



Planetary Health Report Card:

Oxford University Medical School



2021-2022 Contributing Team:

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Summary of Findings

Overall	C
<u>Curriculum</u>	C +
<ul style="list-style-type: none"> • Following from last year's report card the curriculum has increased in score by nearly 20%. This reflects an incredible amount of work and commitment from staff and students to weave Planetary Health (PH) and Education for Sustainable Healthcare (ESH) into the curriculum. • Key curricular updates involve the introduction of a new Special Study Theme 'Planetary Health and Sustainable Healthcare', significant changes to the 'Medical Sociology' course and introducing focused lectures into the Graduate Entry course modules. A key focus for curricular change next year is the standard entry pre-clinical course. • Alongside the PHRC, 2 ESH faculty wide workshops have played a key role in increasing this score, with a third workshop scheduled in March 2022. Finally, given the newly appointed ESH lead at the medical school it is hoped that ESH will be further woven into the core curriculum, complementing the elective teaching. 	
<u>Interdisciplinary Research</u>	C+
<ul style="list-style-type: none"> • The wider university engages in a lot of climate and health research however this is still lacking within the medical school and medical sciences division. • There is hope that the Final Honours Scheme (FHS) projects will offer more ESH focused projects for 3rd year undergraduate students. 	
<u>Community Outreach and Advocacy</u>	F
<ul style="list-style-type: none"> • This is the university and medical school's weakest area. There is lack of community engagement from the institution, medical school and hospital trusts, and minimal change has been seen since last year's report card. • We propose the medical school to engage with community climate focused groups in Oxford, and initiate discussions with local trusts to make available materials regarding climate change and PH for patients. We suggest relevant events are communicated to students as a means to encourage engagement and advocacy. 	
<u>Support for Student-Led Initiatives</u>	B -
<ul style="list-style-type: none"> • The medical school currently supports quality improvement projects and the Green Impact Scheme, and the wider institution has many co-curricular sustainability opportunities. • Students are currently working with the Medical Sciences division to create an area on the website dedicated to planetary health, however this is still in its initial phase. 	
<u>Campus Sustainability</u>	C
<ul style="list-style-type: none"> • In November 2021 the medical school officially declared that climate change is a health emergency. However, it has yet been made clear what concrete actions will be taken in light of the announcement. • At the institution level a divestment from fossil fuel commitment has been made and they are currently running a member consultation aiming for biodiversity net gain and net zero carbon by 2035, to improve on their current target of a 50% reduction by 2030. • We recommend the development of sustainability policy at the medical school level to achieve higher marks. 	

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 analyzing 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 schools’ institutional priorities do not reflect the urgency of this danger to human health.

As future health professionals, we must be prepared to address the impacts of human-caused environmental changes on our patients’ health. This preparation is in the hands of the institutions providing our medical training. It is imperative that we hold our institutions accountable for educating medical students about the health impacts of climate change and other anthropogenic environmental changes, generating research to better understand health impacts and solutions, supporting related student initiatives, embracing sustainable practices as much as possible, and engaging with surrounding communities that are most affected by environmental threats. Because climate change and environmental threats disproportionately affect vulnerable populations (for example, communities of color, older adults sensitive to health threats, and individuals in low-resource settings), these issues are inherently ones of equity and justice.

With the purpose of increasing planetary health awareness and accountability among medical schools, we have created a Planetary Health Report Card that medical students internationally can use to grade and compare their home institutions on an annual basis. This medical-student-driven initiative aims to compare medical schools 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 “a solutions-oriented, transdisciplinary field and social movement focused on analyzing and addressing the impacts of human disruptions to Earth’s natural systems on human health and all life on Earth.” 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.
- **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 (for example, undergraduate departments (USA), other related departments eg 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 mold 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.

Literature Review:

Added to our resources this 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 medical school 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>Due to Covid, the student selected components of the course have been cancelled for nearly 2 years now. Normally, Oxford offers 'student selected modules' (SSM) in 4th and 6th year of the standard entry course or 4th year of the Graduate Entry course at the <u>Centre for Sustainable Healthcare</u> in Oxford. The module is 4 weeks in 4th year and 2 weeks in final (6th) year. Students have the opportunity to explore an area of ESH that interests them as well as having group teaching on the core principles. Students are usually able to undertake both student selected modules with very different content. The SSMs have restarted again this academic year. In addition there is a new component to the Oxford Medical Course called Special Study Themes which run longitudinally through 4th year. One of these themes is 'Planetary Health and Sustainable Healthcare'. It started in January 2022 with an aim to continue in future years.</i></p> <p><i>In addition, the Final Honours School projects provide scope for individuals to choose their own project, which can accommodate planetary health related topics. There is not currently a specific Planetary Health supervisor but this could potentially be accommodated in future years.</i></p>	

