



Planetary Health Report Card:

University of Cambridge

2020-2021 Contributing Team:

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Summary of Findings

Curriculum	C
<p>Strengths: The core curriculum covers healthcare sustainability particularly well, gives a good overview of the links between climate change and health, and encourages students to think about how they can take action in their personal and professional lives. Faculty members are very engaged and are working to strengthen the curriculum.</p> <p>Recommendations:</p> <ul style="list-style-type: none"> ● Generate learning outcomes that address planetary health, with focus on its relation to health justice ● Aim to address these outcomes through a practical and integrated approach across the whole course ● Continue defining specific plans and provide support for development of teaching sessions and resources 	
Interdisciplinary Research	D +
<p>Strengths: Cambridge Zero, focuses on topics related to planetary health, although it is not its primary concern.</p> <p>Recommendations:</p> <ul style="list-style-type: none"> ● Join the Planetary Health Alliance and/or Global Consortium on Climate and Health Education ● Set-up dedicated researchers, groups or departments whose primary focus is planetary health research ● Work within the institution to generate research interest and communication on the topic of planetary health ● Aim to work collaboratively with local communities to generate research questions 	
Community Outreach and Advocacy	F
<p>Strengths: Cambridge Zero researchers have collaborated with community organisations through CUSPE</p> <p>Recommendations:</p> <ul style="list-style-type: none"> ● Begin a process of engaging with local communities on issues of planetary health, such as by working with local hospitals to produce information for patients or running awareness events ● Regularly communicate with students and staff within the School on issues of planetary health 	
Support for Student-Led Initiatives	C
<p>Strengths: The University and Medical School is supportive of student-led planetary health initiatives, for example, the institution’s Living Labs projects offer students the opportunity to carry out sustainability focussed internships.</p> <p>Recommendations:</p> <ul style="list-style-type: none"> ● Develop further opportunities for students to carry out research and QI projects related to planetary health and sustainability ● Appoint a student liaison representing sustainability interests to work with the medical school faculty 	
Sustainability	C
<p>Strengths: The institution-wide Office of Sustainability has multiple full-time staff and there are multiple representatives at the School of Medicine. New buildings utilize sustainable building practices.</p> <p>Recommendations:</p> <ul style="list-style-type: none"> ● Work within the University to advocate for increased sourcing of renewable energy and retro-fitting of older buildings under the remit of the School ● Improve access and uptake of environmentally friendly transport options to placements for clinical students ● Improve existing and create new guidance for students and staff on sustainable events, recycling, food etc. 	

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>Elective courses play a less prominent role in the Cambridge medical curriculum. Although there are Student Selected Components, these are student-led projects rather than taught-courses, and there are minimal options for students who wish to explore sustainable healthcare or planetary health in significant detail. In the 3rd year (intercalation year) students pick one of a diverse range of topics to study. To score higher on this metric, options for students in intercalating years to study planetary health would need to be created.</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>This topic is covered during the Year 4 Improving Health Lecture on Climate Change, delivered by Dr James Smith, which aims to address the learning objective “Discuss how the environment and health interact at different levels including the health impacts of climate change and the health co-benefits of climate action.” It is not covered elsewhere in the curriculum.</i></p> <p><i>In this lecture, the effects on health by extreme heat and changing temperature of the climate are discussed as part of a number of other factors, which interplay to cause a variety of health effects. There is also discussion on one slide of increased occurrence of wildfires, and how extreme heat affects health from directly causing death to affecting concentration. There is no mention of socioeconomic and racial disparities in extreme heat exposure.</i></p> <p><i>To be considered to be explored in depth, this topic would need more substantial attention, such as educating medical students on how to approach patients directly impacted by extreme heat, and there would need to be discussion of socioeconomic and racial disparities in exposure.</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>This topic is covered in one Year 4 lecture: Environmental Change and Health, and briefly in one Year 2 lecture: Fungi (Pathology).</i></p> <p><i>The lecture in Year 4 covers, over 2 slides, some impacts of events ranging from heat waves to floods. It covers individual impacts such as mental health, as well as the rising number of hospitalisations and deaths. There is also a slide on the distribution of these impacts, which disproportionately affect the poor.</i></p> <p><i>The Year 2 lecture on Fungi briefly discusses weather events such as tornadoes or tsunamis as a cause of wound contamination by environmental filamentous mould, which causes disease. This constitutes around 1-2 lines in the lecture handout. There is also a lecture on Inflammation (Pharmacology) that mentions environmental triggers such as high UV radiation as triggers for autoimmunity, however an explicit link between UV radiation and extreme heat as a consequence of climate change was not made. A score of 2 is given here as this was not a learning objective or at least a moderate to large focus of any of the lectures. To improve coverage, the course could address how healthcare systems are impacted by extreme weather events, how extreme weather specifically impacts disease morbidity, and how we can assist patients directly impacted by extreme weather events such as flooding.</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.

