



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



2023-2024 Contributing Team:

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Summary of Findings

| | |
|---|-----------|
| Overall | B |
| <u>Curriculum</u> | C |
| <ul style="list-style-type: none"> • While the University of Exeter does have focus on planetary health in specific areas in the intensive three week Student Selected Unit (SSU) project on Global and Planetary Health, longitudinally there is minimal input regarding the environment and how it impacts health: both Problem Based Learning cases and Communities of Practice cases lack environmental links. • Recommendations: There is a lack of teaching on planetary health in the physiology, anatomy, and clinical medicine lectures across all years outside of specific student-selected modules. Introducing conversations about planetary health into early year lectures, case-based learning, and clinical skills to encourage patient discussion. | |
| <u>Interdisciplinary Research</u> | A |
| <ul style="list-style-type: none"> • While the European Centre for Environment and Human Health conducts commendable interdisciplinary research, there's a notable lack of community involvement in decision-making processes. Engaging communities affected by environmental issues could enrich research outcomes and foster meaningful collaborations. | |
| <u>Community Outreach and Advocacy</u> | C+ |
| <ul style="list-style-type: none"> • Despite existing community engagement efforts, there's a pressing need for more comprehensive patient education regarding environmental health risks. Empowering communities with knowledge about these exposures can enhance public health outcomes and foster informed decision-making. | |
| <u>Support for Student-Led Initiatives</u> | B |
| <ul style="list-style-type: none"> • While the university supports student-led initiatives focusing on environmental conservation and sustainability, there's a need to institutionalise sustainability efforts further. • Recommendations: Establishing dedicated platforms and resources can ensure the longevity and impact of student-led projects in planetary health. | |
| <u>Campus Sustainability</u> | B+ |
| <ul style="list-style-type: none"> • Efforts toward campus sustainability, such as divestment from fossil fuels, are commendable but require more comprehensive policies. • Implementing stricter procurement guidelines and enhancing sustainability practices during events can significantly reduce the university's environmental footprint and promote a culture of sustainability among students and staff. | |

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 in 2022, 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

| 1.1. 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:</i> UEMS delivers a Special Study Unit (SSU) in 2nd year on "Global and Planetary Health," which was first implemented in the 2021-22 academic year. This three-week project includes the following which students can select: "Planetary Renal Health," "Antimicrobial resistance: a global health concern," "Global and planetary health from primary care up," and "Air pollution as a global health challenge," as just a few examples.</p> <p>Other Special Study Units in years 1, 3 and 4 also have optional projects which can include sustainability in healthcare and planetary health, for instance "Climate change and human health: quantifying and valuing impacts of environmental change".</p> | |

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? | |
|---|--|
| 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:</i> <i>The impact of heat is mentioned briefly in several brief exploration of the impact of extreme heat on health, such as a case study of a heat wave in the first year lecture “social class and health”. The masterclass “Global Health and Climate Change” discusses the impact of extreme heat on health but this is optional content.</i></p> | |

| 1.3. Does your <u>medical school</u> curriculum address the impacts of extreme weather events on individual health and/or on healthcare systems? | |
|--|--|
| 3 | This topic was explored in depth by the core curriculum. |
| 2 | This topic was briefly covered in the core curriculum. |
| 1 | This topic was covered in elective coursework. |
| 0 | This topic was not covered. |
| <p><i>Score explanation:</i> <i>The lecture ‘Introduction to Planetary Health’ as part of the Global Planetary Health (GPH) SSU references how climate change leads to extreme weather events which have associated ‘health risks’. There is no mention of the broader impact this will have on healthcare systems. Additional resources are provided on the main GPH SSU site, including links to the World Disasters Report 2020, highlighting the humanitarian impact of climate change and extreme weather.</i></p> <p><i>The masterclass ‘Environment, Climate Change and Global Health’ very briefly references how climate change leads to an increased likelihood of extreme weather events on one slide. Though this is mentioned in the context of increased health risks and potential impacts, this is not explored in any detail.</i></p> <p><i>Although not scoring for the 2024 report card, a lecture from the Public Health Conference from the University of Exeter Medical School in April 2021 titled “Health and the Built environment”, available to access on the BMBS website, explores the effects of flooding, heatwaves, droughts, and cold weather on individual patient health (PTSD, depression, mortality, injury) and on health and social care systems (service disruption, flood risks to NHS assets, overheating risks to patients).</i></p> | |

| 1.4. Does your <u>medical school</u> 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. |
| <p><i>Score explanation:</i></p> | |

In the Year 2 Student Selected Unit (SSU) there is an entire unit titled 'Global and planetary health'. Within this catalogue there are multiple projects that discuss climate change impacts on health. Students shortlisted titles that sound appealing and will be allocated one, which they will study over a 3 week period. There are many SSU titles that discuss emerging infectious diseases, resistance, and environmental impacts on disease across both Year 2 and Year 3 of the BMBS course. The titles of such units are 'Emerging infectious disease', 'Antimicrobial resistance and environmental pollution' and 'antimicrobial resistance: a global health concern'. A select group of students will be assigned to these projects guided by an independent facilitator. The SSU also has a number of joint sessions where students learn about issues across the GPH topic – and are generally placed into mixed groups for presentations with students from at least one other provider. There is no opportunity for a cohort-wide presentation on these topics and so only select individuals will be aware of their independent research, however all students must complete a project on the topic of Global and Planetary health from the catalogue.

