"</u> tab.



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 <u>all</u> 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

Score explanation: On the SUNY Upstate Medical University main web page, '<u>Upstate News</u>' periodically feature articles and interviews from SUNY Upstate researchers discussing the connection between health and the environment, such as <u>alterations to vector-borne disease</u> patterns, air pollution, how large institutions can make efforts to improve sustainability and lower their carbon footprint. Upstate also has an '<u>Informed Patient' podcast</u> that features researchers/professionals, including Dr. Augusta Williams, DSc, MPH, who discusses the <u>connections between the environment and disease</u>, as well as susceptible populations in her "How Climate Affects Health" podcast. While these are available for patients to look for, there is a scarcity of accessible educational resources found directly through the Upstate main hospital, as well as through Community General Hospital in the form of a consolidated section surrounding planetary health. Despite this, there are outsourced printed brochures/posters placed in Upstate clinics regarding the impacts of climate change on general health.

<u>New York State Prescriptions for Prevention</u> additionally has in its materials mention of how climate change impacts, such as extreme heat, air quality, and sun exposure, are connected to health in the "Did you know?" headings.

Section Total (12 out of 14)

85.71%

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Support for Student-Led Planetary Health Initiatives

<u>Section Overview:</u> 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 <u>institution</u> offer support for students interested in enacting a sustainability initiative/QI project?

Yes, the **institution** *either* offers grants for students to enact sustainability initiatives/QI projects *or* sustainability QI projects are part of the core curriculum. (2 points)

The **institution** encourages sustainability QI projects (to fulfil clerkship or longitudinal requirements) and offers resources to help students succeed in these projects, **but** there is no student funding available and there is no requirement to participate. (1 point)

No, the institution **does not** offer opportunities or support for sustainability initiatives or QI projects. (0 points)

Score Assigned:

Score explanation: The Norton College of Medicine requires a certain number of hours participating in Community Engaged Learning opportunities. Opportunities to conduct research and engage with sustainability related projects do exist via this route. One of these opportunities includes the Upstate Community & Wellness Garden, which is a student-run and student-grown garden located on campus. Students have the option to regularly volunteer to water, maintain, and weed the garden. Volunteers are also able to take home some of the crop after a certain amount of work. While this opportunity is available to students in season, there is no requirement to participate in this specific sustainable option. This year, a new student organization, called the Clinical Quality Club, was created by a second year medical student with the intent to promote and support students interested in quality improvement. The Clinical Quality Club encourages QI projects connecting them with existing quality improvement projects, experienced mentors, and educational opportunities at Upstate Medical University.

The State University of New York (SUNY) has embarked on a mission this year to improve sustainability across all campuses to better align with New York state's clean energy goals. SUNY has created an action plan that targets waste reduction in all facilities and operations, increasing climate research, expanding climate education, and advancing green workforce development. In accordance with the SUNY system, SUNY Upstate has developed a Steering Committee composed of faculty, staff, and students to aid in the achievement of the goals listed above. The Committee meets quarterly, and consists of four working groups: Sustainability Life Cycle, Energy, Greening the OR, and Public Health and Outreach.

4.2. Does your <u>institution</u> offer opportunities for students to do research related to planetary health and/or sustainable healthcare/vetcare?

The **institution** has a **specific** research program or fellowship for students interested in doing planetary health/sustainable healthcare/vetcare research. (2 points)

There are research opportunities for students to perform research related to planetary health/sustainable healthcare, but these **require student initiative** to seek these out and carry them out in their spare time. (1 point)

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

Score Assigned: 1

Score explanation: There are limited research opportunities at Upstate focused on planetary health and sustainable healthcare. However, Upstate has ample infectious disease research opportunities at the SUNY Center for Vector-Borne Diseases (CVBD), which focuses on zoonotic disease. This center encourages intersectionality and research collaboration between SUNY Upstate Medical University and SUNY College of Environmental Science & Forestry. Medical students can participate in research that is focused on the geographic expansion of vector-borne diseases due to ecological changes. This initiative will be furthered by the Multidisciplinary Lyme and Tick-Borne Disease Treatment Center, which is still in the process of being established. Some current research topics at CVBD include vector biology, vaccine development, health impacts of chemical stressors, cancer, and cardiovascular health effects from industrial toxins, and more. Additionally, Environmental Health faculty within the Department of Public Health and Preventive Medicine also welcome students to conduct this type of research. Several research projects (one ongoing about proposed solar development and public health, one regarding sustainability / environmental health implications of telehealth and telework policies).