Curriculum: Health Effects of Climate Change

2. Does your medical school 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>This topic is discussed in depth in the elective 'Planetary Health and Sustainable Healthcare' Special Study Theme (SST) for 4th Year SEMs and the elective Centre for Sustainable Healthcare (CSH) special study module (SSM). In the SST, the effects of extreme heat on vulnerable populations was discussed, alongside an exploration of the urban heat island effect and ways in which vulnerable areas are responding to protect populations against extreme heat (e.g. the Ahmedabad early warning and heat action plan).</i></p> <p><i>While this topic was briefly covered in teaching to all final year Oxford medics (the 'Intro to Final Year' week included two mornings of sustainable healthcare lectures), it is unclear whether these lectures will form part of the core curriculum each year, and so we have elected not to award points for coverage in the core curriculum.</i></p> <p><i>In the introductory course to final year, two mornings were delivered as an introduction to Planetary Health and Sustainable Healthcare. This was a fantastic opportunity to teach a cohort of students who hadn't yet had any teaching on the topics and give them an introduction. The details were necessarily broad and shallow and included one slide on the health impacts of extreme heat. As there were no learning outcomes associated with this teaching and it is not a confirmed annual session, we have not awarded any points for this on topics that were only covered briefly in one slide, but did really appreciate the medical school facilitating these sessions very flexibly.</i></p>	

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.
<p><i>This topic is discussed in depth in the elective SST and Centre for Sustainable Healthcare SSM. In the SST, the rising incidence of extreme weather events as a result of climate change was discussed, alongside its impact on community infrastructure and healthcare. The mental health impact of extreme</i></p>	

weather events on populations was also discussed, with examples given of the Australian Bushfires of 2019/2020 and flooding in the Democratic Republic of Congo in 2020.

In the introductory course to final year, two mornings were delivered as an introduction to Planetary Health and Sustainable Healthcare. This was a fantastic opportunity to teach a cohort of students who hadn't yet had any teaching on the topics and give them an introduction. The details were necessarily broad and shallow and included a mention of the health impacts of extreme weather. As there were no learning outcomes associated with this teaching and it is not a confirmed annual session, we have not awarded any points for this on topics that were only covered briefly in one slide, but did really appreciate the medical school facilitating these sessions very flexibly.

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. (GEM)
2	This topic was briefly covered in the core curriculum.
1	This topic was covered in elective coursework. (SEM)
0	This topic was not covered.

SEM pre-clinical: The impact of climate change on patterns of infectious disease is not mentioned in the core syllabus. It would be possible to integrate such teaching in the second year Principles of Pathology lectures and it was discussed with the module lecturer, but no immediate changes are planned.

GEM pre-clinical: During the 'Infection and Immunology' block for the GEM Y1 course, a whole lecture was given to the year group. The lecture explored the influence of a changing climate on infectious disease, including Covid-19.

3rd year elective teaching: The 'Infection' module offered in Final Honour School does not mention vector distribution and climate change. However, the module lead has discussed the potential for increased malaria and leishmaniasis in the teaching starting from next year.

SEM Clinical: This topic is discussed in depth in the elective SST and Centre for Sustainable Healthcare SSM. In the SST, a full lecture is devoted to the effect of climate change and ecosystem collapse on infectious disease patterns. This includes the impact of habitat change on vector-borne diseases and the effect of increased rainfall on water-borne pathogens. Specific examples of malaria, dengue fever, and lyme disease are explored. The emergence of COVID-19 as a novel pathogen is also explored in the context of environmental change and infectious disease patterns, alongside the WHO manifesto for a healthy recovery from the pandemic.

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. (GEM)
2	This topic was briefly covered in the core curriculum. (SEM)
1	This topic was covered in elective coursework.
0	This topic was not covered.

SEM pre-clinical: In first-year medical sociology lectures, the global burden of disease attributable to air pollution was highlighted on a slide. The second-year 'Pharmacology of Asthma' lecture briefly mentioned the link between air pollution and asthma.

GEM pre-clinical: In 2021, a new public health session on COPD, air pollution & asthma was delivered to GEM Y1. The concept of planetary health was explored and data discussed demonstrating the impact of air pollution on COPD. This session was delivered again in February 2022.

SEM clinical: This topic is discussed in depth in the elective 'Planetary Health and Sustainable Healthcare' SST. A guest lecturer from Imperial College London with extensive experience researching the impacts of air pollution on human health was invited to speak about their work, including an analysis of UK air pollution policy, the impacts of different types of air pollution and the impacts of air pollution at different stages of life.

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

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

The lead for the Cardiovascular System block for GEM Year 1 has included a new 1 hour lecture 'Effects of Climate Change on Cardiovascular Health', which they intend to keep within the core curriculum.

However, for SEM this topic is only discussed as part of the elective 'Planetary Health and Sustainable Healthcare' SST, and only very briefly. As above, while this topic was also briefly mentioned in the 'Introduction to final year' teaching given to 6th year students, we have elected not to award points for coverage in the core curriculum for SEM. Overall, there is a major disparity between standard entry and graduate entry teaching of this topic.

In the introductory course to final year, two mornings were delivered as an introduction to Planetary Health and Sustainable Healthcare. This was a fantastic opportunity to teach a cohort of students who

hadn't yet had any teaching on the topics and give them an introduction. The details were necessarily broad and shallow and included one slide on the cardiovascular effects of climate change. As there were no learning outcomes associated with this teaching and it is not a confirmed annual session, we have not awarded any points for this on topics that were only covered briefly in one slide, but did really appreciate the medical school facilitating these sessions very flexibly.