There are lectures in the Year 2 Unit on 'Host Defence' that discuss pathogens, infections, and management of these conditions. However, none of these directly link climate change to the rise of zoonotic infections, new vectors, new pathogens, or emerging infections. One presentation on pandemics, titled 'Influenza Pandemics' identifies that infections are increased with zoonotic transmission, but does not suggest that climate change and environmental disasters can subsequently increase human-animal interactions.

1.5. 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. |
| 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:

In the Year 2 Student Selected Unit there is an entire unit titled 'Global and planetary health'. Within this catalogue there are multiple projects that discuss climate change impacts on health. Students shortlisted titles that sound appealing and will be allocated one, which they will study over a 3 week period. In direct relation to respiratory health there are two projects titled 'Air pollution as a global health challenge' and 'Climate, air pollution, and health'. These enable a small group of students to investigate air pollution and respiratory health with an independent facilitator. This independent facilitator will provide a 'curriculum' of topics to discuss and help lead the students in these projects. The SSU also has a number of joint sessions where students learn about issues across the GPH topic – and are generally placed into mixed groups for presentations with students from at least one other provider.

There is no opportunity for a cohort-wide presentation on these topics and so only select individuals will be aware of their independent research, however all students must complete a project on the topic of Global and Planetary health from the catalogue.

Despite opportunities to discuss the effects of air pollution on asthmatics in the various asthma lectures across Year 1 and Year 2 of the course, no direct links between air pollution were cited on the presentation slides.

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

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|---|--|
| 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:

In the Year 2 Student Selected Unit there is an entire unit titled 'Global and planetary health'. Within this catalogue there are multiple projects that discuss climate change impacts on health. Students shortlisted titles that sound appealing and will be allocated one, which they will study over a 3 week period. Titles of projects that explicitly discuss cardiovascular effects in their briefing include "Air pollution as a global health challenge: what is it and how we can manage it better". This will enable a small group of students to investigate this topic with an independent facilitator. The SSU also has a number of joint sessions where students learn about issues across the GPH topic – and are generally placed into mixed groups for presentations with students from at least one other provider. There is no opportunity for a cohort-wide presentation on these topics and so only select individuals will be aware of their independent research, however all students must complete a project on the topic of Global and Planetary health from the catalogue.

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

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

Score explanation:

In the Year 2 Student Selected Unit there is an entire unit titled 'Global and planetary health'. Within this catalogue there are multiple projects that discuss climate change impacts on health. Students shortlisted titles that sound appealing and will be allocated one, which they will study over a 3 week period. Within this there are a few titles with briefings that explicitly link climate change to mental health and neuropsychology. These include "Nature based social prescribing" and "Nature Saved My Life': Connecting People with Nature for Human and Planetary Health". These discuss the importance of accessing nature and protecting it for our own physical and mental wellbeing. The SSU also has a number of joint sessions where students learn about issues across the GPH topic – and are generally placed into mixed groups for presentations with students from at least one other provider. There is no opportunity for a cohort-wide presentation on these topics and so only select individuals will be aware of their independent research, however all students must complete a project on the topic of Global and Planetary health from the catalogue.

In the Year 4 Student Selected Unit, as a part of the Medical Humanities catalogue, there are further student-selected projects which explore nature and mental health. The titles of some of these include "Exploring Health and Disease through Nature", "The environment, wellbeing, circular economy and

art from single use medical rubbish” and “Living the questions: Conceptual art as a medium for reflecting on medical practice”. These build upon the relationship that nature has on human mental wellbeing, the need to connect with it, and the need to protect it globally. These projects are presented at a cohort-wide conference and so all students have access to discuss the students findings.

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

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

Score explanation:

In the Year 2 Student Selected Unit there is an entire unit titled ‘Global and planetary health’. Within this catalogue there are multiple projects that discuss climate change impacts on health. Students short list titles that sound appealing and will be allocated one, which they will study over a 3 week period. Within this catalogue there are multiple projects which discuss health, individual patient food and water security, ecosystem health, and climate change. These titles include “Microbial pollution of aquatic environments”, “Oceans and human health”, “Water and Health” and “Cooking for the Climate”. There is no opportunity for a cohort-wide presentation on these topics and so only select individuals will be aware of their independent research, however all students must complete a project on the topic of Global and Planetary health from the catalogue.

In the Year 4 Student selected Unit, as a part of the Medical Humanities catalogue, there are further student-selected projects which explore themes of food and water. This includes “The environment, wellbeing, circular economy and art from single use medical rubbish”. These projects are presented at a cohort-wide conference and so all students have access to discuss the students findings.

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

| | |
|---|--|
| 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:

The lecture in year 1 ‘Social class and health’ addresses the evidence of health inequalities on marginalised populations, though this is not specifically due to the impact of climate change. Another first year lecture entitled “Health Promotion,” describes global systems such as capitalism and climate change and the influence of this on health and wellbeing, although this is not in relation to marginalised populations.

