



Planetary Health Report Card:

Newcastle University



2022-2023 Contributing Team:

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Summary of Findings

Overall	B-
<u>Curriculum</u>	B
<ul style="list-style-type: none"> Newcastle University has a considerable amount of coverage and integration of planetary health concepts throughout both the core and elective curriculum. A substantial amount of teaching is dedicated to planetary health and integrated throughout all years via a spiral curriculum. Recommendations: The inclusion of specific planetary health topics, such as over-prescribing as a cause of climate health harm, to be included by expanding on existing teaching. 	
<u>Interdisciplinary Research</u>	B
<ul style="list-style-type: none"> Newcastle University has both dedicated faculty members who have their primary research focus in planetary health, and a dedicated department for interdisciplinary research aiming to increase sustainability, One Planet. Recommendations: One Planet could potentially be better utilised by the medical school in terms of sustainable healthcare. Newcastle Medical School could also consider organising a conference directly related to this, or set up a specific newsletter or dedicated webpage for planetary health news. 	
<u>Community Outreach and Advocacy</u>	D
<ul style="list-style-type: none"> Newcastle University has numerous links to community outreach projects through the Students Union, including many environmental projects, although the medical school is not involved in these and there are none that directly relate to health. Recommendations: Members of the medical school could utilise these links with community outreach projects to focus on developing community outreach projects relating to planetary health. 	
<u>Support for Student-Led Initiatives</u>	B
<ul style="list-style-type: none"> Newcastle University has various opportunities for medical students to do research related to planetary health, and a compulsory sustainability QI project for final years. There are also various student-led societies relating to planetary health and sustainability, such as Students for Global Health, which have faculty support. Recommendations: The medical school could develop a specific webpage or newsletter for PH to make this information more easily accessible and easier to locate. 	
<u>Campus Sustainability</u>	B
<ul style="list-style-type: none"> Newcastle University has ambitious sustainability plans, with a dedicated Office of Sustainability, with a plan to achieve carbon neutrality by 2030. Recommendations: There potentially need to be clearer plans for the Medical School specifically in terms of focusing on lab sustainability and the energy efficiency of the building itself. The institution could also introduce sustainable guidelines for events hosted across the university. 	

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 medical schools, we have created a Planetary Health Report Card that medical students internationally can use to grade and compare their home institutions on an annual basis. This medical-student-driven initiative aims to compare medical schools 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 vs. Institution:** When “medical school” is specified in the report card, this only refers to curriculum and resources offered by the School 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. 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 providers 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.
- **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.
- **Clerkship:** 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 or placements.

Other considerations:

- If there are more than one "tracks" at your medical school 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).

Added to our resources last year, the Planetary Health Report Card [Literature Review by Metric](#) collates the evidence behind each of the metrics in the Planetary Health Report Card. It serves as a 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. 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?	
3	Yes, the medical school has offered more than one elective whose primary focus is ESH/planetary health in the past year.
2	Yes, the medical school has offered one elective whose primary focus is ESH/planetary health in the past year.
1	The medical school does not have any electives whose primary focus is ESH/planetary health, but there are one or more electives that include a lecture on planetary health.
0	No, the medical school has not offered any electives on planetary health or electives that include ESH/planetary health topics in the past year.
<p><i>Score explanation: as with the academic years 2020-22, there were a total of two 4-week student selected components (SSCs) throughout the third and fourth year of the course. There were SSCs available that addressed the global pressures relating to the medical field such as extreme weather, vector changes and climate-driven mass migration, as well as promoting a more sustainable future when considering the interaction between healthcare and natural systems. There was also the option to undertake a sustainability quality improvement project.</i></p>	

Curriculum: Health Effects of Climate Change

2. Does your <u>medical school</u> curriculum address the relationship between extreme heat, health risks, and climate change?	
3	This topic was explored in depth by the core curriculum.
2	This topic was briefly covered in the core curriculum.
1	This topic was covered in elective coursework.
0	This topic was not covered.
<p><i>Score explanation: the core curriculum does address and assess understanding of climate change and health risk through the learning outcomes 'To understand and appreciate the unequal health impacts of</i></p>	

climate change globally’, ‘Discuss the impact of climate change on the health of marginalised/indigenous populations globally’ and ‘Explain how global change such as the climate emergency impacts on health at a global, local and individual level’. These learning outcomes are in the curriculum for years 2, 3 and 5 respectively. The associated teaching with these outcomes does briefly address the risk of extreme heat in the wider context of the climate emergency, but does not directly address this as the key learning point. Further independent study is encouraged throughout teaching with signposting to related resources.

