



Planetary Health Report Card (Medicine): *Lancaster University Medical School*



Lancaster University
Medical School

2024-2025 Contributing Team:

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Land acknowledgment: None.

Summary of Findings

Overall Grade	A-
Curriculum	A
<ul style="list-style-type: none"> Through the use of a “spiral curriculum”, sustainable healthcare and the impacts of climate change are thoroughly integrated throughout the medical school years – there is a particularly pertinent focus on healthcare services’ contributions to climate change and principles of sustainable healthcare. Recommendations: There is room for further scope and detail into medical effects climate change poses to the current population through various specialties. 	
Interdisciplinary Research	A
<ul style="list-style-type: none"> Lancaster Medical School fosters various interactions with both its students and the wider community to develop ideas and emphasise the importance of planetary health. Through its combination of academic initiatives, extracurricular activities, and community engagement, the school highlights the significance of environmental sustainability and works to integrate these values into the broader educational experience. Recommendations: To advance the integration of planetary health, Lancaster University should enhance research opportunities by actively inviting community members to participate. This collaboration would ensure that sustainable practices are not only researched but also implemented across the community. 	
Community Outreach and Advocacy	B
<ul style="list-style-type: none"> Lancaster University provides the public with accessible events and opportunities annually regarding sustainability utilising a wide range of media. Different teams within the institution successfully host a range of projects targeted at different demographics ranging from school children to fellow academics. Recommendations: Dedicated planetary health resources would be beneficial for not only the public but the student body. The development of such resources would closely align with the university’s commitment to sustainability. 	
Support for Student-Led Initiatives	A-
<ul style="list-style-type: none"> Lancaster University and its medical school offer students a wide range of opportunities, both academically and recreationally, to engage with sustainability and planetary health throughout their studies. Student involvement in these initiatives is actively supported and encouraged by faculty and staff, fostering a collaborative environment where students can contribute to and benefit from sustainability-driven projects and events. Lancaster University offers medical students to intercalate in various degrees surrounding public health and sustainability. Recommendations: More events should be organised where students can directly engage with members of the local environmental community to better understand the climate and environment and perhaps a greater emphasis on how healthcare professionals can collaborate with these communities. 	
Campus Sustainability	A-
<ul style="list-style-type: none"> Lancaster University has abided by its commitment to campus sustainability with established sustainable procurement and operational guidelines in place. Furthermore, the Net Zero energy centre set to be completed in Spring 2025 will boost the renewable energy supply of the campus by 25% annually providing substantial progress towards the institution’s net zero goal. Recommendations: The final energy development project yet to be completed by the university is the Solar Farm under construction projected to contain 17,000 solar panels. Additional support to obtain LEAF status and elevate existing accreditations could prove to be beneficial within departments utilising laboratories. 	

Statement of Purpose

Planetary health is human health.

The Planetary Health Alliance describes planetary health as “a solutions-oriented, transdisciplinary field and social movement focused on analysing and addressing the impacts of human disruptions to Earth’s natural systems on human health and all life on Earth.” This definition is intentionally broad, intended to encompass the multitude of ways that the environment can affect health, including water scarcity, changing food systems, urbanisation, biodiversity shifts, natural disasters, climate change, changing land use and land cover, global pollution, and changing biogeochemical flows. The health of humanity is dependent on our environment, and our environment is changing rapidly and in disastrous ways. Although the World Health Organization has called climate change “the greatest threat to global health in the 21st century,” many 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 colour, older adults sensitive to health threats, and individuals in low-resource settings), these issues are inherently ones of equity and justice.

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

Definitions & Other Considerations

Definitions:

- **Planetary Health:** is described by the Planetary Health Alliance as “the health of human civilisation and the state of the natural systems on which it depends.” For example, topics such as climate change, declining biodiversity, shortages of arable land and freshwater, and pollution would all fall under the realm of planetary health. Both planetary health and traditional ‘environmental health’ examine the relationship between human health and the external environment, including extreme temperatures, chemicals, vector-borne diseases, etc. Planetary health explicitly concerns itself with the potential health harms associated with human-caused perturbations of natural systems. Therefore, the human health focus of planetary health makes the field well-adapted for the context of medical school education. Throughout this report card, we use the term planetary health to refer to this broad swath of topics, but resources do not need to explicitly include the term “planetary health” to satisfy the metric.
- **Sustainable Healthcare:** As defined by the Academy of Royal Colleges, sustainable healthcare involves ensuring the ability to provide good quality care for future generations by balancing the economic, environmental, and social constraints and demands within health care settings. A sustainable healthcare system maintains population health, reduces disease burden and minimises use of healthcare services.
- **Education for Sustainable Healthcare (ESH):** is defined as the process of equipping current and future health professionals with the knowledge, attitudes, skills and capacity to provide environmentally sustainable services through health professional education, thus working to decrease the enormous environmental impact of the healthcare industry. Planetary Health Education is an integral part of this education rather than an end in itself. This is because knowledge on Planetary Health is required to be able to fully understand the necessity of sustainable healthcare as well as being part of the broader knowledge needed to fully protect and promote health. In summary, ESH is covered by the three Priority Learning Outcomes of the Centre of Sustainable Healthcare below, and Planetary Health Education is embraced in the first learning objective and is a fundamental requirement to achieve learning outcomes 2 and 3:
 1. Describe how the environment and human health interact at different levels.
 2. Demonstrate the knowledge and skills needed to improve the environmental sustainability of health systems.
 3. Discuss how the duty of a doctor to protect and promote health is shaped by the dependence of human health on the local and global environment.
- **Medical School/Department vs. Institution:** When “Medical school” is specified in the report card, this only refers to curriculum and resources offered by the School/department of Medicine and does not include offerings from other parts of the university (e.g. undergraduate departments (USA), other related departments (e.g. Public Health, Population Health departments). In contrast, when “institution” is specified in the report card, we are referring to the university more broadly including all of its campuses. Any resource reasonably accessible by medical students, no matter where in the institution the resource comes from or if it is

specifically targeted for medical students, can meet this metric.

- **Environmental history (Metric #19 in Curriculum Section):** This is a series of questions students are taught to ask during medical encounters that elicits patients' exposures and environmental risk factors. Historically, this has included consideration of exposures like pesticides, asbestos, and lead, though in the modern era shaped by climate change, it can be expanded to include things like wildfire smoke exposure, air pollution and mould after flooding. Key components include place of residence over the lifecourse, occupational history, food and water sources (e.g. meat from industrial feeding operations, regular fishing in contaminated water, access to clean drinking water), and exposure to air pollution. Please be as specific as possible when providing evidence for this metric.
- **Elective:** The word "elective" refers to an optional course or lecture series that a medical student can opt to take part in but is not a requirement in the core curriculum. Generally, these elective courses take place in the preclinical curriculum but vary by school.
- **Core Curriculum:** This refers to taught material that is delivered to the entire cohort of students in one year.
- **Clerkship / Outreach:** This is a term used in the USA to refer to placements that medical students go on e.g. Pediatrics, General medicine, Psychiatry. In the UK these are referred to as rotations, outreach or placements. This is a relatively short (approximately 4-8 weeks) period of study and patient-centred clinical experience that takes place as part of the undergraduate programme.
- **Clinical rotation:** This is a term used to refer to placements that students go on (e.g., ophthalmology, surgery, cardiology).
- **Physiotherapy vs Physical Therapy:** For the purposes of this report card these terms are considered interchangeable. However, physiotherapy will be used primarily.
- **Community organisations:** For most institutions, there are existing groups that are not directly affiliated with the university and exist as a product of what the community the institution exists in cares about or needs. These specific community organisations relevant to this report include those that are focused around some aspect of climate and health preservation. These community organisations can include but are not limited to local mutual aid initiatives, underserved-resource distribution groups, clean-up and nature conservation groups, community gardeners, and other environmental-related organisations. If your institution does not have access to local volunteerships with community groups, please report any community organisations your institution or school has collaborated with.
- **Climate justice:** The idea that certain population groups and geographical locations which are disproportionately more impacted by climate change are already economically and socially disadvantaged. This double vulnerability sits alongside pre-existing social justice concerns and should therefore shift policy and practice to mitigate the inequitable effects of the climate crisis.
- **Extractivism:** The removal of natural resources typically in large quantities. Within anthropology this term is often used in the context of colonialism to refer to

the historic seizing of natural resources, a practice which has developed business models tied to ecological degradation and loss of biodiversity.