*A second year lecture entitled “Diabetes, the global challenge” identifies the impact of climate change on health, although not related specifically to marginalised populations.
A masterclass is offered to clinical years students titled “Global health and Climate Change” which briefly identifies the impacts on health particularly in groups with low SES.*

1.10. Does your medical school curriculum address the unequal regional health impacts of climate change globally?

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

Score explanation:

The masterclass offered to clinical years students entitled “Global health and climate change” addresses the environmental burden of disease and its relation to climate change, specifically the Global South. There is also discussion around whether impacts on health will be reduced, and this will be highlighted in low SES groups and groups with poor health.

A year one lecture “Stress, Work and Health” indirectly outlines the impacts of climate change on health, detailing that environmental disasters, noise and crowding ... presents a physical and physiological threat to wellbeing”.

There is some coverage of impacts of climate change such as deforestation, overpopulation, global warming and natural disasters, however this doesn't address how regionally this will affect populations globally.

The elective options to study unequal regional impacts of climate change are offered within the Global and Planetary Health Special Selected Unit, specifically the following projects:

- *“Improving population health for everyone,” introduces students to improving equity and access to healthcare in low and middle income countries (LMIC), taught by faculty from all around the world*
- *“Commercial determinants of health: local health shaped by global markets” explores factors that influence health which stem from the profit motive, and how this drives chronic noncommunicable diseases and premature mortality in populations globally.*
- *“Mitigating the health impacts of environmental change with nature based solutions” considers how communities around the world are adapting to extreme weather events*
- *“Antimicrobial resistance and environmental pollution” identifies how LMIC are disproportionately affected by antimicrobial resistance*
- *“Climate change and health” investigates food-borne and vector-borne diseases are changing with the climate.*
- *“Oceans and human health” explores the interconnections between the health of humans and the oceans and impact of human activity.*
- *“Global environmental health inequalities” identifies unequal distribution of environmental risks and their associated health outcomes.*
- *“Air pollution as a global health challenge” is an overview of the air pollution environmental challenge and its links to health*

- “Human migration and health” considers how global health and planetary health are linked, and how migration affects access to healthcare.

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)?

| | |
|---|--|
| 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.</i> | |

1.12. Does your medical school curriculum address important human-caused environmental threats that are relevant to the university’s surrounding community?

| | |
|--|--|
| 3 | This topic was explored in depth by the core curriculum. |
| 2 | This topic was briefly covered in the core curriculum. |
| 1 | This topic was covered in elective coursework. |
| 0 | This topic was not covered. |
| <i>Score explanation: There are several elective Special Study Units covered in years one through four which discuss this, including “Get on your bike and save the world,” “Microbial pollution of aquatic environments,” “Air pollution as a global health challenge,” “The environment, wellbeing, circular economy and art from single use medical rubbish,” and “Apocalypse now: how antibiotic resistance will kill us all”.</i> | |

1.13. To what extent does your medical school 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. |

Score explanation:
This topic was not covered.

1.14. Does your medical school 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. |

Score explanation:
The ‘Social Class and Health’ lecture in year 1 briefly mentions the role the environment has on health but not in any detail and does not stress the anthropogenic nature of these toxins. This is part of the core curriculum.

Curriculum: Sustainability

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

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

Score explanation:
The “Global and Planetary Health” fourth year module contains some content on the benefit of a plant-based diet, such as “Planetary Renal Health”. This is elective content and is only delivered to a small number of students.

1.16. Does your medical school 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. |

Score explanation:

In the fourth year “Medical Humanities” module there is an elective content entitled “ The environment, wellbeing, circular economy and art from single use medical rubbish” that discusses medical waste and the impact on the environment. This is only delivered to a small number of students.

1.17. Does your medical school curriculum cover these components of sustainable clinical practice in the core 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 fulfil 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’s 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) |
| | <p><i>Score explanation:</i></p> <p>1) The Year 3 tutorial on Polypharmacy discussed its impact on health, strategies on how to avoid overprescribing and the process of deprescribing including structured medication reviews, especially to at-risk target groups. This page also has an attached article on “Understanding polypharmacy, overprescribing and deprescribing” which briefly mentions the link between overprescribing to adverse drug events, hospital admissions and health care costs.</p> <p>3) The “Biopsychosocial model” is one of the themes in Week 4 of GP placement and briefly covers social interventions in health.</p> |

Curriculum: Clinical Applications

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

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|---|---|
| 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 |
| <p><i>Score explanation:</i> <i>Regrettably, the subject of addressing patients regarding the health repercussions of climate change remains absent from our core curriculum, with no mention in either lectures or clinical skills sessions.</i></p> | |

| | |
|---|--|
| 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? | |
| 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:</i> <i>At UEMS, students are taught how to take a full social history, which includes asking patients about their occupation, hobbies and living situation. This highlights environmental factors that patients may be exposed to that could affect their clinical condition. The Year 3 tutorial on Environmental lung disease touches on exposure to environmental carcinogens such as smoke, asbestos in addition to organic dust and how these might increase patients' susceptibility to a variety of diseases (e.g lung cancer, asbestosis, pneumonitis, bronchitis etc.).</i> <i>Students have the opportunity to practise their history-taking skills with actors in the clinical skills lab and are provided with feedback on their performances. Students are also assessed on their ability to take a social history during frequent in-vitro and in-vivo clinical assessments.</i></p> | |

Curriculum: Administrative Support for Planetary Health

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|---|--|
| 1.20. Is your <u>medical school</u> 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:</i> <i>The medical school has a team of Advocate Climate Taskforce Academic Representatives for the Faculty of Health and Life Sciences, developing sustainability policies e.g. Veganuary campaigns, sustainable travel strategies, etc. The medical school's European Centre for Environment & Human Health (ECEHH) conducts world-class research, investigating the complex interdependencies between environment and human health, influencing decision makers at local, national and international scales.</i></p> | |

The centre offers a 'Nature, Health and Wellbeing CPD Course' which has been approved by the Federation of the Royal Colleges of Physicians.