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

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

Score explanation: This topic is briefly covered in the core curriculum throughout years 2, 3 and 5 with learning outcomes such as ‘Describe how the environment and health interact at the global level, including the effects of climate change on health’, ‘Discuss the impact of climate change on the health of marginalised/indigenous populations globally and ‘Describe how global change such as the climate emergency, impacts on health at a global, local and individual level’. These outcomes indirectly address extreme weather events within the context of the wider climate emergency, but do not directly highlight consequences of extreme weather events as a main learning point. Further independent study is encouraged throughout teaching with signposting to related resources.

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

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

Score explanation: This topic is directly addressed in the teaching for the learning outcomes ‘Describe the link between globalisation and infectious disease pandemic threat’, ‘Describe the role of Public Health education in containing and delaying the spread of infectious diseases with pandemic potential’ and ‘Describe the role of the WHO and national governments in infectious disease pandemic planning and response’. These are within the second year curriculum.

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

3	This topic was explored in depth by the core curriculum.
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2	This topic was briefly covered in the core curriculum.
1	This topic was covered in elective coursework.
0	This topic was not covered.
<p><i>Score explanation: The second year curriculum addresses this learning point within the outcome 'Describe the link between occupation, the environment and recreational pursuits in different lung diseases'. It is also covered within the fourth year tutorial 'Ecological, environmental and occupational hazards in ill health' which specifically covers the impact of air pollution on respiratory health.</i></p>	

<p>6. Does your <u>medical school</u> curriculum address the cardiovascular health effects of climate change, including increased heat?</p>	
3	This topic was explored in depth by the core curriculum.
2	This topic was briefly covered in the core curriculum.
1	This topic was covered in elective coursework.
0	This topic was not covered.
<p><i>Score explanation: this topic is briefly covered several times throughout the 5 year curriculum in teaching of other related learning outcomes such as 'Describe how the environment and health interact at the global level, including the effects of climate change on health'. It is directly addressed in the fourth year tutorial 'Ecological, environmental and occupational hazards in ill health', but the focus is more on respiratory health.</i></p>	

<p>7. Does your <u>medical school</u> curriculum address the mental health and neuropsychological effects of environmental degradation and climate change?</p>	
3	This topic was explored in depth by the core curriculum.
2	This topic was briefly covered in the core curriculum.
1	This topic was covered in elective coursework.
0	This topic was not covered.
<p><i>Score explanation: There are currently no parts of the core or elective curriculum that address the impact of environmental degradation and climate change on mental health.</i></p>	

<p>8. Does your <u>medical school</u> curriculum address the relationships between health, individual patient food and water security, ecosystem health, and climate change?</p>	
3	This topic was explored in depth by the core curriculum.
2	This topic was briefly covered in the core curriculum.

1	This topic was covered in elective coursework.
0	This topic was not covered.
<p><i>Score explanation: The topic is covered in learning objectives such as 'Discuss the contribution of human activity and population size to global environmental changes such as climate change, biodiversity loss and resource depletion' and 'Describe how the environment and health interact at the global level, including the effects of climate change on health'. Within a second year lecture, focussed on the latter LO, there is teaching on food and water security and how this is linked to climate change.</i></p>	

<p>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?</p>	
3	This topic was explored in depth by the core curriculum.
2	This topic was briefly covered in the core curriculum.
1	This topic was covered in elective coursework.
0	This topic was not covered.
<p><i>Score explanation: This topic was briefly mentioned in the associated lecture for the 'Describe how the environment and health interact at the global level, including the effects of climate change on health' learning objective. There was also the following 3rd year LO: 'Discuss the impact of climate change on the health of marginalised/indigenous populations globally'.</i></p>	

<p>10. Does your <u>medical school</u> curriculum address the unequal regional health impacts of climate change globally?</p>	
3	This topic was explored in depth by the core curriculum.
2	This topic was briefly covered in the core curriculum.
1	This topic was covered in elective coursework.
0	This topic was not covered.
<p><i>Score explanation: This topic was briefly mentioned in the associated lecture for the 'Describe how the environment and health interact at the global level, including the effects of climate change on health' learning objective. There was also the following third year LO: 'Discuss the impact of climate change on the health of marginalised/indigenous populations globally'.</i></p>	

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

<p>11. Does your <u>medical school</u> curriculum address the reproductive health effects of industry-related environmental toxins (e.g. air pollution, pesticides)?</p>	
3	This topic was explored in depth by the core curriculum.