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.

This is not currently covered in the core curriculum, but the organiser of the psychiatry course intends to introduce a morning of teaching on climate change and mental health.

However, this topic is discussed in depth in the elective 'Planetary Health and Sustainable Healthcare' SST. A guest lecturer from the Smith School of Enterprise and the Environment with dual research interests in psychiatry and sustainability was invited to speak about the mental health impacts of climate change. Their lecture covered the research literature surrounding climate change and its effects on bipolar disorder, major depressive disorder, anxiety, PTSD, suicide, and general mental wellbeing (e.g. 'eco-anxiety').

In the introductory course to final year, two mornings were delivered as an introduction to Planetary Health and Sustainable Healthcare. This was a fantastic opportunity to teach a cohort of students who hadn't yet had any teaching on the topics and give them an introduction. The details were necessarily broad and shallow and included one slide on the mental health impacts of climate change. As there were no learning outcomes associated with this teaching and it is not a confirmed annual session, we have not awarded any points for this on topics that were only covered briefly in one slide, but did really appreciate the medical school facilitating these sessions very flexibly.

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. (SEM)
2	This topic was briefly covered in the core curriculum. (GEM)
1	This topic was covered in elective coursework.
0	This topic was not covered.

SEM pre-clinical: Material around this subject is covered in the Introduction to Medical Sociology, through discussing the Ecosystems Health Model. Content addressed included: impact of green space on health inequalities (social class), impact of noise and air pollution on quality of life (outcomes of health care), as well as planetary diet, prevention & self-management.

GEM pre-clinical: This was briefly discussed in the Dr-Patient Relationship lecture. This was also covered in a new lecture given for the first time in 2021, 'Climate Change as a Public Health Crisis'. The lecture is scheduled to be given again this academic year.

Clinical: There were additional sessions to the whole Final year cohort where this was covered, and a new Student Selected Theme was introduced for SEM fourth year medical students which covers these topics in depth.

9. Does your medical school curriculum address the outsized impact of climate change on marginalized populations such as those with low SES, women, communities of color, 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. (GEM and SEM)
1	This topic was covered in elective coursework.
0	This topic was not covered.

SEM pre-clinical: This is briefly covered in the medical sociology course for the undergraduates.

GEM pre-clinical: This is briefly discussed in the 'Climate Change as a Public Health Crisis' lecture.

Clinical Course: In the introductory course to final year, two mornings were delivered as an introduction to Planetary Health and Sustainable Healthcare. This was a fantastic opportunity to teach a cohort of students who hadn't yet had any teaching on the topics and give them an introduction. The details were necessarily broad and shallow and included mention of the disproportionate health impacts on marginalised populations were briefly mentioned. As there were no learning outcomes associated with this teaching and it is not a confirmed annual session, we have not awarded any points for this on topics that were only covered briefly in one slide, but did really appreciate the medical school facilitating these sessions very flexibly.

This topic is mentioned in the CSH SSM and explored in depth throughout the SST available to SEM 4th years.

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. (GEM and SEM)

1	This topic was covered in elective coursework.
0	This topic was not covered.
<p><i>SEM pre-clinical: The 'Medical Sociology' course has been significantly updated this year. The unequal impacts of air pollution and the impacts of living in deprived areas are both explored. It primarily focuses on the inequality within the context of the UK and does not expand into global unequal impacts.</i></p> <p><i>GEM pre-clinical: In the graduate course one of the stated learning outcomes of the syllabus is to “examine the relationship between healthcare inequalities and climate change”. The inequalities arising from climate change and disproportionate impact on countries in the Global South was briefly explored in the 'Climate Change as a Public Health Crisis' lecture.</i></p> <p><i>SEM clinical: This topic is mentioned in the CSH SSM and explored in depth in the SST available to SEM 4th years, including an analysis of the effects of extreme heat on Ahmedabad in India, and regional public health action to adapt (Heat Action Plan).</i></p>	

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

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.
<p><i>GEM pre-clinical: This is not currently covered in the core curriculum.</i></p> <p><i>SEM pre-clinical: This is not currently covered in the core curriculum although the relevant lecturer is keen to include it in next year's 'Fertility and Infertility' core lecture.</i></p> <p><i>Clinical teaching: This is not currently covered in the Women's and Reproductive Health (WRH) rotation. However, the WRH course course organiser and the GEM preclinical course is keen to introduce this next year.</i></p> <p><i>SEM clinical: This was not discussed in the SST available to 4th years on Planetary Health and Sustainable Healthcare and is a potential area for improvement.</i></p>	

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.
<p><i>The elective SST available to 4th years in 'Planetary Health and Sustainable Healthcare' discusses air pollution alongside other human-caused environmental threats, but the majority of the discussions are London-centric, however research regarding Oxford air pollution has been briefly discussed. Discussions of local and regional environmental issues, such as Thames Water sewage leakage into Oxford rivers, would be welcome.</i></p>	

