Planetary Health Report Card (Medicine):

University of Sheffield

2024-2025 Contributing Team:

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Land acknowledgment:

Summary of Findings

Overall Grade	B

Curriculum	B

- The University of Sheffield medical school curriculum includes teaching of a range of planetary health (PH) topics. Some topics - such as sustainable quality improvement and sustainable prescribing - are well taught, and there are mentions of most of the important issues regarding PH within the curriculum. However, this year there has been a slight decline in the teaching of PH topics within the University of Sheffield Medical School curriculum, and integration of many PH topics into the curriculum remains minimal.
- **Recommendations:** The upcoming curriculum review provides significant opportunities for further integration of PH into the curriculum. Because the curriculum is already overloaded, this should involve integrating PH teaching into lectures that are not specifically devoted to the subject.

Interdisciplinary Research	B

- Research into the environmental impact of healthcare systems is taking place within the Sheffield Centre for Health and Related Research, as well as collaboration with other sustainability researchers across various specialisms in the wider university.
- **Recommendations**: Existing websites detailing planetary health and sustainability research at the University of Sheffield could be improved.

Community Outreach and Advocacy	C+

- There is good community outreach from the medical school relating to PH, especially during the Student Selected Components (SSCs) in Phases 2b and 3a, which enable students to engage with local environmental organisations.
- **Recommendations**: Communications from the medical school or the hospital trust could include more information about important PH topics, in order to educate students and patients alike.

Support for Student-Led Initiatives	B-

- Due to lack of student engagement, the student society that previously focused on Planetary Health within the medical school has had to fold this past year. However, multiple student societies within the wider university focus on sustainability or engagement with nature.
- **Recommendations**: Students who are interested in sustainability within medicine should be encouraged to restart a student society focusing on these issues. In order to help with this, more information should be provided to students about opportunities to engage with PH.

Campus Sustainability	B

- The University of Sheffield is committed to becoming net-zero across all activities by 2038. So far, the university has divested from fossil fuels, powers campus buildings with renewable energy, and has begun to implement sustainable procurement practices. However, significant work remains to be done to meet targets relating to building, transport, waste, procurement, and food sustainability.
- **Recommendations**: This year, it is expected that a shuttle bus scheme connecting Sheffield to the hospital placement site in Doncaster will be set up. If this is successful, further shuttle bus schemes across the other placement sites would be of great benefit. Further beneficial changes include providing food waste recycling and enforcing stronger sustainability guidelines on food and procurement.

Statement of Purpose

Planetary health is human health.

The Planetary Health Alliance describes planetary health as "a solutions-oriented, transdisciplinary field and social movement focused on analysing and addressing the impacts of human disruptions to Earth's natural systems on human health and all life on Earth." This definition is intentionally broad, intended to encompass the multitude of ways that the environment can affect health, including water scarcity, changing food systems, urbanisation, biodiversity shifts, natural disasters, climate change, changing land use and land cover, global pollution, and changing biogeochemical flows. The health of humanity is dependent on our environment, and our environment is changing rapidly and in disastrous ways. Although the World Health Organization has called climate change "the greatest threat to global health in the 21st century," many health professional 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 health professional training. It is imperative that we hold our institutions accountable for educating health professional students about the health impacts of climate change and other anthropogenic environmental changes, generating research to better understand health impacts and solutions, supporting related student initiatives, embracing sustainable practices as much as possible, and engaging with surrounding communities that are most affected by environmental threats. Because climate change and environmental threats disproportionately affect vulnerable populations (for example, communities of colour, older adults sensitive to health threats, and individuals in low-resource settings), these issues are inherently ones of equity and justice.

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

Definitions & Other Considerations

Definitions:

- **Planetary Health:** is described by the Planetary Health Alliance as "the health of human civilisation and the state of the natural systems on which it depends." For example, topics such as climate change, declining biodiversity, shortages of arable land and freshwater, and pollution would all fall under the realm of planetary health. Both planetary health and traditional 'environmental health' examine the relationship between human health and the external environment, including extreme temperatures, chemicals, vector-borne diseases, etc. Planetary health explicitly concerns itself with the potential health harms associated with human-caused perturbations of natural systems. Therefore, the human health focus of planetary health makes the field well-adapted for the context of health professional education.Throughout this report card, we use the term planetary health to refer to this broad swath of topics, but resources do not need to explicitly include the term "planetary health" to satisfy the metric.

- **Sustainable Healthcare:** As defined by the Academy of Royal Colleges, sustainable healthcare involves ensuring the ability to provide good quality care for future generations by balancing the economic, environmental, and social constraints and demands within health care settings. A sustainable healthcare system maintains population health, reduces disease burden and minimises use of healthcare services.

- **Education for Sustainable Healthcare (ESH):** is defined as the process of equipping current and future health professionals with the knowledge, attitudes, skills and capacity to provide environmentally sustainable services through health professional education, thus working to decrease the enormous environmental impact of the healthcare industry. Planetary Health Education is an integral part of this education rather than an end in itself. This is because knowledge on Planetary Health is required to be able to fully understand the necessity of sustainable healthcare as well as being part of the broader knowledge needed to fully protect and promote health. In summary, ESH is covered by the three Priority Learning Outcomes of the Centre of Sustainable Healthcare below, and Planetary Health Education is embraced in the first learning objective and is a fundamental requirement to achieve learning outcomes 2 and 3:

    1. Describe how the environment and human health interact at different levels.
    2. Demonstrate the knowledge and skills needed to improve the environmental sustainability of health systems.
    3. Discuss how the duty of a doctor to protect and promote health is shaped by the dependence of human health on the local and global environment.