- **Global South:** Nations that often have less economic and industrial development and are typically in the southern hemisphere. These nations have been found to be disproportionately impacted by the climate crisis.
- **Low socioeconomic status (SES):** An individual or geographical area that across a variety of socioeconomic factors (e.g., income, education, race/ethnicity) is considered vulnerable. This vulnerability has been correlated to more adverse health outcomes often as a consequence of encountering more barriers in accessing and receiving healthcare.
- **Low and Middle-Income Countries (LMIC):** Countries that have lower degrees of economic affluence.
- **Anthropogenic:** Created through human activity
- **Marginalized communities:** Groups excluded from mainstream economic, educational, social, and/or cultural experiences due to race, gender identity, sexual orientation, age, physical ability, language, and/or immigration status (Sevelius et al., 2020).

Other considerations:

- If there are more than one “tracks” at your institution with two different curricula (for example, Harvard Medical School has a Pathways and HST curriculum track), you can choose to fill out a report card for each track, or fill out just one report card and average the scores received by each track in cases where the scores are different (see the 2021 Harvard or Oxford report cards as examples). Where possible please indicate the proportion of students that are on each track.

Completed in 2022 a [Literature Review by Metric](#) is available for the 2022 medicine report card metrics. We are in the process of updating this review and making it more applicable to all the disciplines. However the review serves as a rough collection of references for further learning and a resource for those advocating for increased planetary health engagement at their institutions.

Planetary Health Curriculum

Section Overview: *This section evaluates the integration of relevant planetary health topics into the medical school curriculum. Today's medical students will be on the frontlines of tackling the health effects of climate and other environmental changes. Therefore, it is critical that medical students are trained to understand the health effects of these changes, as well as planetary health issues and principles more broadly. Topics like the changing geography of vector-borne diseases, the health consequences of air pollution, environmental health inequities, and disaster response principles must be part of every medical school's core curriculum.*

Curriculum: General

1.1. Did your <u>medical school</u> offer elective courses (student selected modules) to engage students in Education for Sustainable Healthcare or Planetary Health in the last year?	
Yes, the medical school has offered more than one elective whose primary focus is ESH/planetary health in the past year. (3 points)	
Yes, the medical school has offered one elective whose primary focus is ESH/planetary health in the past year. (2 points)	
The medical school does not have any electives whose primary focus is ESH/planetary health, but there are one or more electives that include a lecture on planetary health. (1 points)	
No, the medical school has not offered any electives on planetary health or electives that include ESH/planetary health topics in the past year. (0 points)	
Score Assigned:	3
<i>Score explanation: Students are offered the opportunity to undertake special study modules (SSMs) within the first and second year, wherein they undergo a guided course of study in a chosen research topic, with the aim of writing short dissertations. Students may indeed carry on to publish their work in partnership with their research convenor. Multiple SSMs with themes in sustainability and global health ethics have been offered this year, and in the previous year. A given example title offered to students might be "The Role of Doctors in Climate Change".</i>	

Curriculum: Health Effects of Climate Change

1.2. Does your <u>medical school</u> curriculum address the relationship between extreme heat, health risks, and climate change?	
This topic was explored in depth by the core curriculum. (3 points)	
This topic was briefly covered in the core curriculum. (2 points)	
This topic was covered in elective coursework. (1 point)	
This topic was not covered. (0 points)	
Score Assigned:	3

Score explanation: This score is justified through integration within the curriculum in earlier years. The introductory lecture to sustainability in Year 3 has slides regarding increased temperatures and consequences for the ecosystem (i.e. desertification) caused by human activity, as well as the Marmot Review and the disproportional impact of extreme temperatures on vulnerable populations. Additionally, one of the Year 4 Primary Care teaching sessions details the effects of extreme heat on the risk of acute kidney injuries, with prevention strategies discussed.

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

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

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

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

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

Score Assigned:

3

Score explanation: Extreme weather events are assessed through a specific learning objective - that students are expected to describe the mechanisms by which extreme weather events affect human health.

The Year 2 Health Inequalities course references the Marmot Review and the impact of extreme weather on socially deprived populations - students may consider such factors in their analysis of a local population's health needs.

The Year 3 introductory lecture to sustainability has a slide referencing climate inequalities through the lens of extreme weather events, i.e. flooding.

One particular Year 4 Primary Care teaching also details the relationship between AKIs and extreme weather/heat (see point 1.3).

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

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

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

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

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

Score Assigned:

2

Score explanation: This aspect of climate change is covered in the Year 3 introductory lecture to sustainability - discussing eutrophication and changing vector patterns. There is an explicit

learning objective for Year 3 – that medical students must describe how human health may be affected by changes in disease vectors.

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

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

This topic was **briefly** covered in the **core** curriculum.

This topic was covered in **elective** coursework.

This topic was **not** covered.

Score Assigned:

3

Score explanation: The Year 2 lecture Ethics, Medicine, and Sustainability has slides depicting the the burden of air pollution on mortality and costs to the NHS.

During a Year 4 Primary Care full-day teaching session on respiratory medicine, greener approaches to prescribing are discussed (i.e. choice of inhalers), as well as how air pollution affects different organ systems. One concrete example used in this session is the Ella Adoo-Kissi-Debrah [case](#).

More importantly, the Year 5 Sustainable Healthcare and Healthcare Inequalities introductory session provides information and invites students to discuss the health risks of air pollution, as well as its link to fuel poverty. This discussion is framed within a patient-based scenario relevant to clinical practice and quality improvement.

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

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

This topic was **briefly** covered in the **core** curriculum.

This topic was covered in **elective** coursework.

This topic was **not** covered.

Score Assigned:

3

Score explanation: The Year 3 introductory lecture to sustainability shows a few slides that briefly mention the cardiovascular effects on climate change (i.e. air pollution and extreme heat), such as heart failure. This is also covered in Year 4 Primary Care teaching, as part of a whole-day session on vascular medicine/diabetes - and includes student-led discussion on potential sustainable methods of diabetes care.

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

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

This topic was **briefly** covered in the **core** curriculum.

This topic was covered in **elective** coursework.

This topic was **not** covered.

Score Assigned:

3

Score explanation: Whilst there is no specific learning objective relating to psychological wellbeing, this point is covered across multiple years. In the Year 5 Sustainability Quality Improvement (SusQI) workshop, which discusses this topic across multiple slides - particularly depicting research around young people and adults' perceptions of climate change and its mental impacts. The concept of eco-anxiety is additionally discussed. In the Year 3 introductory lecture to sustainability has a single slide, showing mental health impacts (alongside effects such as forced migration) are linked to environmental degradation. The Year 2 lecture Ethics, Medicine and Sustainability mentions that contamination of the environment negatively impacts a person's sense of place and the benefits derived from people's relationships with that place, such as green spaces.

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

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

This topic was **briefly** covered in the **core** curriculum.

This topic was covered in **elective** coursework.

This topic was **not** covered.

Score Assigned:

3

Score explanation: The link between humans and their dependency on the natural environment for sustenance is discussed in depth across multiple slides within the Year 3 introductory lecture to sustainability - for example, the loss of biodiversity and the mass extinction of species. One particularly pertinent example is the Health of our Oceans slide - which discusses overfishing and the depletion of marine life, contrasting it with United Nations estimates of human dependence on seafood. Plastic pollution in waterways is also discussed within the lecture.