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.
<p><i>This topic is discussed in depth in the elective 'Planetary Health and Sustainable Healthcare' SST. A 10 minute recording of a talk which an indigenous lecturer presented at the AMEE symposium was discussed at length within the Oxford module, with space given for students to share their opinions on how they might carry forward these values into their own careers. Recommendation to include this in the core curriculum as knowledge of the values of indigenous communities and the way they live in harmony with the Earth is vital for long term Planetary Health.</i></p>	

14. Does your medical school curriculum address the outsized impact of anthropogenic environmental toxins on marginalized populations such as those with low SES, women, communities of color, children, homeless populations, 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>This topic was explored in depth in the 'Planetary Health and Sustainable Healthcare' SST by the Imperial guest lecturer who discussed air pollution and its effects on children and the elderly as</i></p>	

vulnerable populations. Living in large cities and low socioeconomic status were also mentioned as risk factors for exposure to anthropogenic environmental toxins, with Tower Hamlets and Hackney in London used as examples of locations exposed to high quantities of air pollution.

Curriculum: Sustainability

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. (GEM)
2	This topic was briefly covered in the core curriculum.
1	This topic was covered in elective coursework. (SEM)
0	This topic was not covered.

GEM pre-clinical: In a lecture on obesity in the Public Health course for 1st years ‘The Global Syndemic of climate change, obesity, and undernutrition’ was discussed, including details of excess meat consumption being a common driver of the syndemic. This was followed by details of the Lancet Healthy, Sustainable diet as a common solution.

SEM: Plant-based diets were not explicitly mentioned in the curriculum or in lectures. Lectures on nutrition are delivered to first and second years as part of Biochemistry, Medical Sociology and Applied Physiology and Pharmacology. These lectures mention the benefits of a reduction in meat consumption in relation to obesity and cancer risk, and mention the importance of consuming fruits, vegetables and whole grains as part of a varied diet. Specifically, the lectures include a brief discussion on the long-term health impacts of sustainable diets (i.e. plant-based diets). The lecturers have agreed to help with further discussions on adding a dedicated lecture on these topics to the curriculum.

In the introductory course to final year, two mornings were delivered as an introduction to Planetary Health and Sustainable Healthcare. This was a fantastic opportunity to teach a cohort of students who hadn't yet had any teaching on the topics and give them an introduction. This included a set of slides explaining that nearly a third of all greenhouse gas emissions worldwide come from food production and went on to discuss the health and environmental co-benefits of reduced meat consumption, particularly red and processed meat. There was no discussion of any specific diets or mention of a need for advocating for a solely plant-based diet specifically. As there were no learning outcomes associated with this teaching and it is not a confirmed annual session we have not awarded any points for this on topics that were only covered briefly in one slide, but did really appreciate the medical school facilitating these sessions very flexibly.

This topic is discussed in depth in the elective ‘Planetary Health and Sustainable Healthcare’ SST, including an analysis of the carbon impacts of different foods, the health and environmental co-benefits of adopting sustainable diets, and behavioural techniques to help patients to alter their own diets.

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.
<p><i>This has been added in two parts of the course in the last year for all students. Firstly in the Public Health module of the Community block in Year 5 SEM/Year 3 GEM, teaching material on the carbon footprint of the healthcare system has been added to the core online teaching material, including figures from the Greener NHS Plan and Sustainable Development Unit giving visual representation of the breakdown of the NHS' carbon footprint. However, this is not an explicit learning outcome.</i></p> <p><i>Secondly, in the introductory course to final year, two mornings were delivered as an introduction to Planetary Health and Sustainable Healthcare. This was a fantastic opportunity to teach a cohort of students who hadn't yet had any teaching on the topics and give them an introduction. The second morning's focus was on sustainable healthcare and started with an overview of the healthcare system's carbon footprint. As this was a whole morning, despite the fact that there were no learning outcomes associated with this teaching and it is not a confirmed annual session, we have awarded points for this as felt it was covered in so much depth.</i></p> <p><i>Finally, this is also covered in depth in the elective CSH SSM and Planetary Health SST.</i></p>	

17. Does your medical school curriculum cover these components of sustainable clinical practice in the <u>core</u> curriculum? (1 point each)	
1	Waste production within the healthcare system and strategies for reducing waste in clinical activities, such as in the operating room
1	The impact of inhalers on the healthcare carbon footprint and the environmental benefit of dry powdered inhalers over metered dose inhalers.
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 anaesthetic gas options with reduced greenhouse gas emissions
1	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 for obesity. This is commonly known as social prescribing in the UK.

