Planetary Health Report Card:
University of Manchester Medical School

2020-2021 Contributing Team:
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Summary of Findings

Curriculum	F+

- Overall, there is a lack of medically-relevant planetary health topics in the curriculum, justified by statements from the medical school that these topics are not GMC-requirements. The planetary health content identified in this report is therefore dependent on individual lecturer or student preference. The GMC have, however, recently updated their Outcomes for Graduates to include an understanding of sustainable healthcare.
- Going forward, the curriculum would benefit from the incorporation of planetary health and sustainability topics across the entire cohort. This would bring Manchester in line with current standards, creating doctors who have an awareness of how the health of the population is closely aligned with the health of the planet.

Interdisciplinary Research	C+

- The Manchester Environmental Research Institute (MERI) at the university has a comprehensive research agenda including many aspects of planetary health and is connected with researchers based in the School of Medical Sciences. The MBChB programme may benefit from collaboration with MERI, taking advantage of its wealth of projects that explore how human health is being affected by climate and environmental change.
- We recommend that the medical school and/or university show support of planetary health initiative by joining either Planetary Health Alliance or the Global Consortium on Climate and Health Education.

Community Outreach and Advocacy	D

- Although the wider university is involved with multiple community-based projects concerning health and environment, there was no evidence that the MBChB programme is involved in these.
- The primary focus of the programme is, of course, to educate future doctors in medicine, it would be encouraging to see some involvement in outward-facing projects related to climate and health, particularly as this is a topic that is benefiting from increasing awareness in the community and across the world.

Support for Student-Led Initiatives	D+

- Student-led initiatives exist, but are minimal and could be further developed. The programme may benefit from the introduction of a dedicated student liaison/committee to advocate for planetary health on the MBChB programme.
- Closer collaboration between the MBChB programme and other departments throughout the university (e.g. MERI) may facilitate connections between research mentors and students, as well as enhancing the university and medical school's forward-thinking and climate-conscious reputation.

Sustainability	A+

- The University of Manchester Environmental Sustainability Team is well-organized and has far-reaching influence in all aspects of campus life, including carbon neutrality, renewables utilization, transportation, recycling, campus events, procurement, and divestment.
- The medical school adheres closely to the guidelines set by the Sustainability team, resulting in strong campus sustainability. Refitting the older medical school building and reaching carbon neutrality would further improve this.

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.
The medical school does not run any elective modules as a part of the MBChB curriculum. There is, however, the opportunity for medical students to intercalate, gaining a BSc(Hons) in Global Health, which covers concepts including key global health challenges, global determinants of health and illness, and innovative solutions. There are lectures which cover environmental factors that are producing new health controversies, challenges and opportunities.	

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.**
No evidence found.	

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.**
No evidence found.	

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.**

The MBChB curriculum touches upon this metric briefly in Intended Learning Outcomes (ILOs):

Gastroenterology (Year 3):

- *Describe the infective agents that may cause chronic diarrhoea in a patient. This discussion should include national and international/global perspectives.*

Infectious Diseases (Year 4):

- *Apply knowledge of the epidemiology, presentation and treatment of parasitic infections and how to investigate for these.*

These ILOs are more focussed on the epidemiology of infectious diseases and do not include a discussion on the changing patterns of infectious diseases as an impact of climate change.

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 metric is covered briefly in one of the lectures as a part of the MBChB core curriculum and is included in an ILO.

Cardiorespiratory Fitness (Year 1):

- *To demonstrate knowledge of the pathophysiology of asthma, including: aetiology, triggers and epidemiology.*

Professor Angela Simpson delivers a lecture entitled 'Asthma – Where are we now?', in which various factors are shown to correlate with higher incidence of asthma. One such factor was air pollution, particularly NO_2, both in the UK and globally, which was covered over several slides.

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.**

No evidence found.

With regard to addressing mental health, medical school uses the term 'environment' to represent the living arrangements, background, culture and current situation of an individual rather than that of the planet. Therefore, this metric is not covered within the curriculum.

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.**

The medical school has multiple ILOs which include the role of diet in aspects of health and disease.