The Special Study Unit (SSU) themes already cover a broad range of topics related to global health and planetary well-being. The medical school is actively engaged in expanding planetary health education by integrating these themes into their curriculum and promoting research and initiatives focused on addressing planetary health challenges. For instance, through SSUs such as "Cooking for the Climate," students learn about sustainable diets and their impact on individual and public health. Other themes, such as "Tuberculosis: an Infectious disease without borders," "Emerging infectious disease," and "Antimicrobial resistance (AMR): A Global Health Concern," highlight the interconnectedness of health issues across geographic boundaries and the need for global cooperation in addressing them. Furthermore, topics like "Nature based social prescribing" and "Nature Saved My Life': Connecting People with Nature for Human and Planetary Health" emphasise the importance of incorporating nature-based solutions into healthcare practices.

1.21. 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. |

Score explanation:

There is one large Student Selected Component in Year 2 of the course on 'Global and Planetary Health' which spans 3 successive weeks and enables students to explore different projects in depth. In Year 4 Students undertake another Student Selected Unit on 'Medical Humanities', with some of these projects also involving an exploration into the connection between the body, the mind, and nature. Subsequently, a few of these projects have links to climate change.

However, there are very minimal links to climate change outside of these modules.

In the Year 2 lectures on 'Host Defence', there are many lectures covering pandemics and infections, and the rise of antimicrobial resistance, yet there are no slides that link these worries and concerns to climate change, new vectors, new emerging diseases, and from natural disasters. Over the course of Years 1 and 2, students receive multiple lectures on the BioPsychoSocial model. The frequency of these lectures increases when students learn about 'Development' of the body in Year 2. In the lecture 'Developmental milestones- a psychological perspective' there is a slide that mentions that children over the age of 10 begin thinking about natural disasters- this perhaps would spark dialogue regarding climate change, but there is nothing permanent on the slide to mandate and regulate this conversation. Additionally, in the 'Chronic illness in childhood' lecture there is a slide that mentions 'global health' for children. This could be an opportunity for dialogue to be incurred, but it is not directly written on the slide.

Across Year 2 there are lectures on the subject of nutrition (Nutrition and Diabetes; Sleep Disturbance; Neuroanatomy of neurodegeneration) which discuss how nutrition directly impacts health. However, these lectures do not contain slides that detail that climate change can impact food security and thus have a hand in nutritional deficiencies.

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?

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:

There is no named faculty appointed to this specific role, however there are two themed leads for the Global and Planetary Health Special Study Unit, one member of staff for each university locality, who will undertake this role.

Section Total (36 out of 72)

50%

Back to Summary Page [here](#)

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 emphasised.*

| 2.1. 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:</i> There are a variety of researchers and faculty at the European Centre for Environment and Human Health (ECEHH), which is part of UEMS. A select few are listed below: Professor William Gaze, a Professor of microbiology, has a primary interest in the environmental dimension of antimicrobial resistance. He has over 15 years research experience of antimicrobial resistance research in natural environments. Current activity within his group covers fundamental issues of AMR evolution in the environment using <i>in situ</i> and <i>in vivo</i> experiments Professor Lora Fleming, Director of the European Centre for Environment and Human Health (ECEHH) and Chair of Oceans, Epidemiology and Human Health, has a special interest in public, environmental and human health. Prof Fleming is leading a new H2020 funded Seas, Oceans and Public Health in Europe Project (SOPHIE) to establish a network and create a strategic research agenda for Oceans and Human Health in Europe and beyond. Professor Michael Depledge, whose career spans over 40 years working on environmental and human health issues, is the founder of the ECEHH. He has led research teams investigating the impact of climate change on human health and wellbeing. His most recent work includes research to support policy-making for sustainable and climate-resilient economies regarding chemical pollutants There is also the intercalation option of Masters in Environment and Human Health which has modules on sustainable development, climate change and environment and human health. This is led by Dr Cornelia Guell and Dr Benedict Wheeler. You can find out more information about the course here: https://www.exeter.ac.uk/postgraduate/courses/medicine/environment-health-msc/</p> | |

| |
|--|
| 2.2. 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. |

Score explanation:

The [European Centre for Environment and Human Health \(ECEHH\)](#) operates within UEMS and investigates interactions between the environment and human health. The centre receives support from the European Regional Development Fund and the European Social Fund Convergence program for Cornwall and the Isles of Scilly. Their research primarily focuses on two key objectives: identifying potential risks to health and wellbeing arising from the environment and exploring the health and wellbeing advantages offered by the natural environment. The centre boasts a team of experts spanning various disciplines, encompassing epidemiology, policy analysis, systematic reviews, health economics, psychology, and microbiology.