1	The health and environmental co-benefits of avoiding over-medicalisation, over-investigation and/or over-treatment
	<ol style="list-style-type: none"> 1. <i>The clinical skills laboratory is a teaching space that all students go through at various points in their training to learn skills such as cannulation and catheterisations. Over the last year the skills lab has been transformed by a student-faculty group by the 'Bleeding Green' project. It highlights the waste produced in healthcare including its cost through posters and also has drastically reduced its own carbon footprint by repackaging most items used, making students constantly aware of the waste produced. However, this is not included in a formal lecture/core curriculum.</i> 2. <i>During the community module in year 5 (SEM) and year 3 (GEM) there is an online module on COPD and asthma. Within that there is a section explaining the difference in carbon footprint between dry powder inhalers and metered dose inhalers (MDIs) and the current contribution of MDIs to the healthcare's carbon footprint.</i> 3. <i>Not currently addressed in teaching.</i> 4. <i>During the Acute General Medicine module in Year 4 (SEM) and Year 2 (GEM), there are lectures delivered on therapeutics. Within this, there is a lecture dedicated to the environmental impact of over-prescribing. Additionally, de-prescribing and its co-benefits to patients and the environment is covered in Geriatrics teaching in Year 5 (SEM) and Year 3 (GEM).</i> 5. <i>Briefly addressed in online compulsory teaching, and discussed as part of student placements in primary care.</i> 6. <i>Briefly addressed in online compulsory teaching, and discussed as part of student placements in primary care and year 4 'Acute General Medicine' clinical placement.</i>

Curriculum: Clinical Applications

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?	
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 no strategies for having conversations with patients about climate change in the curriculum
<p><i>This topic is discussed in depth in the elective 'Planetary Health and Sustainable Healthcare' SST, particularly around changing diets. There is discussion of how to educate patients on climate change and educational resources which may be helpful, alongside behavioural tools such as self-monitoring which have been shown to improve patient compliance with recommendations such as dietary change.</i></p> <p><i>However, in order to integrate these conversations into daily clinical practice and widen the discussion to the whole year group, these strategies should be expanded into the core curriculum. A potential opportunity could be in the Communication Skills sessions which occur through SEM Y4 and GEM Y2, in which there is already a session on Behavioural Change in patients (at the moment, this mostly</i></p>	

focuses on smoking cessation, but could easily be expanded to include dietary change and climate action).

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

2	Yes, the core curriculum includes strategies for taking an environmental history.
1	Only elective coursework includes strategies for taking an environmental history.
0	No, the curriculum does not include strategies for taking an environmental history.

Students are trained to take a full social history, which includes asking patients about exposures to environmental and occupational hazards as well as smoking. Students must explicitly ask patients about smoking and occupation due to its potential relationship with certain conditions in order to prevent possible point deductions on practical OSCE exams. History taking is taught in a variety of places within the medical school curriculum including on clinical Wednesdays in the GEM course, the MedEd course in 4th year of the standard entry undergraduate course and in standalone introductory lectures at the beginning of clinical years. However, history taking is not taught in the context of environmental health.

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.

In the academic year of 2020-21, Oxford held two faculty workshops led by an external expert. The first to initiate teaching on Education for Sustainable Healthcare at the medical school and the second to build on this with examples of integration into courses either following the workshop or already in place, such as in sociology and in psychiatry. Around 50 individuals attended the second workshop. The workshops were organised by two medical students alongside the external expert and two members of staff.

Following the second workshop the medical school made a major commitment to Education for Sustainable Healthcare, appointing an interim lead and then Lead for Education for Sustainable Healthcare. In addition, the medical sciences division declared that climate change is a health emergency in November 2021. With the Lead for Education for Sustainable Healthcare having taken

office, the medical school is currently in the process of making major changes to further implement ESH. A third workshop is planned for March 2022.

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.

In the graduate entry 1st year there has been notable effort to integrate planetary health teaching across multiple lectures within the Public Health module.

However, we felt this was insufficient to award 4 points as a reflection of the entire medical school teaching, but we are optimistic that given the progress during the 2021/2022 academic year, 4 points will be a realistic possibility.

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.

Over the Summer of 2021 Oxford Medical School engaged an interim lead for Education for Sustainable Healthcare (ESH). Following this they created a post to lead and coordinate ESH teaching throughout the medical school. Having Dr SanYuMay Tun as the named faculty lead is one of the most important pieces of progress over the last year from a student perspective as it means someone has responsibility for overseeing this field's teaching and can drive change.

<p>Section Total (40 out of 69) SEM = 37 GEM = 43 Average = 40</p>	40
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Interdisciplinary Research

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

1. Are there researchers engaged in planetary health research and healthcare sustainability research at your medical school?	
3	Yes, there are faculty members at the School of Medicine who have a primary research focus in planetary health or healthcare sustainability.
2	Yes, there are individual faculty members at the School of Medicine who are conducting research related to planetary health or healthcare sustainability, but it is not their primary research focus.
1	There are planetary health and/or healthcare sustainability researchers at the institution, but none associated with the medical school.
0	No, there are no planetary health and/or healthcare sustainability researchers at the institution or medical school at this time.
<p><i>There are researchers within the Medical Sciences Division undertaking planetary health research. For example the Primary Care department has research focused on sustainability in relation to food production and diet. However, there is no focused research on healthcare sustainability.</i></p> <p><i>There are also researchers outside the Medical School where sustainability and planetary health are the primary focus. For example, there are researchers within a number of different departments across the university, such as the Nuffield Department of Primary Care Health Sciences. They have launched a new DPhil project using big data to understand the health impacts of climate change.</i></p>	

2. Is there a dedicated department or institute for interdisciplinary planetary health research at your institution?	
3	There is at least one dedicated department or institute for interdisciplinary planetary health research.
2	There is not currently a department or institute for interdisciplinary planetary health research, but there are plans to open one in the next 3 years.
1	There is an Occupational and Environmental Health department, but no interdisciplinary department or institute for planetary health research.