In 4th Year, the lecture on Environmental Change and Health includes brief discussion of mosquito-borne infectious diseases. Despite the fact that one of the Global Health Learning Objectives is to be able to ‘Discuss the causes and controls of global pandemics’, we found little evidence that this is achieved in teaching sessions and learning materials, so we do not feel that the topic is discussed in sufficient detail to score 3 points.

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.

This topic is covered during the Year 4 Improving Health Lecture on Climate Change, which aims to address the learning objective “Discuss how the environment and health interact at different levels including the health impacts of climate change and the health co-benefits of climate action.” This lecture provides in-depth discussion of the impact of air pollution, with multiple slides addressing the premature deaths that air pollution causes, and discussion of the impact of nitrous oxide and particulate matter on increasing morbidity from conditions such as asthma, coronary heart disease and lung cancer. The lecture also discusses how air pollution has been made a focus of work from the Royal College of Physicians and Royal College of Paediatrics and Child Health, whose 2016 report discusses the lifelong impact of air pollution on morbidity and mortality. However, despite extensive teaching on the diseases that are impacted by climate change, such as in the Clinical Pathological Conference on Dyspnoea, the impact on climate change is not covered in any other teaching sessions. Despite scoring 3 points for this metric, the curriculum does not address how cardiorespiratory disease interacts with socioeconomic and racial disparities to cause differential impact across populations, and so the curriculum could still be improved to address this.

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.

This topic is covered in one Year 4 Improving Health lecture on Environmental Change and Health. It is covered across several slides, covering that dementia may be linked to air pollution exposure, the effects of extreme weather impact on depression, anxiety, PTSD and student cognitive performance. There is also mention of mental health with regards to delayed impacts of extreme weather events. Mental health and neuropsychological impacts of climate change are not however addressed as a topic on their own (they are mentioned as part of impacts of air pollution and extreme weather). To improve coverage of this metric, the course could integrate teaching into psychiatry teaching sessions, to address more closely the mechanisms of the links between mental health and climate change, and discuss specifically how the health community can support patients and colleagues to cope with the reality of the climate crisis.

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.

Though the Demographics lectures in the Human Reproduction course of 2nd year do discuss the importance of food security and its role in the reduction of mortality rates in the 20th century, at no point does the curriculum highlight how future food security will be impacted by ecological damage and climate change.

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.
<i>This topic is not addressed by the curriculum objectives or content delivered in the year 2019-2020.</i>	

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.
<i>This topic is covered very briefly during the Year 4 Improving Health Lecture on Climate Change, which aims to address the learning objective “Discuss how the environment and health interact at different levels including the health impacts of climate change and the health co-benefits of climate action.” However it is only one slide of the lecture that addresses this issue, and it only refers to how rich people emit more, while poorer people are affected more by climate change. Unequal global impact of climate change is therefore not addressed in terms of which populations are more affected, where and how, or the reasons for this disparity. The discussion is therefore too superficial to be awarded points for being briefly covered or explored in depth..</i>	

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.
<i>This topic is covered across 2 lectures in the Human Reproduction module in Year 2. One lecture on Puberty includes a slide on xenoestrogens and pollutants that can delay or accelerate puberty. In another lecture on IVF there is mention of environmental chemicals (such as pesticides, lead) as an idiopathic cause of poor semen quality, and environmental inducers of oxidative stress (such as BPA) having a role in female infertility.</i>	

A score of 2 points is awarded, as although it is covered across 2 lectures, the topics are only briefly mentioned, with low depth of coverage, and is not reasonably determined to be a focus of any one lecture.

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.

This topic is not mentioned in any teaching sessions, and is not in the curriculum.

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.

This topic is not mentioned in any teaching sessions.

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.

