



Planetary Health Report Card: *Georgetown University*



GEORGETOWN UNIVERSITY

2020-2021 Contributing Team:

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Summary of Findings

Curriculum	C
<ul style="list-style-type: none"> Planetary health topics are briefly covered throughout the medical curriculum and the Deans have extended their support for integrating Education for Sustainable Healthcare (ESH) into the curriculum. Efforts should be made to focus on the intersection of environmental health with specific topics, such as food security, marginalized populations, and indigenous communities. For example, environmental threats relevant to Georgetown’s surrounding community would be an excellent addition to future P3 intersession activities given the school’s drive for social justice. Faculty should be given incentives to incorporate planetary health into current courses, such as by providing strategies to have conversations with patients about climate change and teaching medical students to take an environmental health history. 	
Interdisciplinary Research	C
<ul style="list-style-type: none"> The Georgetown University School of Medicine (GUSOM) faculty have contributed to research through the Georgetown Environment Initiative, Global Health Initiative, and Climate Center. The school has also hosted conferences pertaining to planetary health this past year. There is currently no public or visible process for how communities impacted by environmental injustice can contribute to the research agenda at GUSOM. There should be a greater focus on integrating research that correlates health and the environment. GUSOM should also consider taking steps to join the Planetary Health Alliance or Global Consortium on Climate and Health Education. 	
Community Outreach and Advocacy	D+
<ul style="list-style-type: none"> Georgetown University partners with community organizations and community education is offered through the Georgetown Environment Initiative and Georgetown Climate Center. GUSOM should play a more active role in establishing partnerships with community organizations and providing educational material on environmental health to patients, students, and staff members of the school and affiliated hospitals. 	
Support for Student-Led Initiatives	B
<ul style="list-style-type: none"> Georgetown offers paid research opportunities and has done well to provide co-curricular planetary health programs. There is currently no student representative for sustainability in the medical school. GUSOM should add a student representative to advocate for sustainability practices and localize research opportunities to a single, accessible web page. Further funding should be made available to support medical students interested in enacting sustainability initiatives. 	
Sustainability	B
<ul style="list-style-type: none"> Georgetown University has made substantial improvements in the reduction of CO2 emissions, use of renewable energy and availability of environmentally friendly practices. The university has stated a carbon neutrality goal by 2030. GUSOM should appoint a staff member to head sustainability specifically within the medical school and hospital. 	

Statement of Purpose

Planetary health is human health.

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

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

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

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 change. Therefore, it is critical that medical students are trained to understand the health effects of climate change, as well as planetary health more broadly. Topics like the changing geography of vector-borne diseases, the health consequences of air pollution, environmental health inequities, and disaster response principles must be part of every medical school's core curriculum.

Curriculum: General

1. Did your medical school offer elective courses to engage students in Education for Sustainable Healthcare or Planetary Health in the last year?	
3	Yes, the medical school has offered more than one elective whose primary focus is ESH/planetary health in the past year.
2	Yes, the medical school has offered one elective whose primary focus is ESH/planetary health in the past year.
1	The medical school does not have any electives whose primary focus is ESH/planetary health, but there are one or more electives that include a lecture on planetary health.
0	No, the medical school has not offered any electives on planetary health or electives that include ESH/planetary health topics in the past year.
<p><i>Score explanation: Students were offered a two week Deep Dive elective on “One Health: Exploring the Interplay of the Health of People, Animals and the Environment in Global Health Threats.” This elective was led by Dr. Lorraine Docherty and Dr. Patricia Foley, and explored the interdependency of the health of people, animals and the environment, as well as the effects of climate change on public health.</i></p>	

Curriculum: Health Effects of Climate Change

2. Does your medical school curriculum address the relationship between extreme temperature health risks and climate change, as well as the socioeconomic/racial disparities in extreme heat exposure?	
3	This topic was explored in depth by the core curriculum.
2	This topic was briefly covered in the core curriculum.
1	This topic was covered in elective coursework.
0	This topic was not covered.
<p><i>Score explanation: As part of the M1 core curriculum at Georgetown, the P3 Intersession “Environmental Health and Climate Change Workshop” led by Dr. Caroline Wellbery features an extensive discussion on the effects of rising temperatures on heat stroke incidence and heat injury, specifically among young athletes.</i></p>	

3. Does your medical school curriculum address the impacts of extreme weather events on individual health and/or on healthcare systems?	
3	This topic was explored in depth by the core curriculum.
2	This topic was briefly covered in the core curriculum.
1	This topic was covered in elective coursework.
0	This topic was not covered.
<p><i>Score explanation: The P3 Intersession “Environmental Health and Climate Change Workshop” led by Dr. Caroline Wellbery includes one slide highlighting the connection between climate change and extreme weather events, such as Hurricane Sally and Hurricane Harvey.</i></p>	

4. Does your medical school curriculum address the impact of climate change on the changing patterns of infectious diseases?	
3	This topic was explored in depth by the core curriculum.
2	This topic was briefly covered in the core curriculum.
1	This topic was covered in elective coursework.
0	This topic was not covered.