2	This topic was briefly covered in the core curriculum.
1	This topic was covered in elective coursework.
0	This topic was not covered.
<i>Score explanation: This topic was not covered in the curriculum.</i>	

12. Does your <u>medical school</u> curriculum address important human-caused environmental threats that are relevant to the university's surrounding community?	
3	This topic was explored in depth by the core curriculum.
2	This topic was briefly covered in the core curriculum.
1	This topic was covered in elective coursework.
0	This topic was not covered.
<i>Score explanation: Air pollution is covered in many aspects of the course including in respiratory lectures and this is then related to the North East in terms of previous industry and deprivation. One of the Year 4 ACE tutorial also includes the learning outcome: 'evaluate the role of ecological, environmental and 9 occupational hazards in ill-health and discuss ways to mitigate their effects'. Other human-caused environmental threats are not mentioned.</i>	

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?	
3	Indigenous knowledge and value systems are integrated throughout the medical school's planetary health education
2	Indigenous knowledge and value systems as essential components of planetary health solutions are included briefly in the core curriculum.
1	Indigenous knowledge and value systems as essential components of planetary health solutions are included in elective coursework.
0	This topic was not covered.
<i>Score explanation: This topic was not covered in the curriculum.</i>	

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?	
3	This topic was explored in depth by the core curriculum.
2	This topic was briefly covered in the core curriculum.
1	This topic was covered in elective coursework.

0	This topic was not covered.
<p><i>Score explanation: In one of the fourth year online tutorials, 'Ecological, Environmental and Occupational Hazards in Ill Health', some of the adverse effects of air pollution on children, pregnant women and the elderly are briefly mentioned. It is highlighted how these populations are often more severely affected by anthropogenic environmental toxins.</i></p>	

Curriculum: Sustainability

15. Does your <u>medical school</u> curriculum address the environmental and health co-benefits of a plant-based diet?	
3	This topic was explored in depth by the core curriculum.
2	This topic was briefly covered in the core curriculum.
1	This topic was covered in elective coursework.
0	This topic was not covered.
<p><i>Score explanation: There is no learning outcome or lecture related to plant-based diets in the Newcastle curriculum.</i></p>	

16. Does your <u>medical school</u> curriculum address the carbon footprint of healthcare systems?	
3	This topic was explored in depth by the core curriculum
2	This topic was briefly covered in the core curriculum.
1	This topic was covered in elective coursework.
0	This topic was not covered.
<p><i>Score explanation: At Newcastle University the carbon footprint of healthcare systems is explored in depth through multiple lectures in all years. Specifically in Year 4 there is the learning outcome of 'Demonstrate how to apply the following concepts in clinical management: shared decision making, personalised care, reducing harm/ waste, managing risk, reducing unnecessary variation in practice and sustainability in clinical management'. As well as 'Discuss the environmental impact resulting from healthcare provision and public interventions for children and young people, how these may be measured and identify ways to improve the environmental sustainability of such health systems' in year 3. However, it is important to note that these are not examined.</i></p>	

17. Does your <u>medical school</u> curriculum cover these components of sustainable clinical practice in the <u>core</u> curriculum? (points for each)	
2	The health and environmental co-benefits of avoiding over-medicalisation, over-investigation and/or over-treatment

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 fulfill this metric.
1	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	Environmental impact of surgical healthcare on planetary health and the climate crisis, and how can it be mitigated
1	The impact of anaesthetic gases on the healthcare carbon footprint and ways to reduce anaesthesia environmental impacts, such as total intravenous anaesthesia or choosing less environmentally harmful anaesthetic gas options with reduced greenhouse gas emissions
1	The impact of inhalers on the healthcare carbon footprint and the environmental benefit of dry powdered inhalers over metered dose inhalers.
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)
	<i>Score explanation: In Newcastle University in year 3 as well as throughout clinical placements, social prescribing and the impact of over-prescribing for health and the environment are well emphasised and included in the learning outcome 'Describe the principles and criteria for just and sustainable access to, and provision of, finite healthcare resources including referral, investigations and treatment.' More emphasis should be placed on social prescribing. Specific LO needed.</i>