In the lectures on Inflammation in the Pharmacology module of 2nd Year, it is very briefly mentioned that pollutants such as smoke from cooking with wood are a significant contributing factor that leads to

COPD in low-income countries. Given how superficially this is discussed, and the fact that no other marginalised populations are mentioned, we did not award any points.

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.

Whilst nutrition is a key theme of the Improving Health Course that spans Years 4 to 6 of the curriculum, the course does not address environmental benefits of a plant-based diet in sufficient detail. In the nutrition theme, plant-based diets and the Mediterranean diet are linked with health benefits, however, it is only in the Climate Change lecture given in Year 4, that the environmental benefits of a plant based diet are discussed briefly in the context that individual actions people can take to reduce their environmental impact. The depth of exploration of this metric could be improved by linking up these learning themes.

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.

This topic is explored by the Year 4 Improving Health Lecture on Climate Change and the Year 6 Lecture on Sustainability.
In the Year 4 Lecture, there is in depth discussion of how individuals can advocate for change on a personal and professional level. In particular, the lecture focuses with an illustrative case, on how in a General Practice setting clinicians can incorporate reviewing the type of inhalers a patient is using for asthma (and switching from the most to the least polluting types), into their normal asthma review routine.
In the Year 6 Lecture, the role of the NHS in contributing to climate change was addressed, and students heard from two outside speakers, Dr Chantelle Rizan and Dr Tom Pierce. Dr Rizan gave a comprehensive talk on how the carbon footprint of an operating theatre can be assessed, and gave

practical ways that this can be addressed. One of the strengths of this talk is that it enabled students to understand that physical waste is a relatively small component of the contribution of healthcare to climate change, and that there are more impactful areas where sustainability actions can be focussed. Dr Pierce discussed how anaesthetic gases contribute significantly to the greenhouse gases burden in the atmosphere, and how clinicians and hospitals could change their practice to address this. Both talks were informative and practical in focus, and the coverage of the topics was in great enough depth to enable a score of 3 points for this metric.

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

There is currently no teaching delivered on strategies for discussing the health effects of climate change with patients.

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.

Students are taught to take a social history during the Clinical Communications Skills course and during an Improving Health session in Year 4 on the Social Determinants of Health. Students are taught that the social history should include asking patients about exposures to environmental and occupational hazards, including smoking. It is expected that students ask these questions in hospital clerking and during examined communication skills sessions. However, it should be noted that currently this teaching does not cover asking about exposure to the specific environmental hazards of air pollution and pesticides.

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.
<p><i>The faculty are looking at making significant changes to the course, particularly the Improving Health course, to bring together the themes of Health Justice, and this includes addressing planetary health in a more integrated way across the curriculum. The faculty of the School of Clinical Medicine has been very engaged with the Planetary Health Report Card. We expect that this will be reflected by improvement in the scores in the coming years.</i></p> <p><i>We have already seen minor improvements to the curriculum in the 2020/21 year:</i></p> <p><i>This year (2020/2021 curriculum year) there has been the addition of an optional lecture in the SECHI (Social and Ethical Context of Health) course which students in the first year of the course participate in. The objectives of this lecture were to:</i></p> <ul style="list-style-type: none"> - <i>Explain what is meant by planetary health, sustainability and climate change</i> - <i>Be able to apply ethical concepts to decisions in sustainable healthcare</i> - <i>Connect the ideas of catastrophe, complexity and compassion in the context of climate action</i> - <i>Outline the potential role of the healthcare professional in relation to large scale societal change</i> <p><i>Moreover, the Year 4 Lecture on Environmental Change and Health is continually being adapted by Dr James Smith, and we note that the 2020 lecture had greater coverage of the impact of extreme heat on patients.</i></p>	

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.
<p><i>Planetary health is addressed in the Year 4 Improving Health lecture on Climate Change, and the Year 6 Improving Health Lecture on Sustainability. Both sessions are delivered by Dr James Smith, with</i></p>	

guest speakers for the Year 6 component. The scores given for the curriculum aspect of the Planetary Health Report Card are therefore largely scores for how well these two lectures cover the topics, with some mention in passing in other teaching sessions, without any in depth discussion. There are a number of teaching sessions where metrics of the report card could be addressed to enable more depth of coverage, and to encourage students to include Planetary Health in their approach to these topics. In the pre-clinical years, relevant topics are discussed only very rarely, usually from a purely physiological perspective. The vast majority of the planetary health education is in the clinical half of the course.

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.