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

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

This topic was briefly covered in the core curriculum.	
This topic was covered in elective coursework.	
This topic was not covered.	
Score Assigned:	3
<p><i>Score explanation: Under the Year 2 lecture Ethics, Medicine, and Sustainability, there is a slide describing the ethical tension between sustainability and the concept of social justice in countries which do not have basic health needs met, and the issue of pursuing sustainability without marginalising the most vulnerable populations.</i></p> <p><i>The Year 3 introductory lecture on sustainability references the 2010 Marmot Review and its findings, including the disproportionate impact climate change has on lower socioeconomic status. In addition, the Year 5 sustainable healthcare and healthcare inequality workshop discusses this inequality on a more local level – fuel poverty is discussed as part of a problem-based scenario regarding socio-economic factors impacting the care of respiratory disease patients.</i></p>	

1.10. Does your <u>medical school</u> curriculum address the unequal regional health impacts of climate change globally?	
This topic was explored in depth by the core curriculum.	
This topic was briefly covered in the core curriculum.	
This topic was covered in elective coursework.	
This topic was not covered.	
Score Assigned:	3
<p><i>Score explanation: The Year 2 Health Inequalities module requires students to undertake group presentations on health inequalities, with consideration on health impact induced by climate change and human activity. Additionally, the Year 3 introductory lecture to sustainability explicitly discusses the fact that climate change impacts the most vulnerable populations on the planet on a global scale over multiple slides - with comparison figures that depict the greatest emitters of carbon dioxide amongst nations.</i></p>	

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

1.11. Does your <u>medical school</u> curriculum address the reproductive health effects of industry-related environmental toxins (e.g. air pollution, pesticides)?	
This topic was explored in depth by the core curriculum.	
This topic was briefly covered in the core curriculum.	
This topic was covered in elective coursework.	
This topic was not covered.	

Score Assigned:	0
<i>Score explanation: The Lancaster curriculum does not mention the reproductive health effects of industry-related environmental toxins at present.</i>	

1.12. Does your <u>medical school</u> curriculum address important human-caused environmental threats that are relevant to the university's surrounding community?	
This topic was explored in depth by the core curriculum.	
This topic was briefly covered in the core curriculum.	
This topic was covered in elective coursework.	
This topic was not covered.	
Score Assigned:	3
<i>Score explanation: In Year 2, students undertake the Health Inequalities group project, which requires an understanding of a local population's health needs – factors that may be considered include environmental issues - pollution and availability of green spaces, for example. By understanding these factors, students are then able to suggest interventions that may tackle said threats. Environmental hazards local to the Lancashire area have been informally presented, and has been mentioned in Primary Care workshops. In particular, students have likely been made aware through experience during clinical placement or from the experiences of problem-based learning tutors regarding increased mesothelioma cases in the Barrow-in-Furness region due to the dockyards.</i>	

1.13. To what extent does your <u>medical school</u> emphasise the importance of Indigenous knowledge and value systems as essential components of planetary health solutions?	
This topic was explored in depth by the core curriculum.	
This topic was briefly covered in the core curriculum.	
This topic was covered in elective coursework.	
This topic was not covered.	
Score Assigned:	0
<i>Score explanation: Indigenous knowledge and value systems are not mentioned in the curriculum at present.</i>	

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

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

This topic was **briefly** covered in the **core** curriculum.

This topic was covered in **elective** coursework.

This topic was **not** covered.

Score Assigned:

3

Score explanation: Poor living conditions (and consequent environmental toxins) are covered through the lens of age and deprivation within the curriculum. In year 2, as part of the Health Inequalities course, students are asked to assess the health needs of a given local community - including social factors such as poor quality housing, smoking behaviours, and economic opportunity. In the Year 5 SusQI workshop, a case-based scenario features the multifaceted problem of treating respiratory disease in Barrow-in-Furness, considering key issues such as air pollution due to heavy industry. Students are asked to discuss and consider how such factors may interplay with a patient's health.

Curriculum: Sustainability

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

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

This topic was **briefly** covered in the **core** curriculum.

This topic was covered in **elective** coursework.

This topic was **not** covered.

Score Assigned:

3

Score explanation:

The Year 2 Health Promotion activity allows medical students to get involved in outreach activities for local primary schools, communicating and engaging with children on topics such as cardiovascular health and healthier lifestyle choices (e.g. a plant-based diet).

In Year 3, students undertake the Managing Long Term Conditions module, which focuses on primary care. A sustainability workshop is run during this module, one of which features an extended discussion on low carbon lifestyle choices – particular reference is made during the pre-reading to the EAT-Lancet commission's Planetary Health Diet. Students are asked to evaluate the concept, and consider how to suggest modifications to patients.

1.16. Does your <u>medical school</u> curriculum address the carbon footprint of healthcare systems?	
This topic was explored in depth by the core curriculum.	
This topic was briefly covered in the core curriculum.	
This topic was covered in elective coursework.	
This topic was not covered.	
Score Assigned:	3
<i>Score explanation: The impact of healthcare, particularly through emissions, is repeatedly mentioned across the curriculum – for example, in the Year 2 lecture Ethics, Medicine and Sustainability. In Year 3, the sustainability workshop and the introduction to sustainability lecture both discuss the carbon footprint of the NHS and global healthcare services, and this is again stressed in the Year 5 introduction to SusQI workshop.</i>	

1.17. Does your <u>medical school</u> curriculum cover these components of sustainable clinical practice in the <u>core</u> curriculum? (points for each)	Score
The health and environmental co-benefits of avoiding over-medicalisation, over-investigation and/or over-treatment (2 points)	2
The environmental impact of pharmaceuticals and over-prescribing as a cause of climate health harm. Alternatively teaching on deprescribing where possible and its environmental and health co-benefits would fulfil this metric. (2 points) .	2
The health and environmental co-benefits of non-pharmaceutical management of conditions where appropriate such as exercise or yoga classes for type 2 diabetes; social group activities such as gardening for mental health conditions; active transport such as bicycle schemes. This is commonly known as social prescribing in the UK. (1 point)	1
Environmental impact of surgical healthcare on planetary health and the climate crisis, and how can it be mitigated. (1 point)	1
The impact of anaesthetic gases on the healthcare carbon footprint and ways to reduce anaesthesia's environmental impacts, such as total intravenous anaesthesia or choosing less environmentally harmful anaesthetic gas options with reduced greenhouse gas emissions. (1 point)	1
The impact of inhalers on the healthcare carbon footprint and the environmental benefit of dry powdered inhalers over metered dose inhalers. (1 point)	1
Waste production within healthcare clinics and strategies for reducing waste in clinical activities (e.g. single use items in the inpatient or outpatient setting) (1 point)	1
<i>Score explanation: Sustainable practice is comprehensively discussed, particularly in later years of medical school. Within the Year 3 Managing Long Term Conditions module, a half-day sustainability workshop is conducted. Students are given a scenario and are introduced to the</i>	

principles of sustainable clinical practice. As part of the workshop, students are given digital media covering the above topics:

- Over-medicalisation and over-treatment are addressed through discussion of lean care pathways and how it is both beneficial for patients and cost-effectiveness; polypharmacy and deprescribing are additionally addressed within the scenario.
- Pharmaceuticals being improperly disposed and consequently polluting the environment are also addressed in the workshop - examples given include [diclofenac in the local ecosystem](#).
- Non-pharmacological management of conditions is discussed through low carbon lifestyles (including active transport/cycling) and the EAT-Lancet Commission's Planetary Health Diet.
- This same workshop also discusses clinical waste production, both within surgical theatres and general waste production. The 2019 NICE guidelines for asthma inhalers and the carbon footprint is also discussed.
- As a key example, the introductory lecture to sustainability in Year 3 features changes to anaesthetic gases – such as the use of regional/local nerve blocks, and reducing the use of nitrous oxide.
- In Year 4, two Primary Care sessions focusing on respiratory medicine and diabetes cover all of the above sustainable clinical practice applications through small-group discussion and role-plays.
- As part of Year 5 content, students also undertake a series of sustainability workshops relating to SusQI. The reduction of carbon footprint is once again covered in a primary care context – changing prescribing practices and guidelines, encouraging active travel, and switching medical equipment within GPs are mentioned as potential ideas.