Score explanation: As part of the Infectious Disease (ID) module, a few lectures discuss the impact of climate change on changing patterns of infectious diseases. The “Enterics II” lecture presented by Dr. William Fonzi highlights the correlation between rising temperatures and the increasing number of cases of E. Coli, Salmonella, Vibrio vulnificus etc. Additionally, the lecture “Mosquito-transmitted Viruses of Global Significance” presented by Dr. Radhakrishnan Padmanabhan also discusses climate change in relation to Mosquito-transmitted Viruses. In the “Emerging Viruses” lecture presented by Dr. John Casey, there are a couple of slides that briefly discuss the correlation between climate change and virus outbreaks.

5. Does your medical school curriculum address the cardiorespiratory health effects of climate change, including air pollution?

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

Score explanation: The respiratory module includes information on the effects of climate change on pollen distribution in relation to asthma and allergy exacerbations. In the previous years, Georgetown also had a required, interactive discussion on climate change in the Family Medicine Clerkship. This was overseen by clerkship director Dr. Tobie-Lynn Smith. However, due to COVID-19 and adjustments to the Family Medicine Clerkship, this has been temporarily put on hold. This session will likely be held again in the following year.

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

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

Score explanation: The “Environmental Health and Climate Change Workshop” led by Dr. Caroline Wellbery during the M1 P3 Intersession discusses the mental health impacts of climate change. It highlights the relationships between heat and suicide rates, as well as weather-related changes and intergroup violence.

7. Does your medical school curriculum address the relationships between health, individual patient food and water security, ecosystem health, and climate change?

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

Score explanation: During the MI Nutrition & Patient Health Intersession, there were several lectures on food security led by Dr. Yumi Jarris, Dr. Kofi Essel, and Katherine Donnelly. The lectures covered “An Approach to Food Insecurity Screening in a Clinical Setting” and “Food Insecurity Identification & Management.” However, these lectures did not discuss the relationship between climate change and food security.

8. Does your medical school curriculum address the outsized impact of climate change on marginalized populations such as those with low SES, women, communities of color, children, homeless populations, and older adults?

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

Score explanation: In the previous years, the Climate Change half day didactic session during the Family Medicine clerkship included significant discussion on populations that were the most vulnerable to the effects of air pollution and how lower SES influenced exposure as well as susceptibility. This session has been put on hold this year due to COVID-19 and will likely be added again in the following year.

9. Does your medical school curriculum address the unequal health impacts of climate change globally?

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

Score explanation: In the MI Nutrition & Patient Health Intersession, a lecture on “The DASH and Mediterranean Diet” led by Dr. Sherman briefly discusses how climate change has greater implications for vulnerable populations and those who already have food insecurities.

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

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

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

Score explanation: The Reproduction Module, directed by Dr. Ian Gallicano and Dr. Andrea Singer, in the MI year discusses the effects of environmental toxins, such as Cadmium, that can cross the placenta.

11. Does your medical school curriculum address important human-caused environmental threats that are relevant to the university’s surrounding community?

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

Score explanation: Environmental threats related to GUSOM’s surrounding community are not addressed in our curriculum. This would be an excellent addition to future P3 intersession activities given our drive for social justice.

12. Does your medical school curriculum address the unique climate and environmental health challenges that have impacted and are impacting Indigenous communities?

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

Score explanation: In the M1 P3 Intersession, first year medical students are required to watch a film segment from the “California Newsreel Documentary Series Unnatural Causes: Is Inequality Making Us Sick?”. This is a documentary discussing the causes and effects of diabetes on the health of Pima and Tohono O’odham Indians in southern Arizona. Although this documentary covers challenges that indigenous communities face, it does not mention climate change or other environmental health factors.

13. Does your medical school curriculum address the outsized impact of anthropogenic environmental toxins on marginalized populations such as those with low SES, women, communities of color, children, homeless populations, and older adults?

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

Score explanation: In the previous years, the Climate Change half day didactic session during the Family Medicine clerkship included significant discussion on populations that are the most vulnerable to the effects of air pollution and how lower SES influences exposure as well as susceptibility. This session has been temporarily put on hold due to COVID and will likely be added again.