There is currently no program like this within either the faculty of Biology or the Cambridge School of Clinical Medicine.

Section Total (27 out of 58)	27
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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 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>There is a department of Public Health and Primary Care which has researchers whose primary focus is on climate change and sustainability. 'Global Health' and 'Sustainability' are one of 4 cross-cutting themes in the research of the Cambridge Public Health department. A score of 2 is given as there are only several faculty members whose focus is on healthcare sustainability or planetary health research.</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.
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The Cambridge Public Health department is an interdisciplinary group across the University which has a number of research themes, one of them focusing on the links between nature, health and built environment. However there is no specific department dedicated to planetary health research.

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.

There is no such process to allow disproportionately impacted communities to give input on research agenda at the medical school, hence a score of 0 is given.

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.

There is an institutional website (environment.admin.cam.ac.uk) that includes a collection of links to potential funding opportunities, and university efforts for sustainability, but its focus is not planetary health.

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.
<p><i>In 2021, Cambridge Zero, a new climate change initiative at the University of Cambridge, will host a series of research symposia on their themes of research for zero carbon living, including one on their theme of Health and Society.</i></p> <p><i>Planetary Health was also the theme for the Annual Public Health@Cambridge Showcase in 2019, which included presentations of local Planetary Health research, as well as external speakers such as Sir David King, who was permanent Special Representative for Climate Change for the Foreign Secretary from September 2013 until March 2017.</i></p> <p><i>Since its foundation in 2017, the Cambridge Climate Lecture Series has taken place annually. According to its webpage, 'its principal aim is to increase dramatically the level of public interest and engagement on the topic of climate change.' The group also initiated a podcast series on Climate Change in 2020. However, this was not included in our evaluation as while it is run by some academics of the University, it is not technically part of the University itself.</i></p>	

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.
<p><i>Neither the institution or medical school is currently a member of the Planetary Health Alliance or the Global Consortium on Climate and Health Education.</i></p>	

Section Total (7 out of 19)	7
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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>Healthy Planet Cambridge has a project of visiting local schools to educate students on the links between climate change and health, but as a student-led organisation this is independent of the medical school itself. Also, the recently launched Cambridge Zero initiative for research into the effects of and solutions to climate change puts some emphasis on planetary and environmental health. The initiative encourages collaboration with local organisations, such as through their work with Cambridge University Science and Policy Exchange (CUSPE) and Cambridgeshire County Council . Again, however, the medical school itself has no direct involvement.</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.

No such courses are offered in relation to any topics.

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.

No cohort-wide communications regularly discuss updates in planetary health or sustainable healthcare.

4. 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.

No such resources are visible either online or in the hospitals themselves

5. 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.

No such resources are visible either online or in the hospitals themselves

Section Total (1 out of 12)	1
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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.
<p><i>The Clinical School supports students for complete QI projects through new The Clinical School Leadership Programme. However, there is no specific support currently for sustainability QI projects and sustainability QI projects have not been actively encouraged by the Leadership Programme leads. The University-wide sustainability team promotes sustainability initiatives, with some examples in their case studies available here. The Living Labs programme looks like it offers some great opportunities, but no grants for student-led sustainability initiatives specifically. There is the option to apply for a paid internship, but since this doesn't take the form of a grant 2 points have not been awarded.</i></p>	

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.

By competitive application to the [MB/PhD programme](#), which takes place between Years 4 and 5 of the Standard Undergraduate Medicine course, students have the opportunity to complete a funded/partially funded PhD “...in any of the departments in the Clinical School, one of the university departments in biological sciences, or affiliated institutes (e.g. Gurdon Institute, CRUK Cambridge Research Institute, MRC Laboratory of Molecular Biology, Sanger Institute)” . None of the listed institutions have explicit research themes in planetary health or sustainable healthcare.

In general, the institution does not offer paid/funded research opportunities in any field specifically for medical students outside of the MB/PhD programme.

Medical students are given freedom during the 6 week ‘Student Selected Component’(SSC) in Year 4 to complete a project which could include quality improvement or research, provided they are able to find a mentor to support them in their project. However, there is a SSC database on the VLE which contains details of potential supervisors - currently only one of these lists ‘Climate Change and Health’ and ‘Sustainable Healthcare’ as research interests. This may make it more challenging for students to complete projects in this area if there is excess demand.

Whilst the [Living Lab project](#) does offer paid internships and unpaid academic projects, the paid internships are not research opportunities and do not focus on planetary health or sustainable healthcare.