- **Medical School/Department vs. Institution:** When "Medical school" is specified in the report card, this only refers to curriculum and resources offered by the School/department of Medicine and does not include offerings from other parts of the university (e.g. undergraduate departments (USA), other related departments (e.g. Public Health, Population Health departments). In contrast, when "institution" is specified in the report card, we are referring to the university more broadly including all of its campuses. Any resource reasonably accessible by medical students, no matter where in the institution the resource comes from or if it is

specifically targeted for medical students, can meet this metric.

- **Environmental history (Metric #19 in Curriculum Section):** This is a series of questions students are taught to ask during medical encounters that elicits patients' exposures and environmental risk factors. Historically, this has included consideration of exposures like pesticides, asbestos, and lead, though in the modern era shaped by climate change, it can be expanded to include things like wildfire smoke exposure, air pollution and mould after flooding. Key components include place of residence over the lifecourse, occupational history, food and water sources (e.g. meat from industrial feeding operations, regular fishing in contaminated water, access to clean drinking water), and exposure to air pollution. Please be as specific as possible when providing evidence for this metric.

- **Elective:** The word "elective" refers to an optional course or lecture series that a student can opt to take part in but is not a requirement in the core curriculum. Generally, these elective courses take place in the preclinical curriculum but vary by school.

- **Core Curriculum:** This refers to taught material that is develiered 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.

- **Extractivisim:** 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 medical school 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

This year, Phase 2a students were given the option during their Research Attachment SSC to conduct a review of sustainability within the curriculum. This involved identifying areas in which sustainability is currently being taught, interviewing staff to identify their attitudes towards sustainability teaching, and identifying barriers to further integrating this into the curriculum. Two students were involved in this SSC, and they each produced a report that is being used as the basis for further integration of sustainability into the curriculum.
Additionally, in Phase 2b, students undertake their Social Accountability SSC. This SSC involves teaching students about the wider determinants of health. In autumn 2024, five of these community placements that students could choose were explicitly relating to health and the environment or sustainability; these were the placements at Heeley City Farm, Kelham Island and Neepsend Community Alliance, Schools Climate Education South Yorkshire, Transform Britain, and Whirlow Hall Farm Trust.
Finally, in Phase 3a, students have the opportunity to do an SSC with the primary care sustainability organisation Greener Practice. This 6-week SSC involves students going into general practices and utilising the Greener Impact for Health Toolkit to assess the practice with regards to sustainability, before identifying future areas for improvement. Prior to entering GP practices, students are sent numerous resources teaching them about the link between climate change and healthcare systems, and they are also given weekly teaching sessions alongside the placement, covering a range of topics including green prescribing and deprescribing, sustainable asthma care, health inequalities, and air pollution.

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:	2
The Phase 1 lecture 'Introduction to Environmental Health' (20th December 2024) explains the human impact on the global climate and how this will cause more extreme heat events, before briefly mentioning the risks of temperature-related illnesses such as extreme heat events. *In the first lecture of the Phase 4 climate symposium, 'Climate Change, Sustainability, and Health', there is a slide detailing the impact of heatwaves, explaining the risks of heatstroke and heat exhaustion, especially in people with cardiopulmonary risk factors. It is then explained that there were 15000 deaths in Europe in 2023 as a result of extreme heat and that heatwaves are becoming more common as a result of climate change.*	

1.3. Does your <u>medical school</u> curriculum address the impacts of extreme weather events on individual health and/or on healthcare systems?	
This topic was explored **in depth** by the **core** curriculum. (3 points)	
This topic was **briefly** covered in the **core** curriculum. (2 points)	
This topic was covered in **elective** coursework. (1 point)	
This topic was **not** covered. (0 points)	
Score Assigned:	3
In the Phase 1 lecture 'Introduction to Environmental Health' (20th December 2024), there is a slide explaining the health impacts of climate change, which specifically mentions extreme weather-related illnesses. *Phase 1 students are also taught about extreme weather impacting on respiratory disease in the context of thunderstorms having an exacerbatory effect on asthma in the lecture 'The Lungs: Genes, Work, and the Wider Environment' (25th November 2024)* *Furthermore, the Phase 4 lecture 'Climate Change, Sustainability, and Health' includes multiple slides showing how climate change leads to more extreme weather events and how that can impact health. There is also discussion of how to educate patients about these extreme weather events, for example informing asthmatics of the risk of deterioration, or informing patients with cardiovascular or renal disease about increased risk during heat waves due to dehydration.*	

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:	3
In the Phase 1 lecture 'Introduction to Environmental Health (20th December 2024), there is a slide explaining the health impacts of climate change, which specifically mentions how changing ecosystems are causing changes in the patterns of infectious and vector-borne diseases. Furthermore, the Phase 4 lecture 'Climate Change, Sustainability, and Health' includes two slides explaining how patterns of infectious diseases have changed as a result of climate change, and how they will continue to do so, specifically mentioning mosquito- and tick-borne illnesses, and noting that there was recently a case of malaria in Hull in a person with no recent travel history.	