4.3. Does the <u>institution</u> 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)

Score explanation: Upstate Medical University does have a <u>website</u> dedicated to providing information about ongoing projects, education on recycling and other waste management topics,

and contacts to reach out to with questions about sustainability. However, the website is outdated, contains multiple dead links, and lacks major updates. Students interested in sustainability might not find all of the information they would like on this website, including research opportunities, student organization leadership contacts, and ways to get involved.

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?

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

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

No, there is **not** a student organisation at my institution dedicated to planetary health or sustainability in healthcare. (0 points)

Score Assigned:

2

Score explanation: Upstate has an active Environmental Justice and Sustainability Club which is a student-run and student-led organization aimed at fostering a culture of planetary health engagement, scholarship, and advocacy on campus and within the community. This student group focuses on raising awareness about environmental justice issues and the harms of climate change, highlighting the adverse impacts of climate change on health and healthcare systems. The Environmental Justice and Sustainability Club also uses activism, advocacy, and volunteering to help protect and care for our earth, communities and patients.

The Upstate Environmental Justice and Sustainability Club members are active participants in the completion of the Planetary Health Report Card. Other major tasks accomplished by the club this year included a Promotional Voting Series in which club members and volunteers helped Upstate and Syracuse community members learn everything there is to know about voting in the U.S. Elections, helped people check their voter status, aided in getting individuals registered to vote, and even assisted students in voting by ordering their absentee/mail-in ballots and providing shuttle service both once during early voting, and on actual election day. They also handed out information about each electoral candidates' stances on climate action issues and policies. Another event hosted by the club this year included a bakesale where funds were raised and donated to World Central Kitchen to help feed victims of Hurricane Helene and Milton. All the baked goods were donated by local bakeries and restaurants. The Upstate Environmental Justice and Sustainability Club has a faculty advisor and is supported strongly by Upstate's Sustainability Manager.

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 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: Upstate Medical University has a medical student representative that works directly with faculty interested in incorporating environmental justice more strongly into the medical curriculum. Through the Environmental Justice and Sustainability Club, this student serves as a representative who drafts environmental health topics, slides, and questions which are then presented to the College of Medicine curriculum team with the goal of incorporating them into next year's curriculum.

Several students participate in quarterly Sustainability Steering Committee meetings that include leadership, department heads, and the sustainability team to coordinate sustainability project work. The Steering Committee is made up of 4 working groups, each of which are tasked with specific goals that will improve campus-wide sustainability efforts. The Public Health and Outreach working group is specifically tasked with implementing or improving Education for Sustainable Healthcare (ESH)/planetary health education into the medical school curriculum.

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)	
Projects where students are able to gain experience in organic agriculture and sustainable food systems, such as gardens, farms, community supported agriculture (CSA), fishery programs, or urban agriculture projects.	1
Panels, speaker series, or similar events related to planetary health that have students as an intended audience.	1
Events in which students learn directly from members of a local environmental justice community about the climate and environmental challenges they face, and how health professionals can partner with their community to address these exposures and impacts.	1
Cultural arts events, installations or performances related to planetary health that have students as an intended audience.	1
Local volunteer opportunities related to building community resilience to anthropogenic environmental impacts.	1
Wilderness or outdoors programs (e.g., that organise hiking, backpacking, kayaking, or other outings for students)	1
Score Assigned:	6

Score explanation:

- 1. The <u>Upstate Community & Wellness Garden</u>, as mentioned prior, provides the students with an opportunity to garden and contribute to sustainable agriculture on their campus. This garden is student-run and student-grown by regular volunteers. The student-led garden also hosts events and does outreach regarding sustainable agriculture, food justice, and nutrition.
- 2. Upstate Medical University is an official Bee Campus USA affiliate. <u>Bee Campus USA</u> is a nationwide initiative to create communities that are pollinator-friendly. Upstate has