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.

There is no medical-school specific webpage for locating planetary health and/or sustainable healthcare projects or mentors. While there is a ‘Student Selected Component’ database for students to find mentors for projects, there is currently only one supervisor on the database who lists an interest in ‘Climate Change and Health’ - there is also no specific webpage dedicated to the activities of the medical school as a whole in tackling climate change.

Whilst there is a page dedicated to student projects on the institution wide Sustainability website, this did not score points for the metric because it does not specifically discuss planetary health or sustainable healthcare.

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.

[Healthy Planet Cambridge](#) are a student group dedicated to educating and advocating for change on the links between climate change and health - they are an official student society of the University of Cambridge. Healthy Planet Cambridge have received funding from Clinical Students Society funds, which are supported by the Clinical School. The committee of Healthy Planet Cambridge for the year 2020-2021 has led the completion of the Planetary Health Report Card at the University of Cambridge.

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.
0	No, there is no such student representative.

There is no such student representative.

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.

Section Total (7 out of 14)	7
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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>The University of Cambridge has a Sustainability Team consisting of a number of full-time staff. Each department in the University has a volunteer Energy and Environment Coordinator, who attend central sustainability meetings, share the sustainability information received from the centre and lead on green impact. Within the School of Clinical Medicine, there will be between 12-15 individuals. There is an Energy & Sustainability Manager for Cambridge University Hospitals, which is the hospital associated with the medical school. Despite scoring full points for this metric, as far as the writers of this report card could tell, however, there are no staff members specifically responsible for the sustainability of 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.
<p><i>The University of Cambridge has announced plans to reach net zero emissions by 2038 . Since the commitment was only made in October 2020, plans of how this will be done and the rate of transition remain unclear.</i></p>	

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.
<p><i>According to the University's Sustainability team, there is no significant renewable energy incorporated within the Medical School's own buildings, however a proportion of the University's electricity is procured through a Power Purchase Agreement (PPA) guaranteeing that a certain proportion of the electricity purchased is renewably generated through a collective purchase with other universities in the UK over a 10-year-period. However, this PPA only commits the University to purchasing under 20% of its electricity through these renewable sources. While there are ambitions and plans in the making to increase this, points can only be awarded on the basis of existing arrangements. Link here.</i></p>	

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.
<p><i>The University requires that the Core Sustainable Building Policy is used for new building projects or refurbishments costing above £2million to be certified BREEAM (Building Research Establishment Environmental Assessment Method) 'Excellent' or equivalent approval. The BREEAM certification encompasses a rating system for assets related to 'energy, water, health and well-being, pollution,</i></p>	

transport, materials, waste, ecology and management processes'. The [University's policies](#) are applicable to buildings on the medical school campus.

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.

Cambridge city is very amenable to environmentally transport options - with safe cycle routes and accessible public transport (for example the 'Universal' bus route which runs through the city has a discounted rate for students). Most students use these options for travel within the city.

In the clinical years, students must travel to placements outside of Cambridge, and it is this aspect for which we award 1 point. Costs for travelling to and from placement are reimbursed for students taking public transport, and if students choose to carpool this is reflected in a greater value travel reimbursement (note that students who choose to travel alone by car to placement are still reimbursed but get more reimbursement if there is carpooling). However, there are points for improvement with this and this year we do not have access to data for how many students choose to travel by public transport vs. travel by car, or how the reimbursement value compares between public transport, car (single person use) and car (carpooled), so cannot comment on the uptake of more environmentally friendly options and nor if there is a significant financial incentive to carpool. Moreover, these reimbursements only apply to the very beginning and end of placement, and many students choose to commute to and from placement, both by car and public transport, more often than the reimbursement scheme provides for. It should also be noted that this strategy is not in itself advertised as a 'sustainability' initiative. The school could therefore do more to advertise the environmentally friendly options for travel to placements, and make more environmentally friendly travel options, such as public transport, carpooling and electric vehicles, more accessible/desirable. They could also look at expanding support for environmentally transport options to all travel between placement and Cambridge, not just that which it deems 'essential'.