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
The respiratory effects of environmental factors such as climate change and air pollution in particular are addressed at multiple points in the curriculum. In Phase 1, students are first taught how air pollution can exacerbate asthma in the lecture 'The Lungs: Genes, Work, and the Wider Environment' (25th November 2024). This teaching is expanded upon in the lecture 'Introduction to Environmental Health (20th December 2024), which includes multiple slides detailing the cardiorespiratory effects of air pollution in the UK, with explanations of the various diseases air pollution makes people prone to at each stage of life. *Furthermore, in the Phase 2a lecture 'Bladder Cancer' (25th February 2025), it is explained that air pollution is an independent risk factor for lung cancer.*	

1.6. Does your <u>medical school</u> 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:	2
In the Phase 4 climate symposium, in the lecture 'Climate Change: The Primary Care Impact,' the lecturer explains how heatwaves are becoming more common, and that patients on specific drugs for cardiovascular diseases (such as diuretics and ACE inhibitors) may be more at risk of adverse events during heatwaves. As a result of this, the lecturer explains that they should be counselled on the risk of dehydration during heatwaves. *A previous lecture in this symposium, 'Climate Change, Sustainability, and Health' explains that deaths due to extreme heat events are usually due to the cardiopulmonary effects of heat.*	

1.7. Does your <u>medical school</u> 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:	2
There are multiple brief references to the mental health impacts of climate change. *In the Phase 1 lecture 'Introduction to Environmental Health (20th December 2024), there is a slide explaining the health impacts of climate change, which includes a reference to the fact that climate change has mental health impacts.* *This is also briefly mentioned in the Phase 1 lecture 'Psychiatry: Introduction/Overview and Psychological and Sociological Principles in Behavioural Science (30th January 2025), which explains how schizophrenia has a correlation with urbanicity and suggests multiple causes of this, including poverty and environmental pollutants.* *Finally, at the end of the Phase 4 climate symposium, the lecturer of the final talk, 'SusQI' explains that eco-anxiety is a normal response to the climate crisis and suggests to students that the best way to address it is with climate action. The slides also include links to support groups that can help people experiencing eco-anxiety.*	

1.8. Does your <u>medical school</u> curriculum address the relationships between health, individual patient food and water security, ecosystem health, and climate change?	
This topic was explored **in depth** by the **core** curriculum.	
This topic was **briefly** covered in the **core** curriculum.	
This topic was covered in **elective** coursework.	
This topic was **not** covered.	
Score Assigned:	3
The Phase 1 lecture 'Introduction to Environmental Health (20th December 2024) includes multiple slides discussing the importance of water availability and quality and explains how contamination of water from either sewage or industrial processes can have a major impact on human health. Later in the lecture, there is a slide explaining the health impacts of climate change, which specifically mentions the rising prevalence of water- and foodborne diseases and food and water shortages as impacts of climate change on health. *The Phase 4 lecture 'Climate Change, Sustainability, and Health' includes a video explaining the impact of climate change on food security with subsequent health impacts of this, and how changes in food security will disproportionately affect women and poorer families. There are also 3 slides discussing food security, which explain how pollution, soil erosion, and water scarcity as a result of human activities are leading to increased food insecurity. This lecture also makes a brief mention of water pollution, including contamination of water sources with microplastics, and explains how that can have a deleterious effect on human health.*	

1.9. Does your <u>medical school</u> curriculum address the outsized impact of climate change on marginalised populations such as those with low SES, women, communities of colour, Indigenous communities, children, homeless populations, and older adults?	
This topic was explored **in depth** by the **core** curriculum.	
This topic was **briefly** covered in the **core** curriculum.	
This topic was covered in **elective** coursework.	
This topic was **not** covered.	
Score Assigned:	3
The Phase 4 lecture 'Climate Change, Sustainability, and Health' discusses the major health impacts of climate change, including heatwaves, food insecurity, and changing patterns of infectious diseases. For each of these topics, it is explained in detail how the impacts will be disproportionately felt by the most vulnerable people in society, such as homeless people and people of lower socioeconomic status.	

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:	2
The Phase 4 lecture 'Climate Change, Sustainability, and Health' explains how changing patterns of population health are unevenly distributed, with greater impacts falling on Asia and Africa, and how climate change will continue these trends. It includes a slide explaining what the most significant impacts of climate change will be in various regions of the world, e.g. reduced crop yields and risk of flash flooding and heatwaves in Europe, water stress causing reduced crop yields and so food insecurity in Africa, and reduction in freshwater availability with increased flooding in mega-delta areas in Asia.	

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

1.11. Does your medical school 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
This topic was not covered in elective coursework or the core curriculum.	

1.12. Does your medical school 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
At Sheffield medical school, this topic is frequently brought up in lectures and tutorials across all years, due to the local clinical relevance of the city being famous for its industry (especially steel,	

with many surrounding areas also recently being mining towns). This means that many patients have occupational exposures that put them at risk of particular diseases, which is discussed at numerous points in the curriculum. For example, the Phase 1 lecture 'The Lungs: Genes, Work, and the Wider Environment' dedicates roughly a third of the lecture to talking about specific lung pathologies that are caused by industrial processes. Furthermore, the Phase 2a lecture 'Carcinogenesis' explains further how industrial occupational exposures are linked with specific cancers, as does the Phase 2b lecture 'How a Respiratory History Can Point to the Right Diagnosis'. *Additionally, multiple small group tutorials across all years use examples of patients who have worked in heavy industry or mining as the basis of case discussions.*

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
This topic is not taught in the core curriculum or in elective coursework.	

1.14. Does your <u>medical school</u> curriculum address the outsized impact of anthropogenic environmental toxins on marginalised populations such as those with low SES, women, communities of colour, children, homeless populations, Indigenous populations, and older adults?	
This topic was explored **in depth** by the **core** curriculum.	
This topic was **briefly** covered in the **core** curriculum.	
This topic was covered in **elective** coursework.	
This topic was **not** covered.	
Score Assigned:	2
This is briefly mentioned at multiple points in the curriculum. *In the Phase 1 lecture 'Learning Disabilities and Health,' it is explained how environmental toxins such as lead and cadmium are independently linked with neurodevelopmental disorders, before discussing how health risks such as environmental toxin exposure are independently linked with disability, leading to disabled people being more heavily affected by these toxins.*	

Later in Phase 1, in the lecture 'Introduction to Environmental Health,' it is explained that health is influenced by a range of factors including housing, sanitation, food safety, water quality, and environmental quality, with poorest groups most exposed to the adverse effects of these factors. Furthermore, the Phase 4 lecture 'Climate Change, Sustainability, and Health' discusses how increasing urbanisation leads to worse health outcomes, particularly affecting those in poverty, those with limited access to healthcare, and those with limited access to key services such as water.