Curriculum: Clinical Applications

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?	
2	Yes, there are strategies introduced for having conversations with patients about climate change in the core curriculum.
1	Yes, there are strategies introduced for having conversations with patients about climate change in elective coursework.
0	No, there are not strategies introduced for having conversations with patients about climate change
<i>Score explanation: There are no specific strategies covered for conversations with patients about climate change. It arguably may be covered in 'Demonstrate how to apply the following concepts in clinical management: shared decision making, personalised care, reducing harm/ waste, managing risk, reducing unnecessary variation in practice and sustainability in clinical management', however a more specific LO regarding strategies for conversations is needed.</i>	

19. In training for patient encounters, does your <u>medical school's</u> curriculum introduce strategies	
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for taking an environmental history or exposure history?	
2	Yes, the core curriculum includes strategies for taking an environmental history.
1	Only elective coursework includes strategies for taking an environmental history.
0	No, the curriculum does not include strategies for taking an environmental history.
<p><i>Score explanation: In year 4 students are taught strategies to ask about environmental exposure to asbestos or coal for example in the occupational lung diseases module. However, they are not taught how to take a comprehensive environmental history that would include contaminated water or food or exposure to air pollution.</i></p>	

Curriculum: Administrative Support for Planetary Health

20. Is your medical school currently in the process of implementing or improving Education for Sustainable Healthcare (ESH)/planetary health education?	
4	Yes, the medical school is currently in the process of making major improvements to ESH/planetary health education.
2	Yes, the medical school is currently in the process of making minor improvements to ESH/planetary health education.
0	No, there are no improvements to planetary health education in progress.
<p><i>Score explanation: Newcastle has an annual student staff committee meeting discussing methods to implement ESH as well as a Sustainable Medicine Society. The curriculum is constantly being reviewed with more lectures and workshops being added. 5th years medics now have to undertake a SusQI project.</i></p>	

21. How well are the aforementioned planetary health/Education for Sustainable Healthcare topics integrated longitudinally into the core curriculum?	
6	Planetary health/ESH topics are well integrated into the core medical school curriculum.
4	Some planetary health/ESH topics are appropriately integrated into the core medical student curriculum.
2	Planetary health/ESH is not integrated and is primarily addressed in (a) standalone lecture(s) .
0	There is minimal/no education for sustainable healthcare.
<p><i>Score explanation: At Newcastle Medical School UK, planetary health topics are well integrated longitudinally throughout the curriculum. There are relevant learning outcomes throughout the curriculum from years 1 to 5, which are taught in a variety of ways. There is also the introduction of the Sustainability Quality Improvement project for fifth years which is compulsory for all students.</i></p>	

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?

1

Yes, the medical school has a specific faculty/staff member responsible for overseeing curricular integration of planetary health and sustainable healthcare

0

No, the medical school does **not have a specific faculty/staff member responsible for overseeing curricular integration of planetary health and sustainable healthcare.**

Score explanation: Newcastle Medical School appointed Hugh Alberti as Lead for Healthcare Sustainability Teaching.

Section Total (50 out of 72)

50

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Are there additional curriculum resources offered at your medical school or institution not yet asked about that you would like to describe? If so, please do so below.

Interdisciplinary Research

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

1. Are there researchers engaged in planetary health research and healthcare sustainability research at your <u>medical school</u> ?	
3	Yes, there are faculty members at the medical school who have a primary research focus in planetary health or healthcare sustainability.
2	Yes, there are individual faculty members at the medical school who are conducting research related to planetary health or healthcare sustainability, but it is not their primary research focus.
1	There are planetary health and/or healthcare sustainability researchers at the institution , but none associated with the medical school.
0	No, there are no planetary health and/or healthcare sustainability researchers at the institution or medical school at this time.
<p><i>Score explanation: The Newcastle University Medicine Malaysia has a research team of 10 members from the UK and Malaysia who's primary research focus is in planetary health and healthcare sustainability. The work they undertake is aimed at tackling the United Nations Sustainable Development Goals.</i></p>	

2. Is there a dedicated department or institute for interdisciplinary planetary health research at your <u>institution</u> ?	
3	There is at least one dedicated department or institute for interdisciplinary planetary health research.
2	There is not currently a department or institute for interdisciplinary planetary health research, but there are plans to open one in the next 3 years.
1	There is an Occupational and Environmental Health department , but no interdisciplinary department or institute for planetary health research.
0	There is no dedicated department or institute.
<p><i>Score explanation: One Planet is an interdisciplinary research centre aiming to increase sustainability. Biologists, geologists, soil scientists and ocean researchers focus on sustainability research including food and water insecurity. One Planet will be the physical hub for research and teaching that provides a scientific basis to underpin the decisions that society needs to ensure a sustainable future, more information can be found here: https://www.ncl.ac.uk/who-we-are/strengths/one-planet/.</i></p>	

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

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

Score explanation: There is currently no process and no efforts to introduce this, although the relevance of this might be less applicable to Newcastle University than some other organisations globally.