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.
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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.
<i>Buildings associated with the medical school regularly have recycling bins available, though no sustainable options for disposing of food waste etc. are currently provided.</i>	

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.
<i>The Clinical School Cafe is run by CH&CO, who appear to put some consideration into the environmental impacts of their products and practices, such as intentionally serving local & seasonal food as well as more plant-based options. The medical school themselves, however, appear to have little direct role in this and do not significantly consider the sustainability of campus food, with the exception of ensuring that packaging from the cafe is frequently recyclable and compostable. At an institutional level, the University Catering Service does have an extensive sustainable food policy, but since the UCS doesn't run the clinical school cafe and as the question assesses the medical school specifically, this cannot be factored into the score.</i>	

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.

The Clinical School follows the commitment to University's Green Impact programme, which states that sustainability should be considered as part of all procurement. The University aims to meet ISO 20400 standards for Sustainable Procurement, with purchases that have 'the most positive environmental, social and economic impacts possible over [their] entire lifecycle' (ISO20400). Items purchased at the Clinical School in bulk such as paper and cups are 100% recycled and often recycled itself, this applies also to the Clinical School Cafe.

Some of the equipment used for clinical skills training is procured via Cambridge University Hospitals trust, as it is the same equipment used in the hospital. The sustainability of this equipment's procurement is therefore not considered directly in this report, however it is noted that the Clinical Skills Lab has minimal policies on reuse of clinical skills equipment e.g. reusing of packaging and equipment for practicing clinical skills on mannequins.

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.

There are medical school and institutional guidelines for energy-saving, water-saving, procurement and recycling that target labs, office spaces and individuals. While it is possible to more generally apply these to event planning as well, there is no specific guidance on sustainable event planning.

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.

There is a Green Labs initiative which helps labs across the University reduce the carbon-footprint of their work. There are guidance documents, action frameworks, and funding for energy-efficient equipment. Since the launch of the Equipment Replacement Programme in 2016, over 200 new freezers and 15 new drying cabinets have been replaced for more energy-efficient alternatives. This is a University-wide initiative that extends to all labs, including those associated with the medical school. While it is not a program specifically rolled out by the School, the sustainability team reports a good but varied take-up of the initiative by different labs of the School. We have therefore awarded 2 points for this metric.

Examples of engagement from Medical School departments/buildings/labs include:

- 6 Green Impact group award winners in 2020 - [here](#)
 - Green Impact Excellence Award winners include CRUK-CI in 2017-18 for their work on polystyrene shippers and MRC Epidemiology for their work on IT efficiency
 - 15 departments from the School have made use of the Equipment Replacement Programme, in order to upgrade to more energy efficient equipment, encompassing well over 120 projects
 - Several innovative energy and carbon reduction projects including [here](#) and [here](#).
- Representation from over 12 Medical School departments at Green Labs workshops, which themselves represent a number of labs

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.

The University of Cambridge committed in October 2020 to divest from fossil fuels through direct and indirect investments by 2030, but there is not known to be any progress made on this initiative. Moreover, this commitment to divestment does not include the colleges of the university - of which in January 2021, only two colleges of thirty-one are reported to be fully divested, with a few others committing to partial divestment.

There is extensive student organising on the issue of divestment, with the student group ‘Zero Carbon Cambridge’ leading the way to the University’s commitment to divestment, and they continue to organise on ensuring the fruition of these commitments. <http://zerocarbonsoc.soc.srccf.net/>

According to a 2016 working group on the University’s investment portfolio (source [here](#)) “..the University has no exposure to the most pollutive industries, such as thermal coal and tar sands, and no expectation of having any such exposure in the future. It also has negligible exposure to other fossil fuel industries. In relation to investments managed externally, there are no holdings in tar sands companies and only negligible holdings in thermal coal companies and any future holdings in such companies are expected to be negligible.” The University has pledged for ‘no future investment’ in these areas. Given that no evidence to back-up the commitment to divestment has so far been released, and there was no investment in coal and tar sands to begin with, we have awarded 1 point only for this metric.

Section Total (15 out of 29)	15
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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 an average of the section grades. 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 University of Cambridge School of Medicine

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

Section	Raw Score	Grade
Planetary Health Curriculum (30%)	27 / 58 = 47%	C
Interdisciplinary Research (17.5%)	7 / 19 = 37%	D+
Community Outreach and Advocacy (17.5%)	1 / 12 = 8%	F
Support for Student-led Planetary Health Initiatives (17.5%)	7 / 14 = 50%	C
Campus Sustainability (17.5%)	15 / 29 = 52%	C
Institutional Grade	40%	C-