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 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:

The ECEHH, affiliated with UEMS, houses a Health and Environment Public Engagement (HEPE) group. Comprising individuals residing in the South West with a keen interest in research on the correlations between the environment and health, this group serves as a consultative body for ECEHH. It ensures that the activities of ECEHH take into account the public perspective throughout the research process, from design and execution to dissemination. It's important to note that there is no indication of the group possessing decision-making authority in shaping the research agenda. Additionally, a Peninsula Public Engagement Group (PenPEG) exists, encompassing members of the public involved in research across the broader South West Peninsula.

2.4. 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:
UEMS has a website for the ECEHH which includes research articles, blog posts, current researchers/staff and upcoming events:
<https://www.ecehh.org/>

| 2.5. Has your <u>institution</u> 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. |

Score explanation:
The University of Exeter has been affiliated with Grand Challenges for several years. Grand Challenges is a project week, held for students to design innovative solutions to real world challenges. In 2024, all the Challenge topics relate to the United Nations 17 sustainable development goals, and many were specific to impact on human health. Whilst the precise project is yet to be announced for 2024, last year in 2023 some key themes were “climate and environment emergency” and “future food”.
<https://www.exeter.ac.uk/students/grandchallenges/challenges2022/planetaryhealth/#:~:text=Some%20of%20the%20impacts%20on,loss%20of%20home%2C%20famine%20and>
Although not scoring for the 2024 report card, an online event titled ‘Education for Sustainable Healthcare’ was created in November 2021 aimed at faculty development engaged participants on the importance of including planetary health in the curriculum. Such an event has not been repeated since:
<https://www.exeter.ac.uk/events/details/index.php?event=11566>

2.6. Is your medical school 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 University of Exeter is a member of the Planetary Health Alliance</i> | |

Section Total (15 out of 17)

15

Back to Summary Page [here](#)

Community Outreach and Advocacy

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

| 3.1. Does your 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:</i> <i>The University of Exeter Medical School has established a public user group to engage with the European Centre for Environment and Human Health's work. The Health and Environment Public Engagement (HEPE) group meets 4 times a year. It comprises members of the public from the South West, all of whom have an interest in 'research about the interconnections between environment and health'.</i></p> <p><i>Information links:</i> Link 1 Link 2 YouTube video Main website</p> | |

| 3.2. 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:</i> The Peninsula Environment and Human Health Forum meets twice a year. It is conducted by the European Centre for Environment and Human Health, and is attended by over 80 delegates, including researchers, businesses and third sector organisations. It provides the opportunity for networking with research experts, and consequently specialised knowledge relating to the environment and health that can inform projects and businesses. However, it is not created primarily for a community audience.</p> | |

| 3.3. Does your medical school have regular coverage of issues related to planetary health and/or sustainable healthcare in university update communications? | |
|---|---|
| 2 | Yes, all students regularly receive communication updates dedicated to planetary health and/or sustainable healthcare. |
| 1 | Yes, planetary health and/or sustainable healthcare topics are sometimes included in communication updates. |
| 0 | Students do not receive communications about planetary health or sustainable healthcare. |
| <p><i>Score explanation:</i> The BMBS Bulletin is circulated on a monthly basis. In previous issues, the following topics relating to planetary health and sustainable healthcare have been covered in the Year 5 Bulletin: November 2023: no relevant topic October 2023: NHS Forest Conference 2023 September 2023: no relevant topic June 2023: no relevant topic May 2023: opportunity to partake in a project comparing healthcare in North Devon District Hospital (NDDH) and a Nigerian Hospital to promote sustainable healthcare</p> | |

| 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? | |
|--|---|
| 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 |
| <p><i>Score explanation:</i> The University of Exeter offers the online 'Nature, Health and Well-being CPD Course'. It counts for 14 category 1 (external) CPD credit(s). It is to take place in March 2024.</p> <p>In September 2021, the University of Exeter jointly delivered the NHS Ocean Launch event with NHS Ocean. It aimed to inform on the impacts of healthcare on the ocean and human health, to engage the</p> | |

participants in NHS Ocean and gave first-hand accounts from people involved in conservation. A recording of the event is available via this [link](#).

3.5. Does your medical school or its affiliated teaching hospitals have accessible educational materials for patients about environmental health exposures?

| | |
|---|---|
| 2 | Yes, the medical school or 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. |

Score explanation:

The Royal Devon University Healthcare NHS Foundation Trust (formed of Exeter and North Devon Hospitals) has an educational video on sustainability, accessible via this [link](#).

Neither Torbay Hospital nor the Royal Cornwall Hospital has a dedicated educational site on the environment for patients.

3.6. Does your medical school or its affiliated teaching hospitals have accessible educational materials for patients about the health impacts of climate change?

| | |
|---|---|
| 2 | Yes, the medical school or 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. |

Score explanation:

Neither the medical school nor its affiliated hospitals have accessible online educational materials for patients about the health impacts of climate change.