Curriculum: Clinical Applications

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

Yes, there are strategies introduced for having conversations with patients about climate change in the **core** curriculum. (2 points)

Yes, there are strategies introduced for having conversations with patients about climate change in **elective** coursework. (1 points)

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

Score Assigned:

2

Score explanation:

In response to previous years' feedback, the Year 4 Primary Care teaching has integrated patient communication into its respiratory medicine session - this is done through the format of a video describing a greener approach to patient consultations, with a role-play for students to practice having conversations with patients (e.g. regarding prescribing choices for inhalers).

1.19. In training for patient encounters, does your medical school's curriculum introduce strategies for taking an environmental history or exposure history?

Yes, the core curriculum includes strategies for taking an environmental history. (2 points)	
Only elective coursework includes strategies for taking an environmental history. (1 point)	
No, the curriculum does not include strategies for taking an environmental history. (0 points)	
Score Assigned:	0
<i>Score explanation: Within the first two years of medical school, students are taught to take a full history, through Communication Skills sessions with simulated patients. In this way, students gain confidence in eliciting certain factors of environmental histories, such as occupation and smoke exposure. Environmental backgrounds are particularly stressed for paediatric histories - i.e. living conditions, mold, etc. These skills are continuously practiced not only in clinical placement, but through guided scenarios in Years 3 to 5 by clinical tutors.</i>	

Curriculum: Administrative Support for Planetary Health

1.20. Is your <u>medical school</u> currently in the process of implementing or improving Education for Sustainable Healthcare (ESH)/planetary health education?	
Yes, the medical school is currently in the process of making major improvements to ESH/planetary health education. (4 points)	
Yes, the medical school is currently in the process of making minor improvements to ESH/planetary health education. (2 points)	
No, there are no improvements to planetary health education in progress. (0 points)	
Score Assigned:	4
<i>Score explanation: The medical school is undergoing a major curriculum review, with current scope to include sustainability as part of its “spiral curriculum” concept - the idea that a concept is continuously built on with increasing clinical experience. New learning objectives are being added to early years, as well as additional lectures. Students may also be able to have the opportunity to undertake a susQI project in the near future.</i>	

1.21. How well are the aforementioned planetary health/Education for Sustainable Healthcare topics integrated longitudinally into the <u>core</u> curriculum?	
Planetary health/ESH topics are well integrated into the core medical school curriculum. (6 points)	
Some planetary health/ESH topics are appropriately integrated into the core medical student curriculum. (4 points)	
Planetary health/ESH is not integrated and is primarily addressed in (a) standalone lecture(s) . (2 points)	
There is minimal/no education for sustainable healthcare. (0 points)	

Score Assigned:	6
<p><i>Score explanation: The sustainability curriculum, as it stands, is thoroughly integrated into the core curriculum. An overview of the coverage of sustainability is presented as follows:</i></p> <ul style="list-style-type: none"> <i>• In Year 1, environmental health and its impact on human health is covered as an indicative learning objective.</i> <i>• In Year 2, the lecture Ethics, Medicine, and Sustainability describes the dilemma of providing healthcare whilst balancing sustainable practice, as well as the historical inequality in contributions to climate change. The Health Inequalities group project also encourages students to understand local determinants of health and health hazards in a local population.</i> <i>• In Year 3, a sustainability workshop is undertaken in the Managing Long Term Conditions module, which addresses topics such as the doctor's role in climate advocacy, principles of sustainable practice, waste disposal, and low-carbon lifestyles. The introductory lecture and multiple learning objectives in this year cover the topics of planetary health comprehensively.</i> <i>• In Year 4, environmental health is revisited through a learning objective looking at occupational exposures and risks to health (i.e. cancer, asthma); small-group Primary Care teaching also integrates concepts of sustainability surrounding topics such as respiratory and vascular medicine, urology, and diabetes.</i> <i>• In Year 5, students undertake a series of sustainability workshops with the aim of developing a SusQI proposal. Here, students are introduced to the SusQI framework and the "triple bottom line" concept, as well as value process mapping.</i> <i>• Consequently, sustainable healthcare and climate health are interwoven into the curriculum with the focus on engaging and empowering students as future doctors to undertake climate-conscious practices.</i> 	

1.22. Does your <u>medical school</u> employ a member of faculty to specifically oversee and take responsibility for the incorporation of planetary health and sustainable healthcare as a theme throughout the course?	
Yes, the <u>medical school</u> has a specific faculty/staff member responsible for overseeing curricular integration of planetary health and sustainable healthcare. (1 point)	
No, the <u>medical school</u> does not have a specific faculty/staff member responsible for overseeing curricular integration of planetary health and sustainable healthcare. (0 points)	
Score Assigned:	1
<p><i>Score explanation: The appointed Clinical Lead for Sustainability is Dr. Felicity Connolly, who is responsible for the integration of ESH topics, particularly within the primary care curriculum.</i></p>	

Section Total (65 out of 72)	90%
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Interdisciplinary Research

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

2.1. Are there researchers engaged in planetary health research and healthcare sustainability research at your institution?

Yes, there are faculty members at the **institution** who have a **primary** research focus in planetary health **or** sustainable healthcare/vetcare. (3 points)

Yes, there are individual faculty members at the **institution** who are conducting research **related** to planetary health or healthcare sustainability, OR are part of a national/international sustainability working group, but it is not their primary research focus. (2 points)

There are sustainability researchers at the **institution**, but not specifically associated with healthcare/vetcare. (1 point)

No, there are **no** planetary health and/or sustainability researchers at the **institution** at this time. (0 points)

Score Assigned:

3

Score explanation: Lancaster Medical School has numerous members of staff that have areas of interest in planetary health either as a primary focus or as a special interest. For example, Dr Felicity Connolly who is the Lead of Sustainability in Primary Care as well as the Co-director of Primary Care at the medical school. Dr Connolly is also a member of the Medical School Council ESHalliance National Educational group and was involved in collaborating with others in integrating healthcare sustainability within the medical school curriculum. Please see the collaboration [here](#). Other researchers include Dr Cliff Shelton who is Professor in Anaesthetics as well as Director of Clinical skills and has been heavily involved in improving sustainability in anaesthetics for a number of years. Alongside his clinical role he works alongside NIHR (National Institute of Health Research) academic fellows. His current project involves the implementation of replacing nitrous oxide pipelines with portable cylinders across all NHS hospitals to reduce the carbon footprint burden.