0	There is no dedicated department or institute.
<p><i>There are multiple departments/organisations within the University of Oxford dedicated to interdisciplinary planetary health research. The <u>Martin School</u>, a research organisation aiming to improve the wellbeing of people across the planet, and planetary health, through finding answers to challenges in the areas of health, society, environment and economics. The Martin School had commissioned a council to focus on economic and policy solutions to achieving planetary health (The Rockefeller Foundation Economic Council on Planetary Health), which should be publishing their findings within the coming year.</i></p> <p><i><u>Oxford Environmental Change Institute</u> is a centre for interdisciplinary research on the causes and impact of environmental change. Environmental research group Oxford (ERGO), the department for Health Environment and Development, and Oxford Networks for the Environment focus on areas related to planetary health, such as the effects of climate change in relation to communicable diseases and risks, to human populations, associated with biodiversity loss and climate change.</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.
<p><i>Oxford has a strong track record of Public and Patient involvement regarding input into a research agenda in certain departments associated with the medical school and within the medical sciences division. Examples include the Nuffield Department of Primary Care Health Sciences and Oxford Biomedical Research Centre. However, these groups do not have any significant interaction with people disproportionately affected by climate change and unfortunately there are no current plans to change this.</i></p> <p><i>LEAP (Livestock, Environment and People) is an Oxford University-funded research group. Public engagement is an important facet of their research - link here - they hold various public engagement events throughout the year in order to promote awareness and exchange knowledge with members of the Oxford community.</i></p>	

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

3	There is an easy-to-use, adequately comprehensive website that centralizes various campus resources related to health and the environment including all of the following: upcoming events, leaders in planetary health at your institution, and relevant funding opportunities.
2	There is a website that attempts to centralize various campus resources related to health and the environment, but it is hard-to-use, not updated, or not adequately comprehensive.
1	The institution has an Office of Sustainability website that includes some resources related to health and the environment.
0	There is no website.

The office of sustainability website is comprehensive, though is lacking in specific resources related to planetary health or health and the environment. There are resources related to nutrition, and laboratory-related sustainability.

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.

Oxford Climate Society runs an eight week programme on a termly basis to 'bring together a diverse group of participants and provide them with a comprehensive education in the core issues underlying climate change, as well as the most promising solutions that have emerged across the world to address it'. They also host speakers on interdisciplinary topics related to climate change - link [here](#).

Oxford University's various departments hosted several conferences in the past year:

** The School of Climate Change held a summer school between October and December 2021, which involved participants from all over the world.*

** Oxford Global held a Sustainability in Pharma and Healthcare Conference in April 2022*

** Furthermore, the OSEM (Oxford School of Emergency Medicine Conference) in December 2021 focused on Sustainability in Emergency Medicine, and involved doctors and medical students from the University. However, the conference is not hosted by the Medical School.*

6. Is your medical school a member of a national or international planetary health or ESH organization?

1	Yes, the medical school is a member of a national or international planetary health or ESH organization
0	No, the medical school is not a member of such an organization

Neither the medical school nor the University of Oxford are members of such an organisation.

Section Total (10 out of 17)

10

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Community Outreach and Advocacy

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

1. Does your medical school partner with community organizations to promote planetary and environmental health?	
3	Yes, the medical school meaningfully partners with multiple community organizations to promote planetary and environmental health.
2	Yes, the medical school meaningfully partners with one community organization to promote planetary and environmental health.
1	The institution partners with community organizations, but the medical school is not part of that partnership.
0	No, there is no such meaningful community partnership.
<p><i>Oxford University has <u>established links</u> with community groups in Oxford, including Oxford Hub and Good Food Oxford. However, the medical school has no direct partnership with any of these groups.</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 medical school has not offered such community-facing courses or events.
<p><i>To date, the medical school has not held any community-facing courses events regarding planetary health.</i></p>	

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

2	Yes, all students regularly receive communication updates dedicated to planetary health and/or sustainable healthcare.
1	Yes, planetary health and/or sustainable healthcare topics are sometimes included in communication updates.
0	Students do not regularly receive communications about planetary health or sustainable healthcare.

Currently the medical school does not have an official communication stream dedicated to planetary health or sustainability. They are open to the possibility of changing this and initial discussions are in progress.

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

There are currently no such courses available within OUH.

5. Does your medical school or its primary affiliated hospital have accessible educational materials for patients about environmental health exposures?

2	Yes, all affiliated hospitals have accessible educational materials for patients.
1	Some affiliated hospitals have accessible educational materials for patients.
0	No affiliated medical centers have accessible educational materials for patients.

There are no such resources available for patients at the moment.

6. Does your medical school or its primary affiliated hospital 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>There are currently no educational materials available.</i>	

Section Total (1 out of 14)	1
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Support for Student-Led Planetary Health Initiatives

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

1. Does your institution offer support for medical students interested in enacting a sustainability initiative/QI project?	
2	Yes, the institution <i>either</i> offers grants for students to enact sustainability initiatives/QI projects <i>or</i> sustainability QI projects are part of the core curriculum.
1	The medical school encourages sustainability QI projects (to fulfill clerkship or longitudinal requirements) and offers resources to help students succeed in these projects, but there is no student funding available and there is no requirement to participate.
0	No, the institution does not offer opportunities or support for sustainability initiatives or QI projects.