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

3	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.
2	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.
1	The institution has an Office of Sustainability website that includes some resources related to health and the environment.
0	There is no website.

Score explanation: The university has a comprehensive website regarding sustainability <https://www.ncl.ac.uk/sustainability/> However, it is difficult to find information on research related to health and the environment.

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

4	Yes, the medical school has hosted at least one conference or symposium on topics related to planetary health in the past year.
3	Yes, the institution has hosted at least one conference or symposium on topics related to planetary health in the past year.
2	Yes, the institution has hosted a conference on topics related to planetary health in the past three years.

1	The institution has not hosted any conferences directly, but they have provided financial support for a local planetary health event.
0	No, the institution has not hosted a conference on topics related to planetary health in the past three years.
<i>Score explanation: Newcastle University Sustainable Medics hosted a sustainable medicine conference in May 2022 with speakers from across the region. A second conference is to be held in May 2023.</i>	

6. Is your <u>medical school</u> a member of a national or international planetary health or ESH organisation?	
1	Yes, the medical school is a member of a national or international planetary health or ESH organisation
0	No, the medical school is not a member of such an organisation
<i>Score explanation: The medical school is not a member of an international planetary health or ESH organisation.</i>	

Section Total (12 out of 17)	12
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Are there additional research resources offered at your medical school or institution not yet asked about that you would like to describe? If so, please do so below.

Community Outreach and Advocacy

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

1. Does your medical school partner with community organisations to promote planetary and environmental health?	
3	Yes, the medical school meaningfully partners with multiple community organisations to promote planetary and environmental health.
2	Yes, the medical school meaningfully partners with one community organisation to promote planetary and environmental health.
1	The institution partners with community organisations, but the medical school is not part of that partnership.
0	No, there is no such meaningful community partnership.
<p><i>Score explanation: Newcastle University is partnered with a range of community organisations (such as New Writing North) but there are no specific links associated with the Medical School.</i></p>	

2. Does your medical school offer community-facing courses or events regarding planetary health?	
3	The medical school offers community-facing courses or events at least once every year.
2	The medical school offers courses or events open to the community at least once per year, but they are not primarily created for a community audience.
1	The institution has offered community-facing courses or events, but the medical school was not involved in planning those courses or events.
0	The institution/medical school have not offered such community-facing courses or events.
<p><i>Score explanation: Newcastle University runs a range of community-facing events regarding planetary health that are advertised on the website but the medical school does not have any direct involvement in these.</i></p>	

3. Does your medical school have regular coverage of issues related to planetary health and/or sustainable healthcare in university update communications?	
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2	Yes, all students regularly receive communication updates dedicated to planetary health and/or sustainable healthcare.
1	Yes, planetary health and/or sustainable healthcare topics are sometimes included in communication updates.
0	Students do not receive communications about planetary health or sustainable healthcare.
<i>Score explanation: There are no updates from the medical school providing coverage of issues relating to planetary health and/or sustainable healthcare. These potentially could be included in the student newsletter but this has not been done thus far.</i>	

4. Does the <u>institution</u> or <u>main affiliated hospital trust</u> 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?	
2	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.
1	Yes, the institution or main affiliated hospital trust offers one course relating to planetary health and/or sustainable healthcare for post-graduate providers
0	There are no such accessible courses for post-graduate providers
<i>Score explanation: Lectures on the effects of climate change on health are run for foundation training doctors in the local trust. Furthermore, Newcastle-Upon-Tyne NHS Foundation Trust has specific sustainability fellows who can provide teaching. The trust has also ran online webinars regarding planetary health during a series on COP26. Through the Faculty of Sustainable Healthcare at Northumbria NHS Trust, there is an e-learning module on climate and health that is accessible to all post-graduates. South Tees NHS Foundation Trust have run seminars that were open to all staff and students on the issues.</i>	

5. Does your <u>medical school</u> or its <u>primary affiliated hospital</u> have accessible educational materials for patients about environmental health exposures?	
2	Yes, all affiliated hospitals have accessible educational materials for patients.
1	Some affiliated hospitals have accessible educational materials for patients.
0	No affiliated medical centres have accessible educational materials for patients.
<i>Score explanation: None of the associated trusts have readily accessible educational materials online.</i>	

6. Does your <u>medical school</u> or its <u>primary affiliated hospital</u> have accessible educational materials for patients about climate change and health impacts?	
2	Yes, all affiliated hospitals have accessible educational materials for patients.