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

There is **at least one** dedicated department or institute for interdisciplinary planetary health research. (3 points)

There is not currently a department or institute for interdisciplinary planetary health research, but there are plans to open one in the next 3 years. (2 points)	
There is an Occupational and Environmental Health department , but no interdisciplinary department or institute for planetary health research. (1 points)	
There is no dedicated department or institute. (0 points)	
Score Assigned:	3
<i>Score explanation: Lancaster University is home to the Lancaster Environment Centre (LEC), a dedicated department for education and research in sustainable practices that has been established for many years. LEC offers a diverse range of courses aimed at addressing environmental challenges, as highlighted on their website under “Research Challenges” (LEC Research Challenges), where their commitment to tackling these issues is clearly outlined. In collaboration with LEC, the Centre for Global Eco-Innovation (Centre for Global Eco-Innovation) serves as another key initiative within the university, focusing on the development of innovative practices, processes, and products that promote planetary health. Additionally, the centre plays a vital role in supporting PhD and MRes students by facilitating dissertation projects related to environmental sustainability, fostering interdisciplinary collaboration among experts from various fields.</i>	

2.3. Is there a process by which communities disproportionately impacted by climate change and environmental injustice give input or make decisions about the research agenda at your institution?	
Yes, there is a process in which community members impacted by climate and environmental injustice have decision-making power in the climate + environmental research agenda. (3 points)	
Yes, there is a process in which community members impacted by climate and environmental injustice advise the climate + environmental research agenda. (2 points)	
No , but there are current efforts to establish a process for community members to advise or make decisions on the research agenda. (1 points)	
There is no process, and no efforts to create such a process. (0 points)	
Score Assigned:	2
<i>Score explanation: At Lancaster University there are always ongoing events for the students and public to get involved with. Last year the university teamed up with N8 Research Partnership’s UP North public series events to host a discussion on coastal communities which helps to tackle issues regarding environmental sustainability. This year’s upcoming talks by Dr Jane Davidson who is Chair of Wales Net Zero 2035 - Minister of environment - is delivering a lecture on practical ideas for embedding ethical, long-term thinking into public policy. More information can be found here. By making the public understand the situation of the current climate and deliver what is being done from an institution perspective it can help the public gain insight into this area. It also serves as a way for the public to voice their struggles and provide targeted strategies for the future.</i>	

2.4. Does your institution have a planetary health website that centralises ongoing and past research related to health and the environment?

There is an **easy-to-use, adequately comprehensive** website that **centralises** various campus resources related to health and the environment including all of the following: upcoming events, leaders in planetary health at your institution, and relevant funding opportunities. (3 points)

There is a website that **attempts to centralise** various campus resources related to health and the environment, but it is hard-to-use, not updated, or not adequately comprehensive. (2 points)

The **institution** has an **Office of Sustainability website** that includes **some** resources related to health and the environment. (1 point)

There is **no** website. (0 points)

Score Assigned:

3

Score explanation: Lancaster University hosts a dedicated [sustainability website](#) that provides a user-friendly platform outlining the university's strategies, policies, and key personnel responsible for advancing sustainability. The site also details an action plan, highlighting both the measures implemented and their effectiveness in achieving sustainability goals. These initiatives span various areas, including energy and carbon consumption, as well as recycling and waste management strategies. Additionally, the Green Lancaster initiative actively engages the student community in sustainable practices, offering a range of events and opportunities for students to participate in environmental initiatives.

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

Yes, the **institution** has hosted at least one conference or symposium on topics related to planetary health in the past year. (4 points)

Yes, the **institution** has hosted at least one conference or symposium on topics related to sustainable healthcare/vetcare in the past year. (3 points)

Yes, the **institution** has hosted a conference on topics related to planetary health / sustainable healthcare/vetcare in the past three years. (2 points)

The **institution** has not hosted any conferences directly, but they have provided financial support for a local planetary health event. (1 point)

No, the **institution** has not hosted a conference on topics related to planetary health in the past three years. (0 points)

Score Assigned:

4

Score explanation: Lancaster University has had the privilege of hosting the annual [Green Lancaster sustainability conference](#). This conference is for staff and students to have their voice and challenge new ideas that can be implemented to further increase awareness and continue to lead a sustainable life. Additionally, the Lancaster Medical school building is continually being

used as a regular Collaboration Cafe sessions, inviting staff and external stakeholders to discuss issues within healthcare - some with themes of sustainability and planetary health - example [here](#).

2.6. Is your institution a member of a national or international planetary health or ESH/ESV organisation?

Yes, the institution is a member of a national or international planetary health **or** ESH/ESV organisation. (1 points)

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

Score Assigned:

1

Score explanation: Lancaster Medical School is a member of the Alliance for Sustainability Leadership in Education, a national organisation committed to embedding sustainability as a core priority in education and research across post-16 institutions. This affiliation underscores the medical school's dedication to integrating sustainable practices into its academic and research frameworks. It should also be mentioned that the Medical School is one of the founding members for the European Network for Climate and Health Education ([ENCHE](#)), launched in 2024.

Section Total (16 out of 17)

94%

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Community Outreach and Advocacy

Section Overview: This section evaluates medical school engagement in community outreach and advocacy efforts associated with planetary health. Researching and teaching planetary health is necessary but not sufficient. It is critical that institutions also directly engage with communities most affected by environmental health harms. Although climate change is a problem largely created by those with power and resources, its impacts fall disproportionately on under-resourced populations and communities of colour. Institutions should partner with local communities affected by climate change and pollution to share information about environmental health threats, advocate together for change, and provide opportunities for students to be a part of this work.

3.1. Does your <u>institution</u> partner with community organisations to promote planetary and health?	
Yes, the institution meaningfully partners with multiple community organisations to promote planetary and environmental health. (3 points)	
Yes, the institution meaningfully partners with one community organisation to promote planetary and environmental health. (2 points)	
The institution does not partner with community organisations, but has participating in community focused events relating to planetary health. (1 point)	
No, there is no such meaningful community partnership. (0 points)	
Score Assigned:	3
<p>Score explanation: Within the Year 2 curriculum, students are expected to undertake a Health Promotion workshop with local primary schools, teaching school-age children about healthy and low-carbon lifestyles, environmental health exposures and cardiovascular health. The medical school has an ongoing research and outreach partnership with Eden Project Morecambe with plans to influence health and sustainability education across Morecambe Bay Additional promotional activities include tree planting with students of the on campus preschool centre, an updated photography exhibition based on the UN SDGs. Institutionally, the Children and Young People's Partnership which runs on campus day trips and activities for local primary schools actively promotes sustainability with their 'Go Green' project.</p>	

3.2. Does your <u>institution</u> offer community-facing courses or events regarding planetary health?	
The institution offers community-facing courses or events at least once every year. (3 points)	
The institution offers courses or events open to the community at least once per year, but they are not primarily created for a community audience. (2 points)	
The institution has promoted community-facing courses or events, but was not involved in planning those courses or events. (1 point)	

The **institution/medical school** have not offered such community-facing courses or events. (0 points)

Score Assigned:

3

Score explanation: Continuing from last year's success, Lancaster University has hosted its [second health documentary film festival](#) at HIOne (Health Innovation One Campus). Available to the public, this year's festival centres around health challenges across the North West. The submission Bay Lines: Beach of Dreams by the Morecambe Bay partnership highlights the natural environment of Morecambe Bay. In addition, the university has continued their annual collaboration with Sunway University on the [Art Beats festival](#) which aims to curate an in person and digital exhibition. One of the themes this year is 'Eco-Visions'.

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

Yes, all students **regularly** receive communication updates dedicated to planetary health and/or sustainable healthcare. (2 points)

Yes, planetary health and/or sustainable healthcare topics are regularly included in communication updates to **some courses**. (1 point)

Students **do not** receive communications about planetary health or sustainable healthcare. (0 points)

Score Assigned:

1

Score explanation: News communication to students at Lancaster occurs over Moodle and email communications. On Moodle, there are regular [News](#) updates where a broad range of topics and research are covered. Additionally, the Students Union (LUSU) publishes weekly updates via email which advertises any LUSU Green events. Similarly, within the Medical School, administrators actively promote upcoming conferences, opportunities and institutional research to the students via email.

A suggestion for improvement would be the creation of a regular newsletter showcasing planetary health or sustainable healthcare topics either within the department or as a collaboration with LUSU in their weekly newsletters.

3.4. Does the institution or main affiliated hospital trust engage in professional education activities targeting individuals post graduation with the aim of ensuring their knowledge and skills in planetary health and sustainable healthcare remain up to date during their professional career?