Quality Improvement projects are a compulsory part of the primary care block in the clinical years and SusQI projects are not compulsory but supported and increasingly so. The medical school has also supported other sustainability projects such as the Green Impact Scheme, which is currently underway in the clinical skills laboratory. However, there is no funding available for these projects.

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.

Within the medical school course there are opportunities to undertake unfunded research projects related to planetary health/sustainable healthcare, for example through the student selected components at the Centre of Sustainable Healthcare, in the Final Honours Scheme (FHS) projects in 3rd year and in the sustainability Quality Improvement projects that can be undertaken in the community course in 5th year. Research is also encouraged throughout the course in students' free time

and students are well supported to connect with mentors in areas of interest if that is something they want to do and there are plenty of potential mentors in this area within Oxford university.

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.

There is no medical school specific webpage.

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.

A student group called the Oxford Healthcare and Environment Society was set up in 2019. This is a registered society with Osler House, which provides support, development, improvement and promotion of the academic and non-academic experience of clinical medical students in the University of Oxford including funding to societies that apply for it. The Oxford Healthcare and Environment Society received modest funding last year, but that was due to lack of requesting more rather than due to refusal. When approaching faculty we have also received support for our ideas thus far.

In 2021, Oxford Healthcare and Environment Society joined an international network of medical students to become Oxford Medical Students for a Sustainable Future (Oxford MS4SF).

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.

There are no such student representatives at present.

6. In the past year, has the institution had one or more co-curricular planetary health programs or initiatives in the following categories? (1 point each)

1	Projects where students are able to gain experience in organic agriculture and sustainable food systems, such as gardens, farms, community supported agriculture (CSA), fishery programs, or urban agriculture projects.
1	Panels, speaker series, or similar events related to planetary health that have students as an intended audience.
1	Events in which students learn directly from members of a local environmental justice community about the climate and environmental challenges they face, and how health professionals can partner with their community to address these exposures and impacts.
1	Cultural arts events, installations or performances related to planetary health that have students as an intended audience.
1	Local volunteer opportunities related to building community resilience to anthropogenic environmental impacts.
1	Wilderness or outdoors programs (e.g., that organize hiking, backpacking, kayaking, or other outings for students)

Projects in organic agriculture and sustainable food systems are available through the School of Geography and the Environment (SoGE), including the Environmental Change Institute (ECI).

There have been many panel and speaker events related to planetary health within the university over the past year. A recent example is a talk entitled 'Planetary Healthcare: caring for people and planet in a climate crisis', which was given as part of Meeting Minds Global, a conference for current Oxford students and alumni. Another upcoming event for students entitled 'Governing Planetary Health in an Unequal World' is planned by the Oxford Department of International Development.

No evidence was found of outreach events where students learn directly from members of local environmental justice communities.

The Oxford Research Centre in the Humanities (TORCH) launched the Art Biodiversity Climate (ABC) Network in 2021. The ABC Network within TORCH launched a Science Artist Residency programme

last summer, commissioning 8 artists to create collaborative artworks with their labs ahead of COP26. The resulting art pieces have been displayed in an online exhibition for students.

The university Environmental Sustainability team works with the Oxford Hub to support and encourage students to take part in volunteering projects with an environmental focus.

The Oxford University Expeditions Council offers funding up to £2000 for overseas expeditions to undergraduates and graduates. The University of Oxford Exploration Club provides support and advice to students interested in planning a university expedition. Individual colleges within the university also offer travel grants which can be used for wilderness or outdoor programmes.

Section Total (9 out of 15)

9

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Campus Sustainability

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

1. Does your medical school and/or institution have an Office of Sustainability?	
3	Yes, there is an Office of Sustainability with multiple full-time staff dedicated to campus sustainability. If the Office of Sustainability serves the entire campus, there is at least one designated staff member for sustainability at the hospital and/or medical school.
2	There is an Office of Sustainability with one or more full-time staff dedicated to campus sustainability, but no specific staff member in charge of medical school and/or hospital sustainability.
1	There are no salaried sustainability staff, but there is a sustainability task force or committee
0	There are no staff members or task force responsible for overseeing campus sustainability
<p><i>There is an <u>Office of Sustainability</u> for Oxford University that is very active at the institution level with initiatives and resources. However, there is no specific medical school staff member representative. There are staff members within the hospital with sustainability roles in the Oxford University Hospital trusts, but their roles are not involved in the medical school or university decision making specifically even though some hospital decisions may indirectly impact the student learning environment. Hence the score for this is a 2.</i></p>	

2. How ambitious is your medical school/institution's plan to reduce its own carbon footprint?	
4	The institution has a stated goal of carbon neutrality by 2030 or earlier and the medical school / institution has a well-defined and adequate plan in place to achieve this goal.
3	Yes, there is a stated carbon neutrality goal by at least 2040 and the medical school/institution has a well-defined and adequate plan in place to achieve this goal.
2	Yes, there is a stated carbon neutrality goal by at least 2040, but the medical school/institution has not created a plan to reach that goal or the plan is inadequate.
1	There is a CO2 emission reduction goal, but it is not one of carbon neutrality.
0	There is no stated goal for reduction of CO2 emissions.