Section Total (8 out of 14)

8

Back to Summary Page [here](#)

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 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:
 Students can bring any initiative to medical school faculty, and these are directed to the most appropriate medical school committee for feedback and support. Contact with the medical school is facilitated through termly feedback sessions; directly to academic leads online forms or via Student-Staff Liaison Committee (SSCL) reps. If ideas are supported by a group of students, SSCL reps raise these at termly meetings with the medical school. The vast majority of initiatives are supported and enacted, but the main difficulty is continuity with initiatives after lead students graduate. Furthermore evidence of implementation on the 'your feedback in action' page, has not been updated since January 2022.
 A core curriculum module on Improving Healthcare is undertaken in third year where students are required to propose a QIP and complete a business proposal. However, students select one of six suggested areas of quality improvement, which do not include planetary health or sustainability which could be an area for improvement.
 The university's Green Futures Student Solutions awards up to \$5000 for student-led innovative projects contributing to the Climate Emergency Response or Net Zero targets. Five student-led QIP were funded and completed in 2021/22, however the focus of the QIP is limited to university activity as opposed to the wider area of planetary health.
 UEMS students are also signposted to apply to Learn 2 Innovate, a program directed by Cardiff University, in which students work as part of a multidisciplinary team to develop an idea which is pitched to judges who provide grants for leading innovations. Funding is available from EUMA to students wishing to attend the Innovate-2-learn conferences, however EUMS is not directly associated with the program.

| 4.2. 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. |
| <p><i>Score explanation:</i> The year 2 compulsory SSU theme 'Global and Planetary Health' includes multiple different SSUs options in this field for students to choose from and do research in. These are part of the core medical school curriculum, therefore all students have the opportunity to spend 3 weeks on a planetary health focussed research project.</p> <p><i>Further opportunities requiring student initiative include:</i> Intercalating options, including a Masters of Public Health, which has a module on planetary health, Masters of Environment and Human Health, or Sustainability which provide opportunities to undertake Masters level research in planetary health.</p> <p><i>As part of the university wide Grand Challenge week students conduct research on topics including heat illnesses and rising global average temperature, vector-borne disease distribution and emotional stress from due to climate insecurity, projects are supported by international experts.</i></p> <p><i>Enactus is a student-led society that creates social enterprises, many of which support global planetary health such as Twelve Period which provides free sustainable period products to those impacted by period poverty and Grow an initiative to develop gardens in Cambodian schools - providing a more sustainable food source and incentivising school attendance.</i></p> | |

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

| | |
|---|--|
| 2 | The medical school has a webpage with specific information related to planetary health or sustainable healthcare that includes up-to-date information on relevant initiatives and contact information of potential mentors. |
| 1 | There is a medical school webpage that features some information on projects and mentors within planetary health and sustainable healthcare within the medical school, but it lacks key information. |
| 0 | There is no medical-school specific webpage for locating planetary health and/or sustainable healthcare projects or mentors. |

Score explanation:
There is a university-wide sustainability webpage covering steps to becoming more sustainable, news, events and how to get involved. The ECEHH website has information on the research it is conducting and the staff involved. There is not a page with specific information for medical school students.

4.4. 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:
 Both 'Truro Global Health Society' and 'Students for Global Health Exeter' have not renewed their membership on the SU or Guild pages respectively and are no longer active on social media. They have not been replaced with any new societies in the field of planetary health or sustainable healthcare. Previously these societies had focused their lectures around topics of planetary health, tropical medicine, infectious disease and humanitarian crises and were both affiliated with the student's guild making them eligible to receive society funding and logistical support.

4.5. 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: A medical student was a member of the Planetary Health Thematic forum which aims to increase planetary health in the curriculum and sat on the COP27 planning committee. However, since this student graduated there is no evidence of student representative activity.

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)

| | |
|---|---|
| 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:</i></p> <ol style="list-style-type: none"> 1. <i>Three societies including Bee Society, Green living society and Slow food work to protect pollinating species, encourage foraging and support local agriculture respectively. Exeter Community Garden is run by Exeter students in collaboration with the local community which are concerned by the issues of food security and sustainability.</i> 2. <i>During Grand Challenge week students may conduct research and develop solutions to challenges posed by climate change in line with the sustainable development goals. Students are supported by international experts who present free talks at the university.</i> 3. <i>The university hosted a panel of experts in exploring environmental justice for students in june 2023.</i> 4. <i>An interactive light projection “The Climate Wall” was projected onto university walls in november 2023 representing how people feel about climate change. The medical school explores health inequalities and injustice as part of the global and planetary health SSU in which students hear about research into sustainability impacts of non-communicable diseases, conducted by local epidemiologists about the</i> 5. <i>The university sustainability webpage lists volunteering opportunities local to Exeter and Penryn Campuses, these include beach cleans in collaboration with surfers against sewage, engaging local school children in environmental education sessions and designing marketing material for AI positive recycling.</i> 6. <i>There are several student-run societies which facilitate hiking, walking, kayaking, surfing and other outdoor pursuits.</i> | |
| Section Total (10 out of 15) | 10 |

Back to Summary Page [here](#)

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.