- *Demonstrate the ability to undertake health promotion and monitoring activities such as monitoring growth and development and eliciting smoking and dietary information with the ability to discuss appropriate interventions.*

- *Elaborate on the role of diet, obesity and lifestyle in the aetiology, progression and experience of acute and chronic diseases.*
- *Discuss the role of nutrition, diet and lifestyle in health within the primary care setting.*
- *Understand how diet, alcohol, stroke and cancer influence the determinants of behavioural and physical health.*

The ILOs do not include teaching on the impact of climate change and ecosystem health on food and water security and how these can, in turn, influence health.

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.**

No evidence found.

The health of marginalised populations is highlighted throughout the curriculum, but focuses on the impact of income, socioeconomic status, poverty, diet and lifestyle on health and disease and does not explore how climate change can impact these groups of people.

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.**

The MBChB curriculum does not currently cover how climate change is impacting the health of populations both locally and globally, nor does it include the inequality of the effects of climate change or the planetary environment on the health of different populations.

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.**
No evidence found.	

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.**
No evidence found.	

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.**
No evidence found. This might not feel wholly relevant to the UK, although it is important to be aware of the health challenges caused by climate and environmental change that are faced by indigenous communities across the globe and, in fact, to learn from them in terms of how they have acted as custodians of the environment, recognizing the interconnectedness of all living things, including the impact of all elements of the planet on well-being and health.	

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.

This topic is briefly covered in some of the ILOs throughout the MBChB curriculum.

- *Medicine & Surgery (Year 3): Explain how the wider determinants of health, occupational, environmental & cultural factors may influence the patients' and their immediate family's health experience and lead to inequalities in health and health outcomes. Be aware of inequity in accessing health services for vulnerable populations.*
- *Children's Health (Year 4): Define the social and environmental determinants of child health in the UK and some of the particular health needs of vulnerable groups in child health e.g. refugees, looked after children*

Specific determinants of health, however, are not specifically covered in the online learning materials.

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.**

No evidence found.

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.**

No evidence found, although several student societies have taken an interest in this topic.

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**
No evidence found, although the medical school does teach a number of strategies for navigating difficult conversations with patients, which could be repurposed for conversations about the health effects of climate change.	

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.
A comprehensive social history, including exposure to environmental and occupational hazards, is an integral part of taking a patient history that is taught at the medical school. Students are made aware of specific environmental exposures that are common in the region and are related to specific health problems (e.g. dye manufacturing, cotton mills, asbestos).	

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.

No curriculum reform projects have been implemented yet, but there are intentions of introducing a sustainable healthcare topic into the 5th year curriculum. A "Climate in the Curriculum" student group has also begun working with the medical school to integrate planetary health education into the medical school 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.**
There are no planetary health or sustainable healthcare themes in the MBChB curriculum. No lectures or ILOs focus on these themes.	

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.**
No evidence found.	

Section Total (9 out of 58)	**9**

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.
Professor E. Johnstone (School of Medical Sciences; Division of Developmental Biology & Medicine) studies the effects of pollution on pregnancy outcomes and post-natal development, although their primary research focus is on foetal growth restriction. Link here.	

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.

The Faculty of Science and Engineering includes the Manchester Environmental Research Institute, whose goal is to "deliver the evidence base and solutions to tackle the challenges of global change and its effect on health care, food security, water resources and energy production". In doing so, there are collaborations with researchers throughout the university, including the School of Medical Sciences. Link here.

The Faculty of Biology, Medicine and Health also includes a Centre for Occupational and Environmental Health. One of the research areas specified on the website is Environmental Epidemiology, which, according to the website, has included research into the effects of environmental exposures (namely, temperature and air pollution) on mortality. Link here.

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.

The Faculty of Biology, Medicine and Health, which includes the School of Medical Sciences and the MBChB programme, involves members of the public in all aspects of their research, including decision-making processes as part of their Social Responsibility programme. Link here.
Throughout the institution, while some patient groups were involved in research areas that concerned them (e.g. older people & MIRCA), there was no evidence that people who are disproportionately affected by climate change and environmental injustice are involved in the decision-making process regarding that research agenda. Link here.