Curriculum: Sustainability

1.15. Does your <u>medical school</u> curriculum address the environmental and health co-benefits of a plant-based diet?	
This topic was explored **in depth** by the **core** curriculum.	
This topic was **briefly** covered in the **core** curriculum.	
This topic was covered in **elective** coursework.	
This topic was **not** covered.	
Score Assigned:	2
The Phase 4 lecture 'Climate Change, Sustainability, and Health' includes a slide about the environmental impact of high meat consumption, also linking this raised meat consumption to adverse health impacts such as colorectal cancer and ischaemic heart disease. This is also briefly mentioned in the Phase 4 lecture 'Climate Change: The Primary Care Impact,' which explains the concept of the Planetary Health Plate, stating that a flexitarian diet that incorporates these principles can reduce mortality by 20%, as well as having environmental benefits.	

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
The carbon footprint of healthcare systems is addressed at multiple points in the curriculum at the University of Sheffield. During the Phase 4 climate symposium, this is addressed in each of the 3 lectures given. The first ('Climate Change, Sustainability, and Health') includes a breakdown of the carbon footprint of the NHS, highlighting areas where there is significant progress to be made. The second of these lectures, 'Climate Change: The Primary Care Impact' discusses the environmental impact of the NHS as a whole, before focussing more specifically on the impact of primary care, giving a breakdown of the carbon footprint of primary care in the UK. Students are shown that the	

carbon hotspots in primary care include pharmaceutical prescribing (especially MDIs), as well as travel and infrastructure. Suggestions are then given to find ways to reduce the impact of these carbon hotspots. The final lecture in this climate symposium, 'SusQI', focuses on how the carbon footprint of healthcare is calculated and explains to students how to perform a sustainable QI project to find further areas of improvement.

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)	0
The impact of **anaesthetic** gases on the healthcare carbon footprint and ways to reduce anaestheisa's environmental impacts, such as total intravenous anaesthesia or choosing less environmentally harmful anaesthetic gas options with reduced greenhouse gas emissions. (1 point)	0
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

1. *The Phase 4 lecture 'Climate Change, Sustainability, and Health' includes discussion of how healthcare practitioners can reduce the carbon footprint of their practice by reducing unnecessary tests, including avoiding "tick box-itis", which leads to testing all parameters when they may be unnecessary, and reducing overprescription.*
2. *The Phase 4 lecture 'Climate Change: The Primary Care Impact' breaks down the carbon footprint of primary care, explaining that the carbon hotspots in this area of medicine are predominantly due to prescriptions of pharmaceuticals, especially metered-dose inhalers. The lecturer goes on to suggest that students should consider lifestyle measures as alternatives to prescriptions before prescribing medications for many common diseases with the aim of reducing unnecessary prescriptions. If this is not suitable, then the lecturer suggests that lower-carbon alternatives, such as dry powder inhalers, should be used preferentially.*
3. *Social prescribing is taught throughout the curriculum at Sheffield Medical School. Starting in Phase 1, students are taught to consider non-pharmacological management of patients with a range of conditions through the use of social prescribing in the Early Years GP module, which runs longitudinally across the first 2 years of the course. This is also*

addressed in lectures, such as the Phase 4 lecture 'Climate Change: The Primary Care Impact,' which discusses non-drug interventions to promote health and explains the concept of social prescribing, with further detail about 'green' and 'blue' social prescribing.

4. *This is not currently taught in the Sheffield Medical School curriculum.*
5. *This is not currently taught in the Sheffield Medical School curriculum.*
6. *The Phase 4 lecture 'Climate Change: The Primary Care Impact' explains that the major carbon hotspots in primary care are from prescription of medications, especially metered-dose inhalers (MDIs). Later in the lecture, the impact of MDIs is discussed further, explaining how each MDI used has the equivalent carbon footprint of a car driving 175, or roughly the distance from London to Sheffield. Alternatives to MDIs are then suggested, especially reducing reliance on SABAs to treat asthma, personalised inhaler plans, use of dry powder inhalers, and teaching patients better inhaler technique.*
7. *The Phase 4 lecture 'Climate Change: The Primary Care Impact' includes a slide detailing strategies to reduce waste in the clinical context. These include: reusable PPE, reducing the usage of single-use gloves and couch roll, sterilisation of surgical equipment, and sending unused equipment to medical charities abroad.*

Curriculum: Clinical Applications

1.18. In training for patient encounters, does your <u>medical school's</u> curriculum introduce strategies to have conversations with patients about the health effects of climate change?	
Yes, there are strategies introduced for having conversations with patients about climate change in the **core** curriculum. (2 points)	
Yes, there are strategies introduced for having conversations with patients about climate change in **elective** coursework. (1 points)	
No, there are **not** strategies introduced for having conversations with patients about climate change. (0 points)	
Score Assigned:	0
This is not currently covered in the core or elective curriculum. However, there are considerations for a future SSC that would look at respiratory conditions and include having conversations with patients about sustainable asthma prescribing.	

1.19. In training for patient encounters, does your <u>medical school's</u> curriculum introduce strategies for taking an environmental history or exposure history?	
Yes, the **core** curriculum includes strategies for taking an environmental history. (2 points)	
Only **elective** coursework includes strategies for taking an environmental history. (1 point)	
No, the curriculum does **not** include strategies for taking an environmental history. (0 points)	
Score Assigned:	2

Students are taught the principles of history-taking during a lecture block in Phase 2b. In this block, the lecture 'How a Respiratory History Can Point to the Right Diagnosis' teaches students to consider environmental exposures, including a full occupational history and asking about pets, hobbies, and travel. This is also covered in the lecture 'Taking the Nearly Perfect History' in this block, which teaches students to ask about occupational exposures and emphasises the importance of asking about any recent changes in these exposures that could have led to their present illness.