| 5.1. Does your medical school and/or institution have an Office of Sustainability? | |
|--|--|
| 3 | Yes, there is an Office of Sustainability with multiple full-time staff dedicated to campus sustainability. If the Office of Sustainability serves the entire campus, there is at least one designated staff member for sustainability at the hospital and/or medical school. |
| 2 | There is an Office of Sustainability with one or more full-time staff dedicated to campus sustainability, but no specific staff member in charge of medical school and/or hospital sustainability. |
| 1 | There are no salaried sustainability staff , but there is a sustainability task force or committee |
| 0 | There are no staff members or task force responsible for overseeing campus sustainability |
| <p><i>Score explanation:</i> The University of Exeter has an Office of Sustainability, employing 13 members of staff. Within the faculty, there are members of staff holding the position of Advocate Climate Taskforce Academic Representatives. https://www.exeter.ac.uk/about/sustainability/people/keycontacts/</p> <p><i>In terms of hospitals through which students rotate, the RD&E (Royal Devon and Exeter) has full time Energy and Sustainability Manager and Officers, NDDH (North Devon District Hospital) has an Assurance, Compliance & Sustainability Manager and an Energy, Sustainability & Compliance Officer, Torbay and South Devon NHS Trust has a Senior Responsible Officer for Sustainability and the RCHT (Royal Cornwall Hospital Trust) has an Operational Sustainability Officer.</i></p> <p>https://www.royaldevon.nhs.uk/media/1ujhe04g/rde-ndht-our-green-plan-2022-2025.pdf https://www.torbayandsouthdevon.nhs.uk/uploads/tsdft-green-plan-2022-2025.pdf https://www.england.nhs.uk/south/wp-content/uploads/sites/6/2022/06/Green-Plan-2021-26-Cornwall-and-the-Isles-of-Scilly-Health-and-Care-Partnership.pdf</p> | |

| 5.2. How ambitious is your institution/medical school 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:</i> <i>The University of Exeter has pledged to be carbon neutral for Scope 1 and 2 emissions by 2040 (direct emissions from resources either owned and controlled by the university, or indirect purchased emissions). They are using a front-loaded approach, aiming to reduce emissions by 50% by 2025 and 75% in 2030. There are also plans to reduce scope 3 emissions (indirect) by 50% by 2030 and aiming for net zero by 2050. This is outlined in the 2019 Environment and Climate Emergency Working Group White Paper, an independent inquiry commissioned by the University of Exeter, which contains detailed plans and recommendations for how to achieve this.</i></p> <p>https://www.exeter.ac.uk/media/universityofexeter/campuservices/sustainability/climateemergency/documents/Full-EnvClimE-White-Paper-11_11_19.pdf</p> |

5.3. Do buildings/infrastructure used by the medical school for teaching (not including the hospital) 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. |

Score explanation:

The University of Exeter has a green energy Power Purchase Agreement (PPA) in partnership with other UK universities that adds to the existing 100% REGO-certified renewable electricity contract that's been in place since 2017.

5.4. Are sustainable building practices utilised for new and old buildings on the medical school 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:</i> All University of Exeter buildings utilise the BRE Environmental Assessment Method (BREEAM) as a tool for delivering sustainable buildings. All new builds must achieve an 'Excellent' rating on this scale, and all refurbishments must receive a 'Very Good'.</p> | |

| 5.5. Has the <u>medical school</u> or <u>institution</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 or 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. |
| 1 | The medical school or institution has implemented some strategies to provide environmentally-friendly transportation options, but the options are unsatisfactorily accessible or advertised. |
| 0 | The medical school or institution has not implemented strategies to encourage and provide environmentally-friendly transportation options. |
| <p><i>Score explanation:</i> In order to reduce single occupancy car commuting, the University of Exeter promotes sustainable transport such as commuting on foot, by bike, by bus/coach, by rail or by car sharing. There has been investment to improve cycle parking and changing facilities across Exeter campuses, and the central campus has priority access for pedestrians and cycles. The university has highlighted well lit paths to encourage walking. Students in Exeter can benefit from a Student bus pass which entitles them to unlimited travel on all buses operated by Stagecoach in the Greater Exeter area at reduced prices, whilst students in Cornwall are encouraged to use general public transport discounts. There is a university minibus service which connects the two Exeter campuses with the train station to encourage use of public transport. There are 30 electric charging bays available on the Exeter campus and 2 on the Penryn (Cornwall) campus.</p> | |

| 5.6. 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:</i> The University of Exeter has a clear recycling programme, and all general waste is sent to a waste-to-energy plant rather than landfill. Some waste streams are also treated as resources to generate additional revenue for the university. Food waste is collected from all University catering</p> | |

outlets (including catered Halls of residence) and taken to an anaerobic digestion facility, after a trial of on-site anaerobic composting demonstrated the need for a commercial contract for management of food waste, outlined in the general Waste and Recycling Strategy.

In 2019, the University Catering and Retail Services team scored 77% in the reduce, reuse and recycle criteria of the Sustainable Restaurant Association accreditation. Food waste collection is now available in all Exeter postcodes, although not in university accommodation. In Cornwall, student accommodation food waste is sent to an anaerobic digestion plant, although food waste collections in non university accommodation has yet to be rolled out to all postcodes.

In 2021/22, less than 12% of the university's waste went to landfill; 85% of which has arisen from construction projects and the remaining 15% from skips. However, due to the high carbon intensity of this treatment type, it accounts for almost 68% of the waste emissions.