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.
The institution has a website centralizing its goals regarding environmental sustainability. The homepage includes alphabetically-ordered links to each area (e.g. climate change, travel, waste), and each webpage includes resources to inform the reader on sustainable travel to the university, for example. Within each area, there are links to opportunities to get involved in relevant events and projects. As far as can be seen, however, there are no links to relevant funding opportunities, and although there are contact details provided, these are not for people dedicated to planetary health, and the website is easy to get lost in! Link here. *The Manchester Faculty of Biology Medicine and Health has one webpage briefly explaining 4 goals to create a sustainable Faculty (see link below). There is a link to an information booklet 'Easy Everyday Eco Actions for Everyone'. The contact details of the sustainability lead for each School within the Faculty, including that of Medicine, are also included. The information is not orientated towards health but is more focused on environmental sustainability. Link here.*	

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.
Manchester Medical Society: Delivering Sustainable Healthcare & Presidential Address 20/01/21. Link here.	

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.**
Neither the medical schoor nor the institution has joined the Planetary Health Alliance or the Global Consortium on Climate and Health Education.	

Section Total (11 out of 19)	**11**

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.

The institution supports and collaborates with a number of community organizations to promote planetary health:

- *Incredible Edible, a non-governmental organization (NGO) promoting education in climate change and adaptations to enhance urban food resilience*
- *The Manchester Climate Change Agency, a community interest company leading climate adaptation work in Manchester*
- *City of Trees, a local NGO supporting climate adaptation through afforestation*

Students across the university are encouraged to participate in the Stellify Award. As part of this, students undertake "Ethical Grand Challenges", covering sustainability, social justice and workplace ethics. Students are also obliged to undertake a volunteering role in the community, which may include partnering with community organizations in such a way that promotes planetary and environmental health, however this is dependent on individual students' interests. Link here.

No evidence of meaningful partnerships between the medical school and community organisations was found.

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.

The institution provides a number of opportunities for local communities concerning planetary health:

- *Good water management, including a free online course exploring the importance of clean water and sanitation*
- *The Take a Bite out of Climate Change programme, which engages with the local community to promote awareness of the climate impacts of food*
- *The Bluedot Festival, which encompasses a sustainability and climate theme, provides educational programmes and advice on campaigning around issues of climate change No evidence of community-facing courses or events involving the medical school was found.*

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.**

Although medical students receive regular communication from the Faculty of Biology, Medicine & Health and also from OneMedBuzz, the medical school's newsletter, there is no evidence that planetary health or sustainable healthcare topics have been included in these emails.

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 evidence found for Manchester Foundation Trust Hospitals (MFT) or Lancashire Teaching Hospitals (LTHT). An email inquiry to ECOteam@mft.nhs.uk was not answered.

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.

The LTHT website contains 3 downloadable patient leaflets concerning heatwave advice. There is, however, no mention of the link between heatwaves and climate change.

LTHT also encompasses the Healthier Lancashire and South Cumbria initiative, one of 44 Sustainability and Transformation Plans that are being developed to deliver the NHS Five Year Forward View. However, this is more targeted at improving quality, developing new models of care, improving health and wellbeing, and improving service efficiency. Although this may benefit the climate and environment indirectly, it is not of direct significance. The website linked below is patient-focussed. Link here.

According to their website, MFT has declared a climate emergency in 2019, building on the MFT Sustainable Management Plan, published in 2018. This focuses more on how MFT can provide better sustainable healthcare and reduce its environmental footprint rather than how improvements in these areas might improve population health. The Green Impact and Green Reward Scheme was implemented to encourage learning and proactive behavior change that can impact individuals' environmental impact, although this is targeted for trust staff rather than patients. An email inquiry to ECOteam@mft.nhs.uk was not answered. Link here.

Section Total (3 out of 12)	**3**

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.

The institution promotes participation in the Stellify Award, which includes a sustainability challenge for all first year students. The challenge is a 2.5 hour simulation activity where students are challenged to create plans for a new campus, while global responses to climate change trigger a series of 'game changing' interventions.

The university encourages applications to the Better World Fund to fund projects in the following categories:

- *Environmental sustainability and / or Living Labs projects*
- *Innovation in Social Responsibility in the curriculum*
- *Local community engagement projects*
- *Widening Participation*

There is up to £3000 available for successful projects. Link here.