Curriculum: Sustainability

14. Does your medical school curriculum address the environmental and health co-benefits of a plant-based diet?	
3	This topic was explored in depth by the core curriculum.
2	This topic was briefly covered in the core curriculum.
1	This topic was covered in elective coursework.
0	This topic was not covered.
<p><i>Score explanation: As part of the M1 core curriculum, the Nutrition and Patient Health Module includes a lecture presented by Dr. Thomas Sherman titled: “Protein is Protein...or is It?” Dr. Sherman discusses the amount of water required to produce a quarter-pound burger and a gallon of milk. He discusses consuming alternative protein sources such as crickets from the perspective of greenhouse gas emissions. Dr. Sherman also provides significant analysis of the environmental - as well as health - benefits of vegetarian or vegan options. Additionally, the M1 Patients, Populations, and Policy (P3) Intersession “Environmental Health and Climate Change Workshop” includes information on consumption and choice of foods as it relates to our carbon footprint.</i></p>	

15. Does your medical school curriculum highlight the waste generated by the healthcare system and identify ways to advocate for and implement sustainable best practices in health care?	
3	This topic was explored in depth by the core curriculum.
2	This topic was briefly covered in the core curriculum.
1	This topic was covered in elective coursework.
0	This topic was not covered.
<p><i>Score explanation: In the M1 P3 Intersession, Dr. Caroline Wellbery presented an “Environmental Health and Climate Change” workshop, discussing the intersection of climate change and health care. She discusses supply chains, fleet vehicles, waste anesthetic gases, and pharmaceuticals as sources of climate health harm in the healthcare industry and introduces strategies to reduce these. The strategies include reducing the healthcare sector’s carbon footprint, building climate-smart hospitals, and mobilizing our influence to advance climate solutions.</i></p>	

Curriculum: Clinical Applications

16. In training for patient encounters, does your medical school’s curriculum introduce strategies to have conversations with patients about the health effects of climate change?	
2	Yes, there are strategies introduced for having conversations with patients about climate change in the core curriculum.
1	Yes, there are strategies introduced for having conversations with patients about climate change in elective coursework.
0	No, there are not strategies introduced for having conversations with patients about climate change
<p><i>Score explanation: In the previous years, the “Environmental Health and Climate Change Workshop” during the M1 P3 intersession included a lecture by Tory Ruttenberg and Fran Barnes, climate change communication specialists. They presented specific strategies to emphasize the links between climate change and disease when communicating with patients. The didactic session was immediately followed by a role-play exercise, where one individual assumes the role of the patient and another is the doctor.</i></p>	

17. In training for patient encounters, does your medical school’s curriculum introduce strategies for taking an environmental history or exposure history?	
2	Yes, the core curriculum includes strategies for taking an environmental history.
1	Only elective coursework includes strategies for taking an environmental history.
0	No, the curriculum does not include strategies for taking an environmental history.
<p><i>Score explanation: Neither our core nor our elective curriculum introduces strategies to take a patient’s environmental or exposure history.</i></p>	

Curriculum: Administrative Support for Planetary Health

18. Is your medical school currently in the process of improving Education for Sustainable Healthcare (ESH)/planetary health education?	
4	Yes, the medical school is currently in the process of making major improvements to ESH/planetary health education.
2	Yes, the medical school is currently in the process of making minor improvements to ESH/planetary health education.
0	No, there are no improvements to planetary health education in progress.

Score explanation: The Climate Health and Medical Sustainability organization at Georgetown has a curriculum committee working on integrating climate health into the core and elective curriculum. Deans Mary Furlong and Dustyn Wright have met with students and extended their support for integration of climate health within the curriculum.

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

6	Planetary health/ESH topics are well integrated into the core medical school curriculum.
4	Some planetary health/ESH topics are appropriately integrated into the core medical student curriculum.
2	Planetary health/ESH is not integrated and is primarily addressed in (a) standalone lecture(s).
0	There is minimal/no education for sustainable healthcare.

Score explanation: The Climate Health and Medical Sustainability organization is collaborating with preclinical module directors and Dean Mary Furlong to integrate lectures discussing planetary health concepts. The module directors and Deans are supportive of the efforts being made to continue integrating ESH curriculum longitudinally in the preclinical and clinical curriculum.

20. Bonus: Does your medical school have a program that offers incentives for faculty/departments to develop new planetary health/ESH courses and/or incorporate planetary health/ESH into existing courses?

1	Yes, the medical school has an incentive program.
0	No, the medical school does not have an incentive program.

Score explanation: Although some faculty members have championed the introduction of climate planetary health content within the medical school curriculum, there are no existing opportunities at this time to encourage faculty development of planetary health courses. However, Dean Mary Furlong is currently working with students to integrate more climate change material into the curriculum, so we foresee future positive developments with regards to faculty incentivization.