- committed to improving habitats for bees on its property through avoiding pesticides and herbicides, planting pollinator-friendly plants, and educating Upstate personnel about the impact of pollinators on ecosystems. In early 2024, Bee boxes were installed around Upstate grounds during Spring 2024. This event highlighted awareness of Upstate's Bee Campus affiliation and actions.
- 3. Several student-run panels, speaker sessions, and film viewings have been organized by Upstate Medical University faculty as well as student organizations. These events often center around advocacy and education, and they feature environmental professionals in multidisciplinary fields. Examples of events include the Environmental Justice and Sustainability Club "Trash Talk" event in which students came together to learn about proper waste disposal and recycling in Syracuse, and then hung informational posters around trash and recycling bins throughout campus. The Environmental Justice and Sustainability Club and the Public Health Interest Group (PHIG) at Upstate visited students at the McKinley School in Syracuse, NY to teach them about lead exposure and safety techniques for National Lead Poisoning Prevention Week in October, which is also Children's Health Month.
- 4. Local educational events, notably through the Public Health & Preventive Medicine and Consortium for Culture and Medicine, included a session on Native American Health: Cultural Competency & Historical Trauma on 09/27/24, in addition to planetary and environmental sessions during the 2025 Health Justice Conference, as well as talks on Heavy Metal Toxicity & Chelation Therapy during the medical school Gastrointestinal unit.
- 5. The Graphic Medicine club hosted an Art Piece Collaboration and there was a documentary viewing of Voices Rising with formal debrief amongst students encouraged to attend. The <u>Street Medicine program</u> and interest group additionally promotes volunteerism and community resilience in the direct medical, psychiatric, and addiction care for homeless individuals of Syracuse, in which there is periodic intersection with environmental impacts.
- 6. Upstate's Wilderness Medicine Interest Group has organized several local hikes, ski trips, and other activities throughout the year for medical students. Additionally, they provide a yearly discounted ski lift season's pass at nearby mountains. Other groups, Medicine and Motion and Run Club host outings as well, such as a hike organized in 09/2024 at Green Lakes State Park.

Section Total (12 out of 15)

80.00%

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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: Paul Corsi serves as full time Sustainability Manager for SUNY Upstate facilities. There is additionally a Director of Sustainability and Energy Manager officially devoted as part of their time to sustainability services. Many other faculty and students serve on the Sustainability Steering Committee at Upstate Medical University. The Sustainability Steering Committee aims to advance environmental responsibility and sustainability initiatives across various sectors of Upstate's institution. It focuses on resource efficiency, infrastructure improvements, and public health engagement by addressing key areas such as waste management, energy use, operating room sustainability, and education/outreach. Through its four working groups—Sustainability Life Cycle, Energy, Greening the OR, and Public Health & Outreach—the committee promotes waste reduction, renewable energy adoption, sustainable healthcare practices, and student/research involvement and curriculum integration to create a more environmentally conscious institution.

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 does **not** meet any of the requirements listed above (0 points)

Score Assigned:

3

Score explanation: The <u>SUNY Climate Action Plan</u> aims to 'Achieve net zero SUNY-wide greenhouse gas emissions (Scope 1 and 2), with interim goals of at least a 40 percent reduction by 2030 compared to 1990 levels and at least an 85 percent reduction by 2050.' In this action plan, 100% of electricity used will come from renewable energy <u>by 2030</u>.

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:

1

Score explanation: Our school's infrastructure is integrated with other health professions schools (e.g. nursing, PT, PA, masters) on a centralized campus. Upstate does not specifically source energy from renewables directly, but approximately 20-30% of electricity purchased from the grid is generated using renewables. If considering Nuclear as part of renewables, or rather low-carbon fuels, compared to traditional fossil fuels, this figure jumps to 60-70%. Counteracting this, we use natural gas for heating and cooling and have diesel generators for backup as required by law. Based on this information, the percent energy expenditure that includes renewables is estimated between 20 and 80%.

5.4. Are sustainable building practices utilised for new and old buildings on the <u>institution's</u> campus, with design and construction of new buildings and remodelling of old buildings conforming to a published sustainability rating system or building code/guideline?

Yes, sustainable building practices are utilised for new buildings on the institution's campus and the **majority** of old buildings **have been retrofitted** to be more sustainable. (3 points)

Sustainable building practices are utilised for new buildings on the institution's campus, but most old buildings have **not been retrofitted.** (2 points)

Sustainable building practices are **inadequately or incompletely** implemented for new buildings. (1 point)

Sustainability is **not considered** in the construction of new buildings. (0 points)

Score Assigned:

3

Score explanation: New development is subject to <u>BuildSmart NY guidelines</u> to improve energy efficiency and reduce emissions. <u>NYS EO22</u> prohibits new construction from including infrastructure that can be used for the combustion of fossil fuels. New development is required to achieve LEAD Silver at minimum. Renovation and retrofitting projects have decreased our overall energy use by 5.3% and reduced our natural gas consumption by 33.8% from FY22-23 to FY23-24 through building shell upgrades, LED light upgrades, high efficiency HVAC systems upgrades, automatic light sensors, and regular energy audits.