Curriculum: Administrative Support for Planetary Health

1.20. Is your medical school 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:	2
Sheffield Medical School is currently conducting a review of its curriculum. As part of this, Dr Pirashanthie Vivekananda-Schmidt is actively reviewing areas where PH topics could be better integrated. Last year, two Phase 2a conducted a review of the curriculum with regards to sustainability as part of their research attachment SSC. Their reports identified that the priority for improving sustainability education should be further integration of PH topics into more lectures, especially those not dedicated solely to sustainability or environmental health. These reports, combined with the results from the Planetary Health Report Card, are being used as the basis for the improvements in sustainability education that Dr Vivekananda-Schmidt is advocating for. However, although there may be some minor improvements in the next year, due to some easily identified changes, the majority of this work will not be implemented until at least September 2026 once the full curriculum review has been completed. Therefore, this will be awarded 2 points.	

1.21. How well are the aforementioned planetary health/Education for Sustainable Healthcare topics integrated longitudinally into the core 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:	4

Planetary health topics are taught at various points throughout the curriculum. Although the majority of this teaching is within standalone lectures, some topics are well integrated into the curriculum. Examples of this include teaching on occupational exposures as risk factors, sustainable QI, and sustainable prescribing and deprescribing as an important factors contributing towards patient care. Overall, there is still significant progress that could be made to integrate teaching about the climate crisis into the curriculum beyond these standalone lectures, but aspects of planetary health that are particularly relevant to the local community are consistently taught throughout the course.

1.22. Does your medical school employ a member of faculty to specifically oversee and take responsibility for the incorporation of planetary health and sustainable healthcare as a theme throughout the course?	
Yes, the **medical school** has a specific faculty/staff member responsible for overseeing curricular integration of planetary health and sustainable healthcare. (1 point)	
No, the **medical school** does **not** have a specific faculty/staff member responsible for overseeing curricular integration of planetary health and sustainable healthcare. (0 points)	
Score Assigned:	1
Dr Pirashanthie Vivekananda-Schmidt is the lead for Professionalism and Patient Safety and is actively involved in incorporating planetary health and sustainable healthcare into the curriculum through her responsibilities around ethical practice.	

Section Total (52 out of 72)	**72.2%**

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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
There are lecturers within the School of Medicine and Population Health whose area of research focuses on sustainability, including one who focuses on exploring "the resilience of healthcare organizations in response to extreme events. This includes… extreme weather caused by climate change". He also founded an international network of researchers to explore Health System Resilience for Extreme Weather Emergencies. *Furthermore, Professor Nicolas Martin includes sustainability in dentistry as one of the three key domains of his research, specifically focusing on the environmental impact of materials used in dentistry, remote clinical consultations, and embedding sustainability into undergraduate curricula.*	

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
The Sheffield Centre for Health and Related Research is an interdisciplinary research centre. One of their research themes is 'Global Health and Environment,' which explores "health system resilience for extreme weather emergencies, the effects of climate change on physical and mental health, health system sustainability initiatives, and the inequalities and marginalisation of communities adversely affected by extreme weather".	

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:	0
During Sheffield's Urbanism's Winter Programme, the subject of urbanisation exacerbating rising temperatures and its disproportionate effect on certain communities was mentioned. As part of this, it was acknowledged that climate governance platforms must ensure that "solutions meet the needs of the most vulnerable". However, there are currently no efforts to establish a process for community members to advise or make decisions on the research agenda.	

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:	2
The University of Sheffield has a website that includes information on the environmental impact of the university, its sustainability strategy, recent progress the university has made with regards to sustainability, current research into sustainability, and opportunities for students to study courses in which this is a focus. The section on research into sustainability includes some researchers studying subjects relating to health and the environment, but there is no section on the website that is specifically dedicated to this subject. The University of Sheffield also has a website for the Centre for Energy, Environment, and Sustainability (CEES), which centralises ongoing and past research relating to the environment, including educating businesses about their supply chain and upgrading houses to be more energy efficient. However, this does not include more information about research specifically relating to health and the environment.	

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:	3
The University of Sheffield hosts an annual Sustainability Symposium, which includes topics related to sustainability and health. For example, in 2024 the symposium included the talk "Air Pollution - In Conversation", in which Rosamund Adoo-Kissi-Debrah told the story of how her daughter became the first person in the world to have air pollution listed as a cause on her death certificate, followed by a discussion on the impact of air pollution within Sheffield and how this contributes towards health inequalities. *Furthermore, in September 2024, the University of Sheffield hosted a Sustainability Away Day, which gathered academics and university staff members to discuss sustainability issues, including improving sustainable practices within laboratories and education for sustainable healthcare (ESH). This included a talk from Professor Nicolas Martin, on sustainability in dentistry.*	

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
Sheffield Medical School is a member of the Planetary Health Alliance and the Global Consortium on Climate and Health Education.	

Section Total (12 out of 17)	**70.6%**

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Community Outreach and Advocacy

***<u>Section Overview:</u>* 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
Both the medical school and the wider university partner with multiple organisations that promote sustainability and planetary and environmental health. The medical school works closely with the primary care sustainability group 'Greener Practice.' Third year medical students can choose to take part in the Greener Practice SSC, in which they use the Green Impact for Health Toolkit to promote sustainability within general practices and encourage participation from an increasing number of practices each year. *Phase 2b medical students also have opportunities to work with community organisations promoting planetary and environmental health during their 4 week Social Accountability SSC. Examples include working with Schools Climate Education South Yorkshire to teach children about the health impacts of climate change and working with Transform Britain in their work reviving community assets and improving the ecological health of derelict or underused land.*	

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

Each year, the medical school partners with Schools Climate Education South Yorkshire to deliver teaching sessions to local school children about the health impacts of climate change.
The University of Sheffield also hosts internal events aimed at students and staff relating to sustainability, such as an event focusing on sustainability within the arts and humanities, or a talk about sustainability by the students Amnesty Society.