Section Total (32 out of 58)

C

Interdisciplinary Research

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

1.Are there researchers engaged in planetary health research and healthcare sustainability research at your medical school?	
4	Yes, there are faculty members at the School of Medicine who have a primary research focus in planetary health and healthcare sustainability.
3	Yes, there are faculty members at the School of Medicine who have a primary research focus in a planetary health or healthcare sustainability.
2	Yes, there are individual faculty members at the School of Medicine who are conducting research related to planetary health or healthcare sustainability, but it is not their primary research focus.
1	There are planetary health and/or healthcare sustainability researchers at the institution, but none associated with the medical school.
0	No, there are no planetary health and/or healthcare sustainability researchers at the institution or medical school at this time.
<p><i>Score explanation: There are individual School of Medicine faculty members conducting research related to planetary health or healthcare sustainability, but it is not the primary research focus. For example, Dr. Wellbery published an article on “Faculty development and partnership with students to integrate sustainable healthcare into health professions education.” Additionally, Dr. Foley and Dr. Docherty published an article about One Health in the United States medical education. School of medicine faculty members have also contributed to research within the Georgetown Environment Initiative, Global Health Initiative, and Climate Center.</i></p>	

2. Is there a dedicated department or institute for interdisciplinary planetary health research at your institution?

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

Score explanation: The [Georgetown Environment Initiative](#) serves as a sustainability-driven interdisciplinary program at Georgetown, and there are GUSOM faculty who are a part of this initiative. Additionally, the former dean of GUSOM is a part of the [One Health Commission Board of Directors](#). However, there are currently no multidisciplinary centers, institutes, or departments hosted by the School of Medicine that work to integrate research on health and the environment.

3. Is there a process by which communities disproportionately impacted by climate change and environmental injustice give input or make decisions about the research agenda at your medical school?

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

Score explanation: There is no public or visible process for how communities impacted by environmental injustice can contribute to the research agenda at GUSOM.

4. Does your institution have a planetary health website, or a website centralizing various campus resources related to health and the environment?

3	There is an easy-to-use, adequately comprehensive website that centralizes various campus resources related to health and the environment including all of the following: upcoming events, leaders in planetary health at your institution, and relevant funding opportunities.
2	There is a website that attempts to centralize various campus resources related to health and the environment, but it is hard-to-use, not updated, or not adequately comprehensive.
1	The institution has an Office of Sustainability website that includes some resources related to health and the environment.
0	There is no website.

Score explanation: Georgetown has the [Georgetown Environment Initiative](#) website, which provides campus-wide resources but does not list specific upcoming events. The [Global Health Initiative](#) serves as a centralized website for global health matters, and it includes faculty, research, and past and upcoming events related to the environment and health. Additionally, the [Georgetown Office of Sustainability](#) website provides information specific to sustainability efforts at Georgetown.

5. Has your institution recently hosted a conference or symposium on topics related to planetary health?

4	Yes, the institution has hosted more than one conference or symposium on topics related to planetary health in the past year, including at least one on climate change.
3	Yes, the institution has hosted one conference or symposium on topics related to planetary health in the past year.
2	Yes, the institution has hosted a conference on topics related to planetary health in the past three years.
1	The institution has not hosted any conferences directly, but they have provided financial support for a local planetary health event.
0	No, the institution has not hosted a conference on topics related to planetary health in the past three years.

Score explanation: The Global Health Initiative at Georgetown has hosted and partnered on a variety of [events](#) related to climate change and health. Their focus for the 2019-2020 academic year was the [effect of climate change on global health](#). Most recently, there has been an event on [Environment and Energy](#) as part of the Global Challenges Symposium. In the past, and most recently in 2019, the School of Medicine has also hosted a One Health Day Symposium.

6. Has your institution or medical school joined the Planetary Health Alliance and/or the Global Consortium on Climate and Health Education?

2	Yes, the medical school has joined the Planetary Health Alliance and/or the Global Consortium on Climate and Health Education.
1	Yes, the institution has joined the Planetary Health Alliance and/or the Global Consortium on Climate and Health Education, but the medical school specifically has not.
0	No, the institution has not joined the Planetary Health Alliance or the Global Consortium on Climate and Health Education.

Score explanation: As of March 2021, Georgetown has not joined the Planetary Health Alliance or the Global Consortium on Climate and Health Education.