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?

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:

1

Score explanation: <u>Carpooling incentives</u> and <u>shuttles</u> are available for students, faculty, and staff, but they are unsatisfactorily advertised and accessed. Upstate convened a pedestrian safety committee in 2024 to understand pedestrian safety on the main campus and assess where and what kinds of interventions could be made to improve the safety and walkability of the area.

5.6. Does your <u>institution</u> 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 institution. (0 points)

Score Assigned:

1

Score explanation: There are recycling bins dispersed throughout campus. Many bins have education on what is recyclable and what is not. There is presently a pilot for composting at the residential tower, but these efforts are still in a preliminary phase of their implementation. Food waste from the cafeteria is composted in a local industrial composting facility.

5.7. Does the <u>institution</u> 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:

2

Score explanation: SUNY Single Use Plastics policy prohibits the use of several types of single use plastics in food services. <u>EO32</u> requires us to buy more food served at Upstate from local sources. Plant based options are available, with plans to increase options in the future.

5.8. Does the <u>institution</u> 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: SUNY Sub-object codes have been developed to help Upstate's purchasing team identify and prioritize sustainable products but these have not been fully implemented. Upstate prioritizes the use of reprocessable equipment through vendors like <u>Stryker</u>. Audits are conducted on procedure packs to reduce waste of equipment.

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 presently no sustainability guidelines for events at the medical school, nor within the institution more broadly.

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: We were not able to find information that describes this objective. There have been attempts before to recycle styrofoam on campus, but this did not succeed. The Facilities department does have guidelines on waste management, but these guidelines at present are related to managing these products from an occupational health perspective.

5.11. Does your institution's endowment portfolio investments include fossil-fuel companies?

The institution is **entirely divested** from fossil fuels **and** has made a **commitment to reinvest divested funds** into renewable energy companies or renewable energy campus initiatives. (4 points)

The institution is **entirely divested** from fossil fuels. (3 points)

The institution has **partially divested** from fossil fuel companies **or** has made a **commitment to fully divest**, but **currently** still has fossil fuel investments. (2 points)

The institution has **not divested** from fossil-fuel companies, but faculty and/or students are **conducting organised advocacy** for divestment. (1 point)

Yes, the institution has investments with fossil-fuel companies and there have been **no efforts** to change that. (0 points)

0

Score Assigned:

Score explanation: Our university does not have any direct investments in fossil fuels. However, through participation in various pooled investment vehicles, mutual funds, the investing strategy is delegated to professional investment managers, many of whom integrate environmental, social, and governance (ESG) principles into their decision-making process when investing in individual companies on our behalf. These entities include Black Rock, Victory Fund, Alliance Bernstein, and others. For more information on the endowments, view <u>Upstate Foundation's Financial Information</u> webpage. Because we do not know what financial vehicles these investment managers are using, we cannot say that the endowment is divested from fossil fuels or there has been a commitment on this front.

Section Total (16 out of 32)	50.00%
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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%	
В	60% - 79%	
С	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 Norton College of Medicine, SUNY Upstate Medical University The following table presents the individual section grades and overall institutional grade for the Norton College of Medicine on this medical-school-specific Planetary Health Report Card.

Section	Raw Score %	Letter Grade
Planetary Health Curriculum (30%)	$(41/72) \times 100 = 56.94\%$	C+
Interdisciplinary Research (17.5%)	$(11/17) \times 100 = 64.71\%$	В-
Community Outreach and Advocacy (17.5%)	(12/14) x 100 = 85.71%	A
Support for Student-led Planetary Health Initiatives (17.5%)	(12/15) x 100= 80.00%	A-
Campus Sustainability (17.5%)	(16/32) x 100 = 50.00%	С
Institutional Grade	(56.94x0.3 + 64.71x0.175 + 85.71x0.175 + 80.00x0.175 + 50.00x0.175) = 66.16%	В

Report Card Trends

Section Overview

This graph demonstrates trends in overall and section grades for the years in which Norton College of Medicine, SUNY Upstate Medical University has participated in the Planetary Health Report Card initiative.

Planetary Health Report Card Trends for Norton College of Medicine, SUNY Upstate Medical University