Yes, the **institution** or **main affiliated hospital trust** offers multiple in-person or online courses relating to planetary health and/or sustainable healthcare for post-graduate providers, including at least one with a primary focus of planetary health. (2 points)

Yes, the institution or main affiliated hospital trust offers one course relating to planetary health and/or sustainable healthcare for post-graduate provider. (1 point)	
There are no such accessible courses for post-graduate providers. (0 points)	
Score Assigned:	1
<i>Score explanation: As part of Lancaster Medical School's Annual Education Day Conference, a Planetary Health and Education for Sustainable Healthcare plenary session is held for all delegates. This topic is included in each Education Day, either as a workshop or plenary session.</i>	

3.5. Does your <u>institution</u> or its <u>affiliated teaching hospitals</u> have accessible educational materials for patients about environmental health exposures?	
Yes, the medical school or all affiliated hospitals have accessible educational materials for patients. (2 points)	
Some affiliated hospitals have accessible educational materials for patients. (1 point)	
No affiliated medical centres have accessible educational materials for patients. (0 points)	
Score Assigned:	1
<i>Score explanation: Lancaster Medical school partners with two teaching trusts: University Hospitals of Morecambe Bay (UHMBT) and East Lancashire Hospitals (ELHT). UHMBT provides a comprehensive list of patient information pamphlets on its website, not all educational materials are available digitally however, the team were able to locate them within the hospital setting. Notable examples providing health education on environmental health exposures include a pamphlet on the harms of second-hand smoke exposure within the Women's & Childrens ward at Royal Lancaster Infirmary. The ELHT website hosts a range of digital material for patients to obtain educational material. Using the search function, the team were able to locate examples focused on environmental health exposures such as: Wellbeing after surgery which highlights the impact of smoking post operatively. However, despite these digital resources improvements can be made to increase accessibility. There is a need to improve the range of sources available digitally at UHMBT as the team found substantial amounts of patient information leaflets available within the hospitals but not online. On the other hand, ELHT would benefit from having a dedicated patient information section on the website as currently, the patient education resources available are scattered throughout different webpages.</i>	

3.6. Does your <u>institution</u> or its <u>affiliated teaching hospitals</u> have accessible educational materials for patients about the health impacts of climate change?	
Yes, the medical school or all affiliated hospitals have accessible educational materials for patients. (2 points)	
Some affiliated hospitals have accessible educational materials for patients. (1 point)	
No affiliated hospitals have accessible educational materials for patients. (0 points)	

Score Assigned:	1
<p><i>Score explanation:</i></p> <p><i>Score explanation: The university makes an active effort to engage the community with the impact of climate change with examples highlighted in the Sustainable Learning and Research of the university website. Additionally, the Lancaster University News webpage promotes research by academics with relevant examples being ‘Health Impacts of CLimate Change in the UK’ and ‘Local authorities, healthcare and climate change’. However, despite the resources being free to access the general public may find topics too specialist. Thus, the development of dedicated resources for the lay person regarding climatic health impacts is recommended.</i></p>	
Section Total (10 out of 14)	71%

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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.*

4.1. Does your <u>institution</u> offer support for students interested in enacting a sustainability initiative/QI project?	
Yes, the institution <i>either</i> offers grants for students to enact sustainability initiatives/QI projects <i>or</i> sustainability QI projects are part of the core curriculum. (2 points)	
The institution encourages sustainability QI projects (to fulfil clerkship or longitudinal requirements) and offers resources to help students succeed in these projects, but there is no student funding available and there is no requirement to participate. (1 point)	
No, neither the medical school or the institution offer opportunities or support for sustainability initiatives or QI projects. (0 points)	
Score Assigned:	1
<i>Score explanation: There is currently some support within the medical school for susQI projects. In Year 5, students undertake a quality improvement project during their primary care placement, with the option to incorporate sustainability, although it is not a requirement. At the university level, the Management School actively engages in sustainability projects led by staff and graduate students. However, there is room for further enhancement—expanding support and creating more opportunities for students to engage in susQI initiatives would be highly beneficial.</i>	

4.2. Does your <u>institution</u> offer opportunities for students to do research related to planetary health and/or sustainable healthcare/vetcare?	
The institution has a specific research program or fellowship for students interested in doing planetary health/sustainable healthcare/vetcare research. (2 points)	
There are research opportunities for students to perform research related to planetary health/sustainable healthcare, but these require student initiative to seek these out and carry them out in their spare time. (1 point)	
There are no opportunities for students to engage in planetary health/sustainable healthcare research. (0 points)	
Score Assigned:	2
<i>Score explanation: Within the medical school curriculum, Special Study Modules (SSMs) in Years 1 and 2 offer students a diverse selection of topics to explore. Each SSM is guided by a convenor with</i>	

expertise in the chosen field, providing structured support throughout the research process. Notably, the curriculum includes topics related to planetary health and sustainable healthcare, such as:

- *Ethical Issues in the Environmental Impact of Medicines*
- *The Ethics of Environmentally Sustainable Clinical Decision-Making*
- *Planetary Health and Climate Change: What is the Doctor's Role?*

Furthermore, Lancaster University offers formal research opportunities for intercalating medical students across a variety of degree programs, including Global Health, Global Health Equity, Health Humanities, Leadership and Management in Healthcare, Public Health, and Health Data Science. A full list of these programmes can be accessed [here](#).

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

The institution has a webpage with specific information related to planetary health or sustainable healthcare/vetcare that includes up-to-date information on relevant initiatives and contact information of potential mentors. (2 points)

There is an institution webpage that features some information on projects and mentors within planetary health and sustainable healthcare within the medical school, but it lacks key information. (1 point)

There is **no institution** specific webpage for locating planetary health and/or sustainable healthcare projects or mentors. (0 points)

Score Assigned:

1

Score explanation: Lancaster University maintains a dedicated sustainability [website](#) that provides up-to-date information on ongoing sustainability projects across the university. It also includes staff contact details for students interested in getting involved. Please see the relevant section [here](#). However, the site currently lacks comprehensive information on healthcare sustainability, presenting an opportunity for greater collaboration between Lancaster Medical School and the wider University to enhance its focus on sustainable healthcare initiatives.

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

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

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

No, there is not a student organisation at my institution dedicated to planetary health or sustainability in healthcare. (0 points)	
Score Assigned:	2
<p><i>Score explanation: Historically, Lancaster University had a dedicated student group serving as the Lancaster branch of Students for Global Health. However, this group has been inactive since 2021, which may have contributed to the ongoing lack of engagement with planetary health on campus. Despite this, an informal student organisation continues to foster interest in planetary health, particularly through annual PHRC groups, which benefit from faculty support provided by the medical school's sustainability lead. Looking ahead, this team is in the works to translate the recommendations in this report into actionable content for wider promotion within the student cohort, with the long-term goal of establishing a formal organisation dedicated to planetary health initiatives.</i></p>	

4.5. Is there a student liaison representing sustainability interests who serves on a <u>department or institutional</u> decision-making council to advocate for curriculum reform and/or sustainability best practices?	
Yes, there is a student representative that serves on a department or institutional decision-making council/committee. (1 points)	
No, there is no such student representative. (0 points)	
Score Assigned:	1
<p><i>Score explanation: While the medical school engages in curriculum discussions with student representatives, there is currently no dedicated student role explicitly focused on advocating for sustainability interests. However, at the institutional level, the Student's Union Vice President of Union Development serves as a member of the Sustainability Team, providing student representation within the Green Lancaster Team for the 2024/2025 academic year. Expanding student representation within the medical school to include a sustainability-focused role could further strengthen engagement in this area.</i></p>	