Section Total (10 out of 19)	C
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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 color. Institutions should partner with local communities affected by climate change and pollution to share information about environmental health threats, advocate together for change, and provide opportunities for students to be a part of this work.*

1. Does your medical school partner with community organizations to promote planetary and environmental health?	
3	Yes, the medical school meaningfully partners with multiple community organizations to promote planetary and environmental health.
2	Yes, the medical school meaningfully partners with one community organization to promote planetary and environmental health.
1	The institution partners with community organizations, but the medical school is not part of that partnership.
0	No, there is no such meaningful community partnership.
<p><i>Score explanation: GUSOM offers yearly talk series in climate change related topics including incorporating innovative ways to address climate change issues in the context of modern development in urban development through Georgetown Environment Initiative and The Georgetown Climate Center.</i></p>	

2. Does your medical school offer community-facing courses or events regarding planetary health?	
3	The medical school offers community-facing courses or events at least once every year.
2	The medical school offers courses or events open to the community at least once per year, but they are not primarily created for a community audience.
1	The institution has offered community-facing courses or events, but the medical school was not involved in planning those courses or events.
0	The medical school has not offered such community-facing courses or events.
<p><i>Score explanation: The Georgetown Environment Initiative (GEI) consolidates climate change initiatives throughout the university. Among the various organizations, clubs and centers and programs</i></p>	

is the [Georgetown Climate Center](#), which is run through the Georgetown Law School, and has offered a few community-facing courses throughout the year. Recently the Georgetown Environment Initiative (GEI) and the Georgetown Climate Center held a discussion titled “A Conversation With Bill Gates: How to Survive a Climate Disaster”.

3. Does your medical school have regular coverage of issues related to planetary health and/or sustainable healthcare in university update communications?

2	Yes, all students regularly receive communication updates dedicated to planetary health and/or sustainable healthcare.
1	Yes, planetary health and/or sustainable healthcare topics are sometimes included in communication updates.
0	Students do not regularly receive communications about planetary health or sustainable healthcare.

Score explanation: While the Office of Sustainability has documented its efforts and offered tips on how to implement strategies that take care of the planet, such as offering a [“Sustainable Remote Living Guide for Students”](#), students do not regularly receive communication regarding these efforts.

4. Does the medical school offer continuing medical education (CME) courses that address planetary health and/or sustainable healthcare?

2	Yes, multiple in-person or online CME courses relating to planetary health and/or sustainable healthcare are offered, including at least one with a primary focus of planetary health.
1	Yes, one in-person or online CME course related to planetary health and/or sustainable healthcare is offered.
0	There are no CME courses on planetary health or sustainable healthcare topics.

Score explanation: Currently there are no online or in-person CME courses offered to the students specifically at the medical school. However, the Mid-Atlantic Center for Children's Health and the Environment, a Pediatric Environmental Health Specialty Unit (PEHSU) offers webinars (some available with CME) on a variety of topics related to climate change and health. We are able to offer these webinars for no-cost (as these programs are funded through CDC, EPA). GUSOM belongs to a national network of PEHSUs where you can find webinars broadcast nationally: www.pehsu.net.

5. Do hospitals affiliated with your medical school have accessible educational materials for patients about environmental health exposures?

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

Score explanation: Georgetown University's School of Nursing and Health Studies has the [Mid-Atlantic Center for Children's Health and Environment](#) that is specifically designed to provide patients with education materials regarding environmental health exposures.

6. Do hospitals affiliated with your medical school have accessible educational materials for patients about climate change and health impacts?

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

Score explanation: Accessible educational materials for patients were not found for any of the affiliated hospitals.

Section Total (5 out of 14)	D+
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Support for Student-Led Planetary Health Initiatives

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

1. Does your institution offer support for medical students interested in enacting a sustainability initiative?	
2	Yes, the institution offers grants available to medical students for students to enact sustainability initiatives.
1	The medical school encourages sustainability QI projects (to fulfill clerkship or longitudinal requirements) and offers resources to help students succeed in these projects, but there is no student funding available.
0	No, the institution does not offer opportunities or support for sustainability initiatives.
Score explanation: Currently GUSOM does not offer any grant funding or other support for student sustainability initiatives.	

2. Does your institution offer opportunities for medical students to do research related to planetary health and/or sustainable healthcare?	
3	The institution offers an explicit paid fellowship for medical students to do research related to planetary health and/or sustainable healthcare.
2	The institution offers paid research opportunities for students and planetary health/sustainable healthcare projects would be considered eligible.
1	There are unfunded research opportunities for students to perform research related to planetary health/sustainable healthcare.
0	There are no opportunities for students to receive funding for planetary health/sustainable healthcare research.
Score explanation: The Georgetown University Global Health Initiative Student Fellows Program offers paid research project opportunities for undergraduates, graduate, law and medical students. Of the projects offered there were two specific projects that directly related to planetary health and climate change effects on health. There continues to be no explicit fellowship for medical students directly related to planetary health.	