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.
There was no evidence of any funded research opportunities for medical students. As part of the MBChB programme, medical students undertake a dissertation-style project of their choice each year. This could include research opportunities related to planetary health or sustainable care, but is dependent on the projects offered by supervisors.	

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.**
Within the Faculty of Biology, Medicine and Health, there is a website that briefly outlines faculty goals to improve sustainability and provides contact details for the Sustainability Leads at each School, including the School of Medical Sciences. This website is not specific to the medical school. There is no information provided on related projects.	

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.**

There is no student-led society that is dedicated to sustainability or planetary health. There are, however, some societies that encompass these themes within their wider goals (e.g. Manchester Global Health Society, Students for Global Health).

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.**
No evidence found.	

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.

- *Speaker series organised by Students for Global Health Society entitled "Climate Change: a global health emergency" with Dr Murugesan Raja, a member of the Manchester Climate Change Board and the Clinical lead for Respiratory Medicine for Central Manchester Clinical Commissioning Group.*
- *Volunteering opportunities at the Jodrell Bank site with gardeners, fern and fungi experts, beekeepers, birdwatchers, wildlife experts and gooseberry growers protecting and supporting the biodiversity in 35 acres of gardens and arboretum in Manchester.*

Section Total (5 out of 14)	**5**

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
The University of Manchester has an award-winning Environmental Sustainability Team that works on several overarching themes, including carbon, climate change, construction, energy and water, food, labs, living campus, purchasing, research, teaching and learning, travel and waste. *The Vice President for the Social Responsibility Team is a clinical academic and senior lecturer with the medical school. They also work in a clinical role at MFT.*	

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.

The University of Manchester has a stated goal of carbon neutrality by 2038, with a detailed process to progress carbon reduction updated September 2020 that includes a number of proposed activities to support a zero carbon pathway that are currently being discussed and costed. These processes encompass buildings, infrastructure, policy, and procedures. The medical school falls under this institutional umbrella.

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.
The medical school is integrated into the larger University of Manchester campus, and normally utilizes facilities across the campus for teaching. While we were unable to collect data on the current utilization of renewable energy for medical school buildings' energy needs, the University of Manchester declared in November 2020 that the University will switch to 100% offsite renewable energy when it renews its contract in 2021. Through this process, 100% of university electrical consumption will be certified using REGO (Renewable Energy Guarantees of Origin) and will also form a "Power Purchase Agreement" (PPA) with a renewables generator.	

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.
The University of Manchester has developed a set of institutional guidelines, the Environmental Sustainability Project Tracker, that detail the environmental sustainability considerations that new-builds and major refurbishments must use during design and construction. These guidelines are comprehensive and apply to the medical school. They detail environmental considerations at each	

stage of the project, as defined by the Royal Institute of British Architects, and require the signature of the University's Head of Environmental Sustainability at each stage. The guidelines include the following broad categories: energy, water and drainage, waste and materials, transport, BREEAM, pollution and construction, biodiversity, climate change, post occupancy evaluation, and communication and research.

Additionally, the Manchester Cancer Research Centre, which is associated with the medical school, has a BREEAM rating of "Excellent" with a score of 72.18%. This rating and ratings for several other University of Manchester building projects can be found on the BREEAM website.

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.

The main medical school teaching building, Stopford, is located on Oxford Road. Due to city regulations, private cars are not allowed to drive on Oxford Road, which is reserved only for city buses and city-commissioned taxis. The University provides abundant information on sustainable travel methods to and from campus and most students walk or use public transport (tram, bus, train, etc.) to commute to and from campus. Additionally, the medical school has ample bicycle parking and lockers to encourage cycling as a transportation method.

Travel guidance and resources for students and staff can be found here.

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.

The University of Manchester has implemented a comprehensive conventional recycling program with several recycling points for metal, plastic, and paper across the campus, including in the medical school. This results in 60 waste streams managed by the Directorate of Estates and Facilities, with most of these recycled/re-used. Additionally, food waste bins are readily available to those who utilize the medical school facilities at the Students Union (just across the road from Stopford), Small World Cafe (just up Oxford Road), and the Eats Restaurant in University Place. Food waste from these bins is sent to ReFood, who use anaerobic digestion in their composting process.