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

The University of Sheffield has an online sustainability newsletter, which sometimes includes planetary health topics, such as information on recent publications from academics at the university relating to planetary health. However, this is not routinely sent to students so would require them to seek out this information. Infrequent university-wide emails will also include information on planetary health.

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 providers. (1 point)
There are **no** such accessible courses for post-graduate providers. (0 points)

Score Assigned:	1

The University of Sheffield offers a number of CPD courses for postgraduates. One of these, 'Human Nutrition in the Global South' studies "the broad range of factors that influence food intake and nutritional status, e.g…. climate change and global food systems". Additionally, the Sheffield Teaching Hospitals NHS Foundation Trust has identified that provision of CPD training on sustainability is a priority, but as yet no further CPD courses relating to sustainability have been created.

3.5. Does your institution or its affiliated teaching hospitals 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:	0
The Sheffield Health and Social Care NHS Foundation Trust have produced a document on their Green Plan and Sustainability Strategy. This document outlines that climate change and pollution 'will exacerbate existing health inequalities', with the effects of air pollution being 'linked to 500 deaths a year in Sheffield'. However, this document isn't aimed at patients, so cannot be considered to be an educational resource for them. It would be useful to have a shortened document for patients, with information summarised about environmental health exposures.	

3.6. Does your institution or its affiliated teaching hospitals 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:	0
The Sheffield Health and Social Care NHS Foundation Trust have produced a document on their Green Plan and Sustainability Strategy. The document does outline that some health impacts may be due to 'heatwaves, worsened cold weather, storms and floods'. However, this document isn't aimed at patients, so cannot be considered to be an educational resource for them.	

Section Total (8 out of 14)	**57.1%**

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Support for Student-Led Planetary Health Initiatives

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

4.1. Does your institution offer support for students interested in enacting a sustainability initiative/QI project?	
Yes, the **institution** *either* offers grants for students to enact sustainability initiatives/QI projects *or* sustainability QI projects are part of the core curriculum. (2 points)	
The **institution** encourages sustainability QI projects (to fulfil clerkship or longitudinal requirements) and offers resources to help students succeed in these projects, **but** there is no student funding available and there is no requirement to participate. (1 point)	
No, **neither** the medical school or the institution offer opportunities or support for sustainability initiatives or QI projects. (0 points)	
Score Assigned:	2
Sustainable QI is a part of the core curriculum of Sheffield Medical School. During the Phase 3b Community and Palliative Care rotation, all students must perform a QI audit project within a GP practice. As part of this, students are required to consider the sustainability impacts of their recommendations, and this forms part of the marking criteria for this project. Additionally, in Phase 4, the lecture 'SusQI' explains in great depth the rationale and methods involved in sustainable QI, and students are given the opportunity within the lecture to practise considering sustainability issues that they can incorporate into future QI projects. *There are also opportunities to take part in sustainable QI during SSCs, such as the Phase 3a Greener Practice SSC, in which students use the Green Impact for Health Toolkit to enact sustainable QI within general practices.*	

4.2. Does your institution offer opportunities for students to do research related to planetary health and/or sustainable healthcare/vetcare?	
The **institution** has a **specific** research program or fellowship for students interested in doing planetary health/sustainable healthcare/vetcare research. (2 points)	
There are research opportunities for students to perform research related to planetary health/sustainable healthcare, but these **require student initiative** to seek these out and carry them out in their spare time. (1 point)	
There are **no opportunities** for students to engage in planetary health/sustainable healthcare research. (0 points)	
Score Assigned:	1

Sheffield Medical School offers research opportunities to students in their fourth year wishing to intercalate. This can include planetary health topics, such as climate change as a public health issue, the link between climate change and human nutrition, and climate change in the context of international development. However, these are unfunded and not necessarily the primary focus of the research, so this will be awarded 1 point.

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
The Medical School has created a Google site accessible to students called Planetary Health and Sustainability',which details what planetary health is and the opportunities available in the medical school to learn more about it. It also documents where Planetary Health has been included into the curriculum and it features videos explaining key concepts such as health promotion and the impacts of human activities on health. The page on student-led initiatives provides information on societies to join (such as Healthy Planet Society or Students for Global Health). However, it does not feature any contact details for potential mentors, and it has not been updated recently, for example to reflect the fact that Healthy Planet Society no longer exists.	

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:	0

As of this year, there is no longer a student society specifically dedicated to planetary health or sustainability in healthcare. There was previously a student society with this focus - Healthy Planet Society - but due to lack of student engagement in recent years, it has ceased its activities. Other student groups, such as Students for Global Health, have hosted events linked to Planetary Health but sustainability is not the main focus of this society.

4.5. Is there a student liaison representing sustainability interests who serves on a department or institutional 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
The University of Sheffield has a Welfare and Sustainability Officer, whose role includes advocating for sustainability best practices within the university.	