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

2	The medical school has a webpage with specific information related to planetary health or sustainable healthcare that includes up-to-date information on relevant initiatives and contact information of potential mentors.
1	There is a medical school webpage that features some information on projects and mentors within planetary health and sustainable healthcare within the medical school, but it lacks key information.
0	There is no medical-school specific webpage for locating planetary health and/or sustainable healthcare projects or mentors.

Score explanation: There is no medical-school specific webpage for finding planetary health projects or mentors. The [Georgetown Environment Initiative](#) does provide a webpage resource of affiliated faculty where there are members of the medical school faculty (Dr. Mary Best Martin, Dr. Paul Roepe, and Dr. Caroline Wellbery).

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

2	Yes, there is a funded student organization with faculty support at my medical school dedicated to planetary health or sustainability in healthcare.
1	Yes, there is a student organization at my medical school dedicated to planetary health or sustainability in healthcare but it lacks faculty support and/or funding.
0	No, there is not a student organization at my institution dedicated to planetary health or sustainability in healthcare.

Score explanation: Georgetown University School of Medicine supports the [Georgetown Climate Health and Medical Sustainability Group](#). The group is active in providing and supporting opportunities for fellow medical students through curriculum reform, hosting speakers and advocacy workshops, and partnering with local community organizations to educate about environmental justice and the importance of including planetary health in our healthcare plans for the future.

5. Is there a student liaison representing sustainability interests who serves on a medical school or institutional decision-making council to advocate for sustainability best practices?

1	Yes, there is a student representative that serves on a medical school or institutional decision-making council.
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0	No, there is no such student representative.
<i>Score explanation: There is no student sustainability liaison within the School of Medicine.</i>	

6. In the past year, has the institution had one or more co-curricular planetary health programs or initiatives in the following categories? (1 point each)

1	Projects where students are able to gain experience in organic agriculture and sustainable food systems, such as gardens, farms, community supported agriculture (CSA), fishery programs, or urban agriculture projects.
1	Panels, speaker series, or similar events related to planetary health that have students as an intended audience.
1	Events in which students learn directly from members of a local environmental justice community about the climate and environmental challenges they face, and how health professionals can partner with their community to address these exposures and impacts.
1	Cultural arts events, installations or performances related to planetary health that have students as an intended audience.
1	Local volunteer opportunities related to building community resilience to anthropogenic environmental impacts.
1	Wilderness or outdoors programs (e.g., that organize hiking, backpacking, kayaking, or other outings for students) that follow Leave No Trace principles.

Score explanation:

- *Organic Agriculture/Sustainable Food Systems*
 - *The [Georgetown Community Garden](#) continues to be supported by the university. Despite the challenges of COVID restrictions, the mission of this group continues to be “a green space for everyone at Georgetown University”.*
 - *[Georgetown Beekeeping](#) has remained active in offering virtual Beekeeping 101 courses over zoom and continue to keep hives on campus.*
- *Speakers related to planetary health*
 - *In April 2020, the [Berkley Forum](#) hosted a discussion on Religion and the COVID-19 Pandemic: Environmental Health. Planetary Health was a specific topic discussed during the forum.*
 - *Our group hosted a Couch Advocacy Workshop where we discussed environmental justice, the connections between climate change and COVID-19, and how to advocate from home.*
- *Local Environmental Justice Speaker*
 - *We were able to partner with St. Augustine Catholic Church to dialogue about how climate change impacts health and creates further disparities among local communities of color, as well as the intersection of climate change and COVID-19.*
- *Cultural arts events*

- *The [Georgetown Laboratory for Global Performance & Politics](#) creates performance art that aims to intersect politics and performance. These performances include global perspectives on many topics, including environmental health.*
- *Local volunteer opportunities*
 - *The medical school does offer [environmental volunteer options](#) for students to work with local parks, conservancies and the Neighborhood Farm Initiative.*
- *Wilderness/Outdoors Programs*
 - *Newly formed [Georgetown SOM Wilderness Medicine Group](#), has been active in bringing many guest speakers into the School of Medicine including Dr. Matt Wilson, National Park Service Medical Director, and Dr. Luanne Freer, Founder of Everest ER. They are also supportive of Global Healthcare, fundraising for construction of a hospital in Nepal.*

Section Total (10 out of 15)

B

Campus Sustainability

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

1. Does your medical school and/or institution have an Office of Sustainability?	
3	Yes, there is an Office of Sustainability with multiple full-time staff dedicated to campus sustainability. If the Office of Sustainability serves the entire campus, there is at least one designated staff member for sustainability at the hospital and/or medical school.
2	There is an Office of Sustainability with one or more full-time staff dedicated to campus sustainability, but no specific staff member in charge of medical school and/or hospital sustainability.
1	There are no salaried sustainability staff, but there is a sustainability task force or committee
0	There are no staff members or task force responsible for overseeing campus sustainability
<p><i>Score explanation: Georgetown University has an Office of Sustainability, which was established in 2013. There are full time staff members, but no stated affiliation with the medical school.</i></p>	