1	Some affiliated hospitals have accessible educational materials for patients.
0	No affiliated hospitals have accessible educational materials for patients.
<i>Score explanation: None of the associated trusts have readily accessible educational materials online.</i>	

Section Total (4 out of 14)	4
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Are there additional community engagement and advocacy resources offered at your medical school or institution not yet asked about that you would like to describe? If so, please do so below.

Support for Student-Led Planetary Health Initiatives

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

1. Does your medical school or your institution offer support for medical students interested in enacting a sustainability initiative/QI project?	
2	Yes, the medical school or 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.
1	The medical school or 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.
0	No, neither the medical school or the institution offer opportunities or support for sustainability initiatives or QI projects.

Score explanation: Following feedback on sustainability within the curriculum, Newcastle University medical school has introduced the completion of a sustainable quality improvement project as a part of the core curriculum for final year medical students. This is undertaken whilst on placement in general practice over two placement blocks throughout the year.

2. Does your institution offer opportunities for medical students to do research related to planetary health and/or sustainable healthcare?	
2	The institution has a specific research program or fellowship for students interested in doing planetary health/sustainable healthcare research.
1	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.
0	There are no opportunities for students to engage in planetary health/sustainable healthcare research.

Score explanation: There is an opportunity for students to undertake an intercalated year between the fourth and fifth year curriculum in Global Health or Public Health, which contain modules focused on planetary health. There are also potential opportunities within the student selected components and elective placement blocks to carry out research in planetary health if a student wishes to do so.

3. Does the medical school have a webpage where medical students can find specific information related to planetary health and/or sustainable healthcare activities and mentors within the medical school? For example, projects achieved, current initiatives underway at the medical	
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school and/or contact of information of potential mentors.	
2	The medical school has a webpage with specific information related to planetary health or sustainable healthcare that includes up-to-date information on relevant initiatives and contact information of potential mentors.
1	There is a medical school webpage that features some information on projects and mentors within planetary health and sustainable healthcare within the medical school, but it lacks key information.
0	There is no medical-school specific webpage for locating planetary health and/or sustainable healthcare projects or mentors.

Score explanation: There is currently no webpage specifically attached to the medical school regarding planetary health and/or sustainable healthcare projects.

4. Does your medical school have registered student groups dedicated towards fostering a culture of planetary health engagement, scholarship, and advocacy on campus, supported by faculty advisors?	
2	Yes, there is a student organisation with faculty support at my medical school dedicated to planetary health or sustainability in healthcare.
1	Yes, there is a student organisation at my medical school dedicated to planetary health or sustainability in healthcare but it lacks faculty support .
0	No, there is not a student organisation at my institution dedicated to planetary health or sustainability in healthcare.

Score explanation: The student-led groups 'Newcastle University Sustainable Medics' and 'Students for Global Health' are both active societies that host events on planetary health and sustainability in healthcare. They both have faculty support within the medical school.

5. Is there a student liaison representing sustainability interests who serves on a medical school or institutional decision-making council to advocate for curriculum reform and/or sustainability best practices?	
1	Yes, there is a student representative that serves on a medical school or institutional decision-making council/committee.
0	No, there is no such student representative.

Score explanation: Within the 'Sustainable Campus' department at Newcastle University, there is a 'Student Environment and Sustainability Committee' who are student led. As part of their role, they liaise with the Environment and Sustainability Committee within the university.