4.6. In the past year, has the <u>institution</u> had one or more co-curricular planetary health programs or initiatives in the following categories? (1 point each)	Score
Projects where students are able to gain experience in organic agriculture and sustainable food systems, such as gardens, farms, community supported agriculture (CSA), fishery programs, or urban agriculture projects.	1
Panels, speaker series, or similar events related to planetary health that have students as an intended audience.	1
Events in which students learn directly from members of a local environmental justice community about the climate and environmental challenges they face, and how health professionals can partner with their community to address these exposures and impacts.	0

Cultural arts events, installations or performances related to planetary health that have students as an intended audience.	1
Local volunteer opportunities related to building community resilience to anthropogenic environmental impacts.	1
Wilderness or outdoors programs (e.g., that organise hiking, backpacking, kayaking, or other outings for students)	1
<p><i>Score explanation: The Edible Campus, a student-led society under Lancaster Student Union, promotes sustainable food production and consumption. This is achieved through Weekly Action Days at the university's dedicated ECOHub, where volunteers assist with site maintenance and produce cultivation. The harvested products are either distributed to volunteers or sold at the ECOHub, with minimal plastic usage to further support sustainability efforts. The Green Lancaster Sustainability Conference is an annual event aimed at all Lancaster students and staff. It provides an opportunity for the Green Lancaster team to report on ongoing sustainability projects, as well as showcase new initiatives suggested by students, fostering a collaborative environment for sustainability. In August 2024, Lancaster University partnered with Sunway University to host the International Festival of Art, Film, Music, and Theatre. The festival's theme centered around planetary health, encouraging submissions from various artistic mediums to raise awareness and promote discussion on environmental issues. Currently, the medical school lacks volunteering opportunities for students focused specifically on sustainability. However, the Student's Union has partnered with the university since 2005 to establish Green Lancaster, an initiative that allows both students and staff to actively engage in developing practical responses to the local impacts of climate change and ecological degradation. The Student's Union offers a variety of societies focused on wilderness activities. Additionally, students at the medical school have established a Wilderness and Emergency Medicine Society, organising outings throughout the year to engage in outdoor pursuits and foster an appreciation for the natural environment.</i></p>	
Section Total (12 out of 15)	80%

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Campus Sustainability

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

5.1. Does your <u>institution</u> have an Office of Sustainability?	
Yes, there is an Office of Sustainability with multiple full-time staff dedicated to campus sustainability. If the Office of Sustainability serves the entire campus, there is at least one designated staff member for sustainability at the hospital. (3 points)	
There is an Office of Sustainability with one or more full-time staff dedicated to campus sustainability, but no specific staff member in charge of hospital sustainability. (2 points)	
There are no salaried sustainability staff , but there is a sustainability task force or committee. (1 point)	
There are no staff members or task force responsible for overseeing campus sustainability. (0 points)	
Score Assigned:	3
<p>Score explanation: Lancaster University has a central sustainability team led by Professor Simon Guy the Pro-Vice Chancellor of sustainability working with staff managing different projects on campus. Additionally, an effort has been made to include students within the Sustainability Team as paid internships are advertised annually. Roles within the team include:</p> <ul style="list-style-type: none"> • Head of sustainability Dr Georgiana Allison • Carbon, Environment & Sustainability • Sustainability Marketing & Communications • Sustainable facilities • Energy Manager • ReStore Manager (On campus Thrift Store) <p>The Faculty of Health and Medicine which includes the MBChB course has a sustainability engagement group which aims to enhance sustainability within faculty teaching and research. Our teaching trust hospitals are dedicated to specific Green Plans. The University Hospitals of Morecambe Bay Green Plan is led by Aaron Cummings. Blackpool Teaching Hospital's Green Plan is led by Trish Armstrong-Child. Likewise, the East Lancashire Hospital Trust also has a Green Plan for the period of 2022-2025 led by Shazad Sarwar.</p>	

5.2. How ambitious is your <u>institution's</u> plan to reduce its own carbon footprint?
The institution has a written and approved plan to achieve carbon neutrality by 2030 (5 points)

The institution has a written and approved plan to achieve carbon neutrality by 2040 (3 points)	
The institution has a stated goal of carbon neutrality by 2040 but has not created a plan to reach that goal or the plan is inadequate (1 point)	
The institution/medical school does not meet any of the requirements listed above (0 points)	
Score Assigned:	3
<i>Score explanation: Within the updated 24/25 Sustainability Policy by Dr Georgiana Allison, Lancaster University has set it's goal to achieve Net Zero by 2035 with a renewed commitment to support the UN 17 sustainable Development goals.</i>	

5.3. Do buildings/infrastructure used by the institution for teaching (not including the hospital) utilize renewable energy?	
Yes, institution buildings are 100% powered by renewable energy. (3 points)	
Institution buildings source >80% of energy needs from off-site and/or on-site renewable energy. (2 points)	
Institution buildings source >20% of energy needs from off-site and/or on-site renewable energy. (1 point)	
Institution buildings source <20% of energy needs from off-site and/or on-site renewable energy. (0 points)	
Score Assigned:	1
<p><i>Score explanation: The team is unable to source the exact energy breakdown of the HiONE (Health Innovation One Campus). However, the building is connected to the low-carbon District Heating infrastructure of the main campus which reduces energy consumption. Other sources of sustainable energy on campus includes:</i></p> <ul style="list-style-type: none"> <i>• A Wind Turbine supplying 14% of the university's annual electricity,</i> <i>• A Biomass boiler which feeds into the district heating system supplying 2-3% of the total annual heat demand using locally sourced wood chips as fuel.</i> <i>• Additionally, a 52 acre solar farm is under construction and is set to be completed by Spring 2025 capable of supplying over 25% of the campus annual electricity demand.</i> <i>• Rooftop solar panels are located on numerous buildings as part of the university's BREEAM accreditation of which HiOne ranks 'Excellent'.</i> <p><i>Future improvements are expected as the University received £21m funding from the GHNF which is matched by the University's contribution of £19m to construct a Net Zero energy centre starting in late 2024, featuring air source heat pumps.</i></p>	

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

Yes, sustainable building practices are utilised for new buildings on the institution's campus and the majority of old buildings have been retrofitted to be more sustainable. (3 points)	
Sustainable building practices are utilised for new buildings on the institution's campus, but most old buildings have not been retrofitted . (2 points)	
Sustainable building practices are inadequately or incompletely implemented for new buildings. (1 point)	
Sustainability is not considered in the construction of new buildings. (0 points)	
Score Assigned:	3
<i>Score explanation: The University has employed the BREEAM standard since 2005. New buildings such as the medical school campus must be of an 'Excellent' standard whereas refurbishments should be of 'Very Good' standard.</i>	

5.5. Has the <u>institution</u> implemented strategies to encourage and provide environmentally-friendly transportation options for students and reduce the environmental impact of commuting?	
Yes, the institution has implemented strategies to encourage and provide environmentally-friendly transportation options such as safe active transport, public transport, or carpooling and these options are well-utilised by students. Alternatively, the campus location is not amenable to unsustainable forms of transportation by default. (2 points)	
The institution has implemented some strategies to provide environmentally-friendly transportation options, but the options are unsatisfactorily accessible or advertised. (1 point)	
The institution has not implemented strategies to encourage and provide environmentally-friendly transportation options. (0 points)	
Score Assigned:	2
<i>Score explanation: The Medical School provides a free bus pass known as the HICrider for all students which allows for free campus travel between the Health Innovation One Campus(HIOne) and other Lancaster University bus stops which has proven popular due to Lancaster being a campus university. For clinical placements to our teaching trusts, coaches are arranged by the medical school with the exception of clinics based in Lancaster and Royal Lancaster Infirmary of which students are expected to make their own way due to the close proximity. From third year onwards, due to the increase in community placements, a travel bursary is provided to students to assist with the costs of public transport. The institution as a whole provides cycle paths around the perimeter of the campus including to and from the HIOne. All first year accommodation on campus provides bike storage for the students, additionally, the campus contains a bike repair shop to encourage cyclists. There are also storage facilities for cycling gear within buildings as well as external bike sheds outside of the HIOne. The use of private vehicles is disincentive through regulations on student permits as they are limited to students who meet a certain set of criteria. Students without a permit can still use the parking spaces, but they must pay a fee every time with strict digital and in person ticketing systems in place.</i>	

5.6. Does your institution have an organics recycling program (compost) and a conventional recycling program (aluminium/paper/plastic/glass)?