2. Does your medical school and/or institution have a stated goal of carbon neutrality by 2050?

4	The medical school is already carbon neutral.
3*	Yes, there is a stated carbon neutrality goal and the medical school has a well-defined and adequate plan in place to achieve this goal.
2	Yes, there is a stated carbon neutrality goal, but the medical school has not created a plan to reach that goal or the plan is inadequate.
1	There is a CO2 emission reduction goal, but it is not one of carbon neutrality.
0	There is no stated goal for reduction of CO2 emissions.

Score explanation: In a [statement to the Georgetown Community](#), President John G. DeGioia stated a commitment to cut Georgetown University's Carbon Footprint by 50% by 2020. This was in accordance with the [White House American Campuses Act on Climate Pledge](#) signed in 2015. This goal was achieved by FY14, as the University reduced its carbon footprint by 71% since 2006, as seen [here](#). The university recently stated a goal of becoming carbon neutral and water positive by 2030 [here](#).

3. Do buildings/infrastructure used by the medical school for teaching (not including the hospital) utilize renewable energy?

3*	Yes medical school buildings are 100% powered by renewable energy
2	Medical school buildings source >80% of energy needs from off-site and/or on-site renewable energy.
1	Medical school buildings source >20% of energy needs from off-site and/or on-site renewable energy.
0	Medical school buildings source <20% of energy needs from off-site and/or on-site renewable energy.

Score explanation: Georgetown purchases [renewable energy](#) certificates annually that fully power the Main, Medical and East campuses. In 2013, the school installed solar panels on university-owned row houses that are expected to produce 19,711 kWh each year. The full list of renewable energy initiatives can be seen [here](#).

4. Are sustainable building practices utilized for new and old buildings on the medical school campus, with design and construction of new buildings and remodeling of old buildings conforming to a published rating system or sustainable building code/guideline?

3	Yes, sustainable building practices are utilized for new buildings on the medical school campus and the majority of old buildings have been retrofitted to be more sustainable.
2	Sustainable building practices are utilized for new buildings on the medical school campus, but most old buildings have not been retrofitted.
1	Sustainable building practices are inadequately or incompletely implemented for new buildings.
0	Sustainability is not considered in the construction of new buildings.

*Score explanation: “Georgetown is committed to achieving LEED Silver certification or higher for all new facilities and major renovation on campus”. The list of old buildings and their levels of LEED certification can be found [here](#).
Nationally, [LEED](#) is considered the most commonly used rating system for green building. A total of eight buildings have achieved or are working towards achieving LEED silver or gold certifications: five buildings on campus have achieved or are working towards gold certifications, while three buildings have silver certifications. The full list of renewable energy initiatives can be seen [here](#).*

5. Has the medical school implemented strategies to encourage and provide environmentally-friendly transportation options for students and reduce the environmental impact of commuting?

2	Yes, the medical school has implemented strategies to encourage and provide environmentally-friendly transportation options such as safe active transport, public transport, or carpooling and these options are well-utilized by students. Alternatively, the campus location is not amenable to unsustainable forms of transportation by default.
1	The medical school has implemented some strategies to provide environmentally-friendly transportation options, but the options are unsatisfactorily accessible or advertised.
0	The medical school has not implemented strategies to encourage and provide environmentally-friendly transportation options.

Score explanation: Georgetown University School of Medicine has implemented strategies that encourage and provide [environmentally friendly transportation](#) services for students and staff. The [Georgetown University Transportation Shuttle \(GUTS\)](#) is a free shuttle bus that is available for all medical students, law students, and undergraduates. It uses a biodiesel fuel (B20 when available). Additionally, faculty, employees, and staff at the University and MedStar Georgetown University Hospital can access GUTS services. The GUTS buses operate along four routes, connecting the main campus with two Washington Metropolitan Area Transit Authority (Metro) stops. Other options for transportation include car shares and bicycles. The University is officially a [Bicycle-Friendly Campus](#). There is no on-campus [Parking](#) for undergraduate students offered. On-campus parking is given

priority to carpool parking for faculty and staff. The parking decks for faculty, staff and visitors also have electric vehicle charging spots.

6. Does your medical school have an organics recycling program (compost) and a conventional recycling program (aluminum/paper/plastic/glass)?

2	Yes, the medical school has both compost and recycling programs accessible to students and faculty.
1	The medical school has either recycling or compost programs accessible to students and faculty, but not both.
0	There is no compost or recycling program at the medical school.