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)	
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1	Projects where students are able to gain experience in organic agriculture and sustainable food systems, such as gardens, farms, community supported agriculture (CSA), fishery programs, or urban agriculture projects.
1	Panels, speaker series, or similar events related to planetary health that have students as an intended audience.
1	Events in which students learn directly from members of a local environmental justice community about the climate and environmental challenges they face, and how health professionals can partner with their community to address these exposures and impacts.
1	Cultural arts events, installations or performances related to planetary health that have students as an intended audience.
1	Local volunteer opportunities related to building community resilience to anthropogenic environmental impacts.
1	Wilderness or outdoors programs (e.g., that organise hiking, backpacking, kayaking, or other outings for students)
<p><i>Score explanation: There are various volunteering and student run projects at Newcastle University relating to the above categories. These groups include 'EcoSoc' and 'Newcastle University Sustainable Medics'.</i></p>	

Section Total (11 out of 15)	11
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Are there additional student-led initiative resources offered at your medical school or institution not yet asked about that you would like to describe? If so, please do so below.

Campus Sustainability

Section Overview: This section evaluates the support and engagement in sustainability initiatives by the medical school and/or institution. The healthcare industry is a major contributor to greenhouse gas emissions as well as pollution that harms local, regional, and global ecosystems. While healthcare is, by nature, a resource-intensive 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.

1. Does your <u>medical school</u> and/or <u>institution</u> have an Office of Sustainability?	
3	Yes, there is an Office of Sustainability with multiple full-time staff dedicated to campus sustainability. If the Office of Sustainability serves the entire campus, there is at least one designated staff member for sustainability at the hospital and/or medical school.
2	There is an Office of Sustainability with one or more full-time staff dedicated to campus sustainability, but no specific staff member in charge of medical school and/or hospital sustainability.
1	There are no salaried sustainability staff , but there is a sustainability task force or committee
0	There are no staff members or task force responsible for overseeing campus sustainability
<p><i>Score explanation: The Sustainability Team is based within Estates and Facilities and focuses on operational sustainability across the whole University campus and its activities. For this reason, there are no team members designated for sustainability within the Medical School or any other specific areas.</i></p>	

2. How ambitious is your <u>institution/medical school</u> plan to reduce its own carbon footprint?	
5	The institution/medical school has a written and approved plan to achieve carbon neutrality by 2030
3	The institution/medical school has a written and approved plan to achieve carbon neutrality by 2040
1	The institution/medical school has a stated goal of carbon neutrality by 2040 but has not created a plan to reach that goal or the plan is inadequate
0	The institution/medical school does not meet any of the requirements listed above
<p><i>Score explanation: Following the Climate Emergency Statement, Newcastle University has committed to achieve net-zero carbon dioxide emissions by 2030.</i> https://www.ncl.ac.uk/sustainable-campus/about-us/climate-statement/</p>	

3. Do buildings/infrastructure used by the <u>medical school</u> for teaching (not including the hospital)
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utilise renewable energy?	
3	Yes medical school buildings are 100% powered by renewable energy
2	Medical school buildings source >80% of energy needs from off-site and/or on-site renewable energy.
1	Medical school buildings source >20% of energy needs from off-site and/or on-site renewable energy.
0	Medical school buildings source <20% of energy needs from off-site and/or on-site renewable energy.
<p><i>Score explanation: For the year 2020-2021 the yearly carbon emissions for Newcastle University medical school were:</i></p> <ul style="list-style-type: none"> • Total electricity - 42,471,820kWh • Total gas - 52,089,731kWh • Total heat - 12,965,270kWh <p><i>All electricity is provided from renewable sources via Ofgem's 'Renewable Energy Guarantee of Origin'. There was no data available regarding the sources of gas and heat. The university itself has clear goals outlined around future plans to reduce Scope 1, 2 and 3 going forwards.</i></p> <p><i>https://www.ncl.ac.uk/media/wwwnclacuk/sustainablecampus/files/NU_Climate%20Action%20Plan%202019-20_AW_Smaller%20size.pdf</i></p>	

4. Are sustainable building practices utilised for new and old buildings on the <u>medical school</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?	
3	Yes, sustainable building practices are utilised for new buildings on the medical school campus and the majority of old buildings have been retrofitted to be more sustainable.
2	Sustainable building practices are utilised for new buildings on the medical school campus, but most old buildings have not been retrofitted .
1	Sustainable building practices are inadequately or incompletely implemented for new buildings.
0	Sustainability is not considered in the construction of new buildings.
<p><i>Score explanation: The Medical School building has not been retrofitted, with the stated efficiency rating in terms of energy efficiency below the average of a public building. There are plans in the Climate Action Plan to increase the efficiency of and remodelling old buildings as necessary. In terms of new buildings, as part of the Climate Action Plan, sustainable practices are utilised in terms of both limiting unnecessary building, and doing so in a sustainable way when necessary.</i></p>	