Yes, the institution has **both** compost **and** recycling programs accessible to students and faculty. (2 points)

The institution has **either** recycling **or** compost programs accessible to students and faculty, but not both. (1 point)

There is **no** compost or recycling program at the medical school. (0 points)

Score Assigned:

2

Score explanation: The medical school has followed [Lancaster University's Waste & Recycling strategy since](#) 2011. Recycling bins widely distributed and easily accessible throughout the building and campus including along the pedestrian footpaths in campus. Institutionally, this initiative has led to an 70% recycling rate. With regards to composting, the student-led society [Edible Campus](#) which focuses on small-scale farming actively includes composting as a part of their activities. The society accepts regular compostables from faculties, catering and students.

5.7. Does the institution apply sustainability criteria when making decisions about the campus food and beverage selections (e.g. local sourcing, reduced meat, decreased plastic packaging)?

Yes, the institution has **adequate** sustainability requirements for food and beverages, including meat-free days or no red-meat, and **is engaged** in efforts to increase food and beverage sustainability. (3 points)

There are sustainability guidelines for food and beverages, but they are **insufficient or optional**. The institution **is engaged** in efforts to increase food and beverage sustainability. (2 points)

There are sustainability guidelines for food and beverages, but they are **insufficient or optional**. The institution is **not** engaged in efforts to increase food and beverage sustainability. (1 point)

There are **no** sustainability guidelines for food and beverages. (0 points)

Score Assigned:

3

Score explanation: The university has been fair trade accredited since 2008. As a part of the Sustainable Development Goals - [Zero Hunger](#) the University has committed to improving the range of plant-based options. A notable example of progress is that Pendle Brew Bar has become 100% plant-based. On campus outlets such as HIVE in HIOne (Health Innovation One Campus) have vegan and vegetarian options available. Additionally, the university is committed to sourcing ingredients from sustainable local suppliers. The University outlets have also signed up to the 'Too Good to Go' app in order to tackle food waste.

5.8. Does the institution apply sustainability criteria when making decisions about supply procurement?

Yes, the institution has adequate sustainability requirements for supply procurement and is engaged in efforts to increase sustainability of procurement. (3 points)	
There are sustainability guidelines for supply procurement, but they are insufficient or optional . The institution is engaged in efforts to increase sustainability of procurement. (2 points)	
There are sustainability guidelines for supply procurement, but they are insufficient or optional . The institution is not engaged in efforts to increase sustainability of procurement. (1 point)	
There are no sustainability guidelines for supply procurement. (0 points)	
Score Assigned:	3
<p><i>Score explanation: Lancaster University has developed sustainable procurement guidelines to embody its environmental and social aims. To ensure best practice the framework is consistent with:</i></p> <ul style="list-style-type: none"> • <i>The Higher Education Procurement Association standards</i> • <i>The Chartered institute of Procurement and Supply guidance</i> • <i>The Crown Commercial Services.</i> <p><i>Additionally, all suppliers are subject to a Sustainability Impact Analysis which ensures the supplier is compliant with Living Wage, protective of human rights, uses plastic free or 100% recyclable packaging and conscious of delivery and transactions which increase carbon costs. Furthermore, anyone purchasing on behalf of the University is required to complete an introduction course on Sustainable procurement.</i></p>	

5.9. Are there sustainability requirements or guidelines for events hosted at the institution?	
Every event hosted at the institution must abide by sustainability criteria. (2 points)	
The institution strongly recommends or incentivizes sustainability measures, but they are not required . (1 point)	
There are no sustainability guidelines for institution events. (0 points)	
Score Assigned:	2
<p><i>Score explanation: Events hosted by the institution must abide by policies such as the ‘Fairtrade Policy’ for event catering and the ‘Waste & Recycling Policy’. Furthermore, events held in the HIOne campus include additional policies based on the Sustainable Events Guide published by the University of Queensland.</i></p>	

5.10. Does your <u>institution</u> have programs and initiatives to assist with making lab spaces more environmentally sustainable?	
Yes, the institution has programs and initiatives to assist with making lab spaces more environmentally sustainable. (2 points)	

There are guidelines on how to make lab spaces more environmentally sustainable, but not programs or initiatives. (1 point)	
There are no efforts at the institution to make lab spaces more sustainable. (0 points)	
Score Assigned:	2
<i>Score explanation: The HIOne campus currently lacks dedicated lab spaces. However, institutionally faculties such as those within the Lancaster Environment Centre, Chemistry, Physics and Engineering are actively working to enhance lab sustainability through the globally recognised LEAF framework (Laboratory Efficiency Assessment Framework). The team is working to advance existing accreditation from Bronze to Silver as well as secure additional accreditation for existing and future labs.</i>	

5.11. Does your <u>institution's</u> endowment portfolio investments include fossil-fuel companies?	
The institution is entirely divested from fossil fuels and has made a commitment to reinvest divested funds into renewable energy companies or renewable energy campus initiatives. (4 points)	
The institution is entirely divested from fossil fuels. (3 points)	
The institution has partially divested from fossil fuel companies or has made a commitment to fully divest , but currently still has fossil fuel investments. (2 points)	
The institution has not divested from fossil-fuel companies, but faculty and/or students are conducting organised advocacy for divestment. (1 point)	
Yes, the institution has investments with fossil-fuel companies and there have been no efforts to change that. (0 points)	
Score Assigned:	2
<i>Score explanation:</i> <i>Since the University's declaration of the planet emergency in 2020, all investments have been transferred to two new sustainable funds.</i> <ul style="list-style-type: none"> • <i>'Responsible Multi-Asset Fund' which is tailored for charities rto minimise environmental consequences of any investments by following the Environmental Social and Governance criteria.. Screening of potential investments by the University is centred around have zero exposure to companies which derive more than 10% of its revenue from fossil fuels.</i> • <i>'Advance Strategy Fund' which focuses on increasing investments into sustainable businesses. This aim is reflected in a higher screening threshold where companies must derive less than 5% of their profits from fossil fuels.</i> 	

Section Total (26 out of 32)	81%
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Grading

Section Overview

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

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

**Within each grade bracket, a score in the top 5% (_5 to _9%), receives a “+”, and a score in the bottom 5% (_0- _4%) receives a “--”. For example, a percentage score of 78% would be a B+.*

Planetary Health Grades for Lancaster Medical School

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

Section	Raw Score %	Letter Grade
Planetary Health Curriculum (30%)	$(65/72) \times 100 = 90\%$	A
Interdisciplinary Research (17.5%)	$(16/17) \times 100 = 94\%$	A
Community Outreach and Advocacy (17.5%)	$(10/14) \times 100 = 71\%$	B
Support for Student-led Planetary Health Initiatives (17.5%)	$(12/15) \times 100 = 80\%$	A-
Campus Sustainability (17.5%)	$(26/32) \times 100 = 81\%$	A-
Institutional Grade	$(90 \times 0.3 + 94 \times 0.175 + 71 \times 0.175 + 80 \times 0.175 + 81 \times 0.175) = 84.3\%$	A-

Report Card Trends

Section Overview

This graph demonstrates trends in overall and section grades for the years in which Lancaster University has participated in the Planetary Health Report Card initiative. Note that no data exists for the academic year 2021-2022.

Planetary Health Report Card Trends for Lancaster University