Score explanation: Georgetown University has an organics [recycling](#) and [composting program](#). The University reports that each month, 25 tons of organic food waste are composted from the University's main dining hall, Leo O'Donovan Hall. This accounts for roughly 90% of the dining hall's waste. In the 2018-2019 academic year, Georgetown's recycling program began its transition to a [single stream recycling system](#) to make recycling more manageable for the community and to lessen waste contamination. The recycling program is accessible to medical students on-campus, but the composting program is not.

7. Does the medical school apply sustainability criteria when making decisions about the campus food and beverage selections?

3	Yes, the medical school has adequate sustainability requirements for food and beverages and is engaged in efforts to increase food and beverage sustainability.
2	There are sustainability guidelines for food and beverages, but they are insufficient or optional. The medical school is engaged in efforts to increase food and beverage sustainability.
1	There are sustainability guidelines for food and beverages, but they are insufficient or optional. The medical school is not engaged in efforts to increase food and beverage sustainability.
0	There are no sustainability guidelines for food and beverages.

Score explanation: The [on-campus dining](#) at Georgetown strives to use [local and organic food](#). 30% of food is from within 150 miles and 40% within 250 miles. All milk purchased is hormone-free and all eggs are cage-free. All seafood meets Monterey Bay Aquarium Seafood Watch "Best Choice". There is a preference for fair-trade products and all coffee is fair-trade certified. There are vegetarian and vegan options, which have been nationally recognized for the diverse options. Food waste is composted and solid waste is converted into energy through an Energy from Waste facility nearby. "Energy generated allows the plant to be self-sustainable and is used to power area homes and businesses." The dining halls also aim to conserve water by using trayless dining and automatic sinks.

8. Does the medical school or associated institution apply sustainability criteria when making decisions about supply procurement?

3	Yes, the medical school has adequate sustainability requirements for supply procurement and is engaged in efforts to increase sustainability of procurement.
2	There are sustainability guidelines for supply procurement, but they are insufficient or optional. The medical school is engaged in efforts to increase sustainability of procurement.
1	There are sustainability guidelines for supply procurement, but they are insufficient or optional. The medical school is not engaged in efforts to increase sustainability of procurement.
0	There are no sustainability guidelines for supply procurement.

Score explanation: There is a published guideline for [supply procurement](#), but the word “sustainability” is not mentioned within the document. Sustainability at Georgetown has a recently added “[Purchasing](#)” tab that is “coming soon”.

9. Are there sustainability requirements or guidelines for events hosted at the medical school?

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

Score explanation: There is a [Plastic Free Pledge](#) for student-run clubs to commit to reducing their use of single-use plastics, but there are no official sustainability guidelines for medical school events.

10. Does your medical school have programs and initiatives to assist with making lab spaces more environmentally sustainable?

2	Yes, the medical school has programs and initiatives to assist with making lab spaces more environmentally sustainable.
1	There are guidelines on how to make lab spaces more environmentally sustainable, but not programs or initiatives.
0	There are no efforts at the medical school to make lab spaces more sustainable.

Score explanation: There are no published programs or initiatives to assist with making lab spaces more environmentally sustainable.

11. Does your institution's endowment portfolio investments include fossil-fuel companies?	
4	The institution is entirely divested from fossil fuels and has made a commitment to reinvest divested funds into renewable energy companies or renewable energy campus initiatives.
3	No, the institution is entirely divested from fossil fuels.
2	The institution has partially divested from fossil-fuel companies.
1	The institution has not divested from fossil-fuel companies, but faculty and/or students are conducting organized advocacy for divestment.
0	Yes, the institution has investments with fossil-fuel companies and there have been no efforts to change that.
<p><i>Score explanation: On February 6, 2020, The Georgetown University Board of Directors adopted a policy on Impact Investments and Fossil Fuels. Among the principles in this policy, the university will divest from private investments with a primary focus of extracting or exploring fossil fuels. The goal is to divest from these private investments as early as possible, but within the next 10 years. Additionally, within this policy the university hopes to divest from public investments within 5 years. Previously, in 2015 and 2017, Georgetown committed to divesting from coal and tar sands, respectively.</i></p>	

Section Total (19 out of 29)	B
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Grading

Section Overview

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

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

Planetary Health Grades for the Georgetown School of Medicine

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

Section	Raw Score	Grade
Planetary Health Curriculum (30%)	32 / 58 = 52%	C
Interdisciplinary Research (17.5%)	10 / 19 = 52%	C
Community Outreach and Advocacy (17.5%)	5 / 14 = 36%	D+
Support for Student-led Planetary Health Initiatives (17.5%)	10 / 15 = 67%	B
Campus Sustainability (17.5%)	19 / 29 = 66%	B
Institutional Grade	55%	C+