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.

While the medical school does not have any dedicated cafes, the University at large has committed to environmental sustainability in its food services (including on-campus restaurants, residence halls, and events). Specifically, the University has Fairtrade university status, sources free-range eggs and farm-assured chickens, ensures all fish appears on the Marine Conservation Society approved list, and provides free tap water from all catering outlets and at water fountains across campus. The Sustainable Restaurant Association also assesses University cafes and restaurants on Society, Sourcing, and Environment and has awarded 3 stars to Food in Residence, 3 stars to the Greenhouse Cafe, and 2 stars for Christies Bistro.

The University's sustainable food policy may be found here and it has also committed to eliminating all single use plastics in cafes and labs by 2022.

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 medical school coordinates procurement through the University's Central Procurement Office, and must thus adhere to the office's Responsible Procurement guidelines. These include engaging suppliers with a supplier engagement tool to determine their values in terms of forced labour, plastic use, climate emergency declaration, carbon neutral deliveries, and supply chain transparency and visibility. Staff are encouraged to buy through contracted suppliers who comply with health and safety regulations and align with the University's broader responsible procurement objectives. These suppliers are also working with the University's Environmental Sustainability Team to minimise packaging and decrease single use plastic and carbon.

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.

Events held at the University of Manchester medical school fall under the jurisdiction of the University of Manchester Conferences and Venues Team. This team's sustainability policy and sustainability mission focus on sustainable catering and sustainable audiovisual (AV) support. Through the commitment to sustainable catering, the Conferences and Venues Team purchases organic vegetables from Manchester Veg People (a local cooperative of growers) and organic milk from the local Gazegill Organics. The University has been a Fairtrade university for 16 years as of 2021 and purchases OneWater (ethical bottled water donating all profits towards PlayPump systems in Africa). These initiatives have resulted in several awards for the catering team, including the 2016 Sustainable Restaurant Association's Food Made Good Award. Through the commitment to sustainable AV support, the team uses energy-efficient LED screens and technologies to turn off lighting and AV equipment if not in use. Conventional bulb projects have been replaced by laser projectors, to reduce power consumption and use of toxic metals. Packaging and batteries for all equipment is recycled.
The Students' Union also has a Sustainability Checklist for student-hosted events, including a Food & Drink checklist, Transport checklist, Energy Reduction checklist, Ethical Items for Events, Marketing Checklist, and Waste Checklist.

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.

The University of Manchester Faculty of Biology, Medicine, and Health (which includes the medical school) has a Sustainable Labs Network to allow staff to share best practice in sustainable labs and learn and guide each other. Labs are also provided with guidance on energy use and water use reduction in labs. Labs may also send teams to participate in LEAF (Laboratory Efficiency Assessment Framework), a framework to improve sustainability in lab spaces. LEAF provides clear, feasible environmental actions and a spreadsheet in which to record these. Each action is categorised as Bronze, Silver, and Gold, with a focus on quantifying efficiency and sustainability through in-tool calculators. The LEAF cycle runs every year from October to December, with a midway audit in March/April and a final audit in October/November.

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.
According to https://gofossilfree.org/divestment/commitments/ , the University of Manchester has fully divested from fossil fuels. That is, the University has made a binding commitment to end investments in fuel reserve and extraction companies by 2022 and to decarbonise all investments by 2038. The University plans to shift these investments to carbon efficient companies.	

Section Total (28 out of 29)	**28**

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 Manchester School of Medicine
The following table presents the individual section grades and overall institutional grade for the University of Manchester 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%)	9 / 58 = 16%	F+
Interdisciplinary Research (17.5%)	11 / 19 = 58%	C+
Community Outreach and Advocacy (17.5%)	3 / 12 = 25%	D
Support for Student-led Planetary Health Initiatives (17.5%)	5 / 14 = 36%	D+
Campus Sustainability (17.5%)	28 / 29 = 97%	A+
Institutional Grade	**42%**	**C-**