5.7. Does the medical school 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. |

Score explanation:

The UoE medical school abides by wider campus guidance and [policy on sustainable food](#), this policy has made year on year improvements to the procurement, delivery, and anti-waste strategies in place to improve the sustainability of food and drink served on campus. Campaigns have been conducted around the support for Veganuary, but no year around agreement is in place.

- 90% of fresh meat is procured from the southwest of England.
- All poultry products and milk is sourced from the south-west of England.
- Fish is accredited by the Marine Stewardship Council
- Increased number of vegetarian and whole food suppliers
- Menus consist of 50% vegetarian, vegan, or plant-based meals.
- Massive reduction in plastics (especially single use)
- Favourable pricing for use of reusable cups
- All food packaging is compostable.
- Refillable locally sourced fresh milk bottle stations
- Decreased end of day food waste through the adoption of “too good to go”

5.8. 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 of Exeter allows for any registered member of staff to make one off acquisition less than £1000 via either payment form or university card. Staff are encouraged to review the sustainable procurement checklist before purchasing anything. Costs greater than £1000 or regular purchases must be made through approved suppliers. Any staff can request that a company be made an approved supplier, but this requires authorisation by the procurement team. All members of the procurements team have received training in sustainable procurement.

The University of Exeter maintains contracts with many suppliers and uses its influence as a large purchaser to encourage the adoption of sustainable measures, for example encouraging the adoption of solar panels and wind turbines by poultry suppliers.

The UoE produces an annual update to its sustainable procurement policy which sets out previous achievements as well as goals for the year to improve its adherence to sustainability criteria and sourcing of equipment and materials.

Currently there is no mandatory policy or minimum criteria for suppliers or contracted partners of the university, but efforts are being made to encourage sustainable purchasing and procurement.

https://www.exeter.ac.uk/media/universityofexeter/financeservices/University_of_Exeter_Sustainable_Bought_Goods_and_Services_Policy_Final_311022.pdf

<https://www.exeter.ac.uk/cornwall/sustainability/sustainabilityincornwall/procurement/>

<https://www.exeter.ac.uk/departments/finance/buying/suppliers/>

5.9. 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:

The University of Exeter and student unions have both created [checklist style guidance](#) for the creation of events hosted by the university or medical school. This guidance does not form part of a certification or accreditation for events. The guidance ranges in depth and considerations but no part is considered mandatory.

In addition, the Events Exeter team responsible for working with outside clients have produced some brief guidance on planning a sustainable event with the team happy to discuss implementation of green and sustainable event ideas. There are no mandatory requirements for events hosted at the university to meet.

The guidance that is available is not easily found and is certainly not well distributed to potential organisers of events at the university.

5.10. 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:

The College of Health and Life Science subscribes to the wider university of Exeter lab sustainability policy. At the University of Exeter there is the [LEAF](#) (Lab Efficiency Assessment Framework) team. LEAF is an online tool developed at UCL to provide global standards for lab sustainability. They provide a series of recommendations, criteria, and tiered accreditations for when these criteria are met. This range of recommendations and criteria include tackling plastic and recycling, water, chemical, travel, procurement, and energy waste.

5.11. 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 organised advocacy for divestment. |
| 0 | Yes, the institution has investments with fossil-fuel companies and there have been no efforts to change that. |

Score explanation:

The University of Exeter has committed to partially divest from fossil fuel companies. As set out in the university's [investment policy](#) (April 2022), the University of Exeter does not directly invest in companies involved in the extraction of fossil fuels. However, where investments in groups are made, a tolerance of 5% of the total turnover of said group is allowed to be composed of companies profiting from the extraction of fossil fuels. Additionally, the university currently has ~3% of its investment fund invested in fossil fuel companies as found from a freedom of information request made in July 2022 by

[people and planet](#). The University of Exeter's investment portfolio does [produce fewer tons of CO2 per million pounds](#) invested than both the "MSCI world index" and "MSCI world low carbon leaders index" when using the 'weighted carbon intensity model'.

Students at the university have campaigned to encourage the University of Exeter to divest fully from its fossil fuel investments. In 2019, the University [committed to fully divest](#) from fossil fuel investments.

Concerningly, the University of Exeter entered into a research partnership with fossil fuel company "Shell". This is despite ongoing protests from students and academics. The University of Exeter receives [the most funding](#) from fossil fuel companies out of any university in the UK. UoE also does not exclude fossil fuel companies from careers fairs or other employment events.

| | |
|-------------------------------------|-----------|
| Section Total (24 out of 32) | 24 |
|-------------------------------------|-----------|

Back to Summary Page [here](#)

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 Exeter School of Medicine

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

| Section | Raw Score % | Letter Grade |
|---|-----------------------------|--------------|
| Planetary Health Curriculum (30%) | $(36/72) \times 100 = 50\%$ | C |
| Interdisciplinary Research (17.5%) | $(15/17) \times 100 = 88\%$ | A |
| Community Outreach and Advocacy (17.5%) | $(8/14) \times 100 = 57\%$ | C+ |
| Support for Student-led Planetary Health Initiatives (17.5%) | $(10/15) \times 100 = 67\%$ | B |
| Campus Sustainability (17.5%) | $(24/32) \times 100 = 75\%$ | B+ |
| Institutional Grade | 65.23% | B |

Report Card Trends

Section Overview

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

Planetary Health Report Card Trends for Exeter University