5. Has the <u>medical school</u> implemented strategies to encourage and provide environmentally-friendly transportation options for students and reduce the environmental impact of commuting?	
2	Yes, the medical school has implemented strategies to encourage and provide environmentally-friendly transportation options such as safe active transport, public transport,

	or carpooling and these options are well-utilised by students. Alternatively, the campus location is not amenable to unsustainable forms of transportation by default.
1	The medical school has implemented some strategies to provide environmentally-friendly transportation options, but the options are unsatisfactorily accessible or advertised.
0	The medical school has not implemented strategies to encourage and provide environmentally-friendly transportation options.
<p><i>Score explanation: The medical school has a city centre location and so the vast majority of students travel in via sustainable transportation methods. There are sufficient provisions around the medical school to aid in this (such as multiple bike racks). Carpooling and public transport are both encouraged for clinical placements.</i></p>	

6. Does your <u>medical school</u> have an organics recycling program (compost) and a conventional recycling program (aluminium/paper/plastic/glass)?	
2	Yes, the medical school has both compost and recycling programs accessible to students and faculty.
1	The medical school has either recycling or compost programs accessible to students and faculty, but not both.
0	There is no compost or recycling program at the medical school.
<p><i>Score explanation: The university has a vast recycling program that is readily accessible but does not have a composting programme. It states on its website: 'Unfortunately the University does not have an outlet for compostable materials' and so compostable cups, plates etc. can not be composted. However, food waste is taken to an anaerobic digestion facility to make biogas.</i></p>	

7. Does the <u>medical school</u> apply sustainability criteria when making decisions about the campus food and beverage selections (e.g. local sourcing, reduced meat, decreased plastic packaging)?	
3	Yes, the medical school 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.
2	There are sustainability guidelines for food and beverages, but they are insufficient or optional . The medical school is engaged in efforts to increase food and beverage sustainability.
1	There are sustainability guidelines for food and beverages, but they are insufficient or optional . The medical school is not engaged in efforts to increase food and beverage sustainability.
0	There are no sustainability guidelines for food and beverages.
<p><i>Score explanation: There are a range of meat-free options available in all of the food and drink outlets with all outlets offering at least 30% of their meal options as meat-free. The university has a sustainable procurement policy which includes provision for local sourcing of food where possible.</i></p>	

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

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

Score explanation: The university has a robust sustainable procurement policy that can be accessed online.

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

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

Score explanation: There are no guidelines

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

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

Score explanation: Newcastle University uses the Laboratory Efficiency Assessment Framework (LEAF) in order to monitor and reduce lab impacts

11. Does your institution's endowment portfolio investments include fossil-fuel companies?

4	The institution is entirely divested from fossil fuels and has made a commitment to reinvest divested funds into renewable energy companies or renewable energy campus initiatives.
3	The institution is entirely divested from fossil fuels.

2	The institution has partially divested from fossil fuel companies or has made a commitment to fully divest , but currently still has fossil fuel investments.
1	The institution has not divested from fossil-fuel companies, but faculty and/or students are conducting organized advocacy for divestment.
0	Yes, the institution has investments with fossil-fuel companies and there have been no efforts to change that.

Score explanation: In 2016 Newcastle announced that it would divest from fossil fuel companies within 5 years. The following exclusions are applied to University investments:

- *Tobacco related companies*
- *Companies making revenue from extraction and production of fossil fuels*
- *Companies manufacturing armaments.*

Newcastle University investments are governed by the University's [Socially Responsible Investment Policy](#). However, 0.21% of funding comes from Orica, one of the world's largest providers of commercial explosives and blasting systems to the mining, quarrying, oil and gas, and construction markets.

Section Total (22 out of 32)	22
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Are there additional sustainability resources offered at your medical school or institution not yet asked about that you would like to describe? If so, please do so below.

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 Newcastle School of Medicine

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

Section	Raw Score %	Letter Grade
Planetary Health Curriculum (30%)	$(50/72) \times 100 = 69.44\%$	B
Interdisciplinary Research (17.5%)	$(12/17) \times 100 = 71.59\%$	B
Community Outreach and Advocacy (17.5%)	$(4/14) \times 100 = 28.57\%$	D
Support for Student-led Planetary Health Initiatives (17.5%)	$(11/15) \times 100 = 73.33\%$	B
Campus Sustainability (17.5%)	$(22/32) \times 100 = 68.75\%$	B
Institutional Grade	63.05%	B -