4.6. 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)	**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.	0
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
The University of Sheffield's Students Union continues to provide a plethora of societies with some targeting skills in organic agriculture and sustainable food systems. The Beekeeping Society continues to play a vital role in teaching students and local residents about the importance of wildlife and the importance of bees in pollination, whilst 'also campaigning for their conservation'. As of 2024, the society now owns three bee hives. Furthermore, the Allotment Society continues to	

teach students the skills of 'grow[ing] food, herbs and flowers'. Both societies are welcoming to people of all levels of experience in the field of organic agriculture and sustainable food systems, and are either free or of very low entrance costs making them more accessible for all.
In 2024 the University of Sheffield hosted a sustainability symposium, where a range of speakers covered topics such as air pollution and the impact of a low carbon footprint. A recording of the whole event can be found on the Grantham Centre for Sustainable Futures webpage that gives a summary of topics covered.
The Sheffield University Conservation Society offers regular volunteering opportunities such as litter picking along rivers and tree planting. As a group they are continually open to new suggestions from members on what else they can do to reduce the impacts of anthropogenic actions on the environment. More information on the society can be found on the Student's Union website. Furthermore, there are numerous societies whose main activities include outdoor pursuits. Some examples include the Sheffield University Walking Club and the University of Sheffield Canoe Club. Within the medical school specifically, Wilderness Medicine Society conducts multiple weekends away hiking and teaching students about provision of healthcare in remote settings.

Section Total (9 out of 15)	**60%**

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Campus Sustainability

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

5.1. Does your institution have an Office of Sustainability?	
Yes, there is an Office of Sustainability with multiple full-time staff dedicated to campus sustainability. If the Office of Sustainability serves the entire campus, there is **at least one designated staff member** for sustainability at the hospital. (3 points)	
There is an Office of Sustainability with one or more full-time staff dedicated to campus sustainability, but **no specific staff member** in charge of hospital sustainability. (2 points)	
There are **no salaried sustainability staff,** but there is a sustainability task force or committee. (1 point)	
There are **no** staff members **or** task force responsible for overseeing campus sustainability. (0 points)	
Score Assigned:	3
The university has a large team of sustainability personnel whose work is embedded across the university. Roles cover a range of different areas, such as communications and projects, energy, waste and transport. Each sub group within the sustainability team has at least one lead manager, for example there is a Sustainable Labs Manager and a Car Parking and Sustainable Travel Manager. All roles and contact details of the staff involved can be found on the Sustainability at Sheffield website.	

5.2. How ambitious is your institution's plan to reduce its own carbon footprint?
The institution has a **written and approved plan** to achieve carbon neutrality by **2030** (5 points)
The institution has a **written and approved plan** to achieve carbon neutrality by **2040** (3 points)
The institution has a stated goal of carbon neutrality by **2040** but has **not created a plan** to reach that goal or the **plan is inadequate** (1 point)
The institution/medical school does **not** meet any of the requirements listed above (0 points)

Score Assigned:	3
The University of Sheffield continues to work towards their targets of being a carbon neutral campus by 2030 and to be completely net zero in all affiliated activities by 2038. The University outlines that "[they] aim to become one of the most sustainable research-intensive universities in the country and reach net-zero carbon emissions as quickly as possible." This is all outlined on the Sustainability at Sheffield Targets website and progress on specific actions is marked on the Sustainability Action Plan.	

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
The University of Sheffield purchases its electricity from Bryt Energy, a 100% renewable energy supplier. Furthermore, there are also a number of on-site renewable energy sources, including solar panels and a wind turbine. The medical school building itself is attached to the Royal Hallamshire Hospital, which is run by the Sheffield Teaching Hospitals Trust. As a result of this, the medical school facilities - including energy - are all rented from the hospital. The electricity used by the hospital is also from a zero-carbon electricity tariff, but the hospital has not yet switched to non-fossil fuel heating. Based on figures from 2021, heating accounted for roughly half of the medical school's energy use, so this will be awarded one point.	

5.4. Are sustainable building practices utilised for new and old buildings on the institution's 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 intitution'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:	2
The University of Sheffield's new building called the Wave was recently awarded an Outstanding BREEAM accreditation, which is the highest sustainability accreditation awarded. This is due to several factors including the use of sustainable materials, and all operations relating to the building being designed to be net-zero. As from previous years, the University's Sustainability Action Plan continues to include metrics related to the construction and retrofitting of buildings, including embedding sustainability criteria into the decision making for new buildings and major refurbishments. Currently, only some of the University's older buildings have been retrofitted, with "some existing buildings with suitable structures have been retrofitted with green roofs." More information on the topic of sustainable building practices can be found on the Sustainability at Sheffield - Buildings and Infrastructure website.	

5.5. Has the institution implemented strategies to encourage and provide environmentally-friendly transportation options for students and reduce the environmental impact of commuting?	
Yes, the institution has implemented strategies to encourage and provide **environmentally-friendly transportation options** such as safe active transport, public transport, or carpooling and these options are well-utilised by students. Alternatively, the campus location is not amenable to unsustainable forms of transportation by default. (2 points)	
The institution has implemented **some** strategies to provide environmentally-friendly transportation options, but the options are **unsatisfactorily** accessible or advertised. (1 point)	
The institution has **not** implemented strategies to encourage and provide environmentally-friendly transportation options. (0 points)	
Score Assigned:	1
The University of Sheffield incentivises staff and students to engage in active travel through the use of the app 'Better Points', which gives students who engage in active travel a digital currency that can be spent at University of Sheffield catering outlets, redeemed for high street vouchers, or donated to charity. *The medical school also supports sustainable travel with the H1 bus, which runs between the two major hospitals within Sheffield, the Royal Hallamshire Hospital (where the medical school is based) and the Northern General Hospital. This bus is free for NHS staff and University of Sheffield students, so it is frequently used by students who have placements or teaching at the Northern General Hospital. There were also plans to implement similar shuttle bus schemes to the other major placement sites (in Rotherham, Barnsley, Chesterfield, and Doncaster), but these plans were put on hold due to the COVID-19 pandemic. The Doncaster and Bassetlaw Teaching Hospitals Trust has been actively considering implementing a shuttle bus between Sheffield and Doncaster, with a consultation sent out to students in 2024 to determine how well used it will be. It is hoped that this shuttle bus will be introduced for students from autumn 2025. However, until that happens, the vast majority of students on clinical placements continue to rely on private cars to reach placement sites.*	

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:	1
Within the medical school, including its cafe and laboratories, there are conventional waste recycling facilities available, but at present there is no organics recycling or food waste collection available for staff and students to use.	

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 a**dequate s**ustainability requirements for food and beverages, including meat-free days or no red-meat, and **is engaged** in efforts to increase food and beverage sustainability. (3 points)	
There are sustainability guidelines for food and beverages, but they are **insufficient or optional**. The institution **is engaged** in efforts to increase food and beverage sustainability. (2 points)	
There are sustainability guidelines for food and beverages, but they are **insufficient or optional.** The institution is **not** engaged in efforts to increase food and beverage sustainability. (1 point)	
There are **no** sustainability guidelines for food and beverages. (0 points)	
Score Assigned:	2
The Sustainability Action Plan, outlined by the University of Sheffield, states how unused food is directed to community fridges for students and community food charities in order to reduce food waste. (2021). Measures have been put in place as of 2023 to discourage the use of packaging and cutlery from catering outlets and introduced incentives for this. However, there are currently no mandatory rules for this. The campus also has a zero-waste shop in the Students' Union. However, there is still much progress to be made, as many of the metrics relating to food and within the University's Sustainability Action Plan have yet to be completed. *Sheffield Teaching Hospitals has an NHS Sustainability Plan for 2022-2025 with a section on 'Food and Nutrition'. This details short and longer term goals towards sustainable food within the hospitals and sustainable options to eliminate single use plastics associated with this. It shows commitment to applying sustainability criteria to food, but is at the stage of encouraging this as opposed to mandatory rules. The Medical School continues to use the University's sustainability criteria to direct what food and beverages to source, this includes continuing to promote sales of sustainable foods through nudge mechanisms.*	

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:	2
The University of Sheffield has all suppliers follow a code of conduct to ensure that procurement is an 'environmentally, socially, ethically and economically responsible' practice. The standards set out by the University follow guidelines advised at global conventions, an example of a rule that must be followed by procurers is that they must 'take active steps towards the elimination of excessive packaging and single use plastics'. The code of conduct outlined by the University was due for an update in early 2024, however this couldn't be found on the institute's website page. Using the University's Sustainability Action Plan, it seems many goals still remain incomplete. Over half of the sustainability metrics relating to procurement remain to be incomplete, a statistic similar to the previous year.	

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:	1
As part of the University of Sheffield's sustainability strategy, a review has been conducted of the sustainability plans of venues used for events in order to encourage best sustainable practice. Sustainability guidelines for events are available to staff but not currently available to students, and sustainability requirements are not included in the guidelines for selecting a venue.	

5.10. Does your institution 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

The University of Sheffield has piloted the Laboratory Efficiency Assessment Framework (LEAF) across various faculties and has now begun to implement it more broadly across the University. This framework provides practical actions to labs to increase the efficiency of their resource use, resulting in lower use of lab consumables, electricity, and water, as well as safer lab practices. Furthermore, the Green Impact scheme includes a lab-specific section. As a result, some departments include their own Green Impact Teams, which provide regular updates with practical information to enable staff and students to reduce their lab's impact.

5.11. Does your institution's endowment portfolio investments include fossil-fuel companies?
The institution is **entirely divested** from fossil fuels **and** has made a **commitment to reinvest divested funds** into renewable energy companies or renewable energy campus initiatives. (4 points)
The institution is **entirely divested** from fossil fuels. (3 points)
The institution has **partially divested** from fossil fuel companies **or** has made a **commitment to fully divest**, but **currently** still has fossil fuel investments. (2 points)
The institution has **not divested** from fossil-fuel companies, but faculty and/or students are **conducting organised advocacy** for divestment. (1 point)
Yes, the institution has investments with fossil-fuel companies and there have been **no efforts** to change that. (0 points)

Score Assigned:	3

The University of Sheffield has fully divested from fossil fuels. Additionally, it is exploring how investments can be used to support companies that have a positive impact, including promotion of sustainability and protection of the global environment, its climate, and its biodiversity. The University of Sheffield is also a founder signatory to the 'COP26 declaration: asset owner climate expectations of asset management'. This sets out minimum climate commitments from companies managing its investments, including all assets having a net zero target by at least 2050, asset managers' default position being to vote in favour of climate resolutions, and engaging in active shareholder engagement on 1.5°C-aligned transition plans. According to the University of Sheffield investment managers' annual Impact Report (available here), in the year up to 31st July 2024, assets that have a positive impact (such as charities, education, renewable energy infrastructure, and green bonds) accounted for 7.6% of the University's Endowment. This is lower than the figure in the previous year.

Section Total (21 out of 32)	**65.6%**

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

Section	Raw Score %	Letter Grade
Planetary Health Curriculum (30%)	(52/72) x 100 = 72.22%	B
Interdisciplinary Research (17.5%)	(12/17) x 100 = 70.59%	B
Community Outreach and Advocacy (17.5%)	(8/14) x 100 = 57.14%	C+
Support for Student-led Planetary Health Initiatives (17.5%)	(9/15) x 100= 60%	B-
Campus Sustainability (17.5%)	(21/32) x 100 = 65.63%	B
Institutional Grade	**(72.22x0.3 + 70.59x0.175 + 57.14x0.175 + 60x0.175 + 65.63x0.175) = 66.00%**	**B**

Report Card Trends

Section Overview
This graph demonstrates trends in overall and section grades for the years in which the University of Sheffield Medical School has participated in the Planetary Health Report Card initiative.