In March 2021, the University of Oxford approved a new [Environmental Sustainability Strategy](#), aiming to achieve net zero carbon and biodiversity net gain by 2035. There is a laid out strategy to achieve this in the website and is broadly made up of 10 priority areas and 4 'enablers' (governance, funding, annual reporting and off-setting).

3. Do buildings/infrastructure used by the medical school for teaching (not including the hospital) utilize renewable energy?

3	Yes medical school buildings are 100% powered by renewable energy
2	Medical school buildings source >80% of energy needs from off-site and/or on-site renewable energy.
1	Medical school buildings source >20% of energy needs from off-site and/or on-site renewable energy.
0	Medical school buildings source <20% of energy needs from off-site and/or on-site renewable energy.

Oxford University purchases 100% renewable electricity (windpower) and is increasing on-site generation including over 2,000 solar panels, combined heat and power and ground source heat pumps – website [here](#). However, heating is provided by natural gas boilers and the Office of Sustainability states that currently the university is approximately 55% from both on and off site renewables.

4. Are sustainable building practices utilized for new and old buildings on the medical school campus, with design and construction of new buildings and remodeling of old buildings conforming to a published sustainability rating system or building code/guideline?

3	Yes, sustainable building practices are utilized for new buildings on the medical school campus and the majority of old buildings have been retrofitted to be more sustainable.
2	Sustainable building practices are utilized for new buildings on the medical school campus, but most old buildings have not been retrofitted.
1	Sustainable building practices are inadequately or incompletely implemented for new buildings.
0	Sustainability is not considered in the construction of new buildings.

Any new university buildings (since 2017) at Oxford use the Passivhaus methodology to inform projects. There is Passivhaus certification. There is also a Sustainability Design Guide document and implementation of the university Carbon Management Strategy in all builds and refurbishments. Details can be found [here](#). However, a significant number of old buildings used for medical students are not yet conforming to a published rating system or sustainable building guideline.

5. Has the medical school implemented strategies to encourage and provide environmentally-friendly transportation options for students and reduce the environmental impact of commuting?

2	Yes, the medical school has implemented strategies to encourage and provide environmentally-friendly transportation options such as safe active transport, public transport, or carpooling and these options are well-utilized by students. Alternatively, the campus location is not amenable to unsustainable forms of transportation by default.
1	The medical school has implemented some strategies to provide environmentally-friendly transportation options, but the options are unsatisfactorily accessible or advertised.
0	The medical school has not implemented strategies to encourage and provide environmentally-friendly transportation options.

At Oxford almost all students walk or cycle due to the city infrastructure. During hospital placements in different cities hospital accommodation is provided and students are only reimbursed for one journey each way to try to discourage commuting. In addition there is the Green Travel Fund which supports departments to encourage sustainable travel.

6. Does your medical school have an organics recycling program (compost) and a conventional recycling program (aluminum/paper/plastic/glass)?

2	Yes, the medical school has both compost and recycling programs accessible to students and faculty.
1	The medical school has either recycling or compost programs accessible to students and faculty, but not both.
0	There is no compost or recycling program at the medical school.

The Medical School does have a conventional recycling programme, but currently no compost recycling. The medical school generates very little organic waste since most staff use different research buildings to purchase food and drink, and although some of these do have separate organics recycling, many of the spaces don't - including Osler House the clinical school student building. Hence 1 point was awarded.

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.
<p><i>The medical school itself does not directly have food and beverage offerings. Many of the research buildings and associated cafes for Oxford University are supplied by the Compass Group, which is committed to being sustainable, and this Group does have sustainability <u>guidelines</u>. However, the medical school itself does not seem to be engaged in efforts to increase food and beverage sustainability. Osler house is the one medical school building which has got a canteen solely for medical students. Osler House was closed for much of the pandemic since 2020, however it has no sustainability guidelines. It currently provides recyclable cups for the free tea and coffee machine, but it could be argued that this is insufficient and students could easily provide their own cups for the free machine.</i></p>	

8. Does the medical school or associated institution apply sustainability criteria when making decisions about supply procurement?	
3	Yes, the medical school has adequate sustainability requirements for supply procurement and is engaged in efforts to increase sustainability of procurement.
2	There are sustainability guidelines for supply procurement, but they are insufficient or optional. The medical school is engaged in efforts to increase sustainability of procurement.
1	There are sustainability guidelines for supply procurement, but they are insufficient or optional. The medical school is not engaged in efforts to increase sustainability of procurement.
0	There are no sustainability guidelines for supply procurement.
<p><i>Oxford University has a sustainability procurement strategy that can be viewed here. In their current form they are encouraged rather than enforced and due to this they have not fulfilled the requirements for the top marks. On top of that the medical school procurement is extremely intertwined with the OUH Trust procurement, which currently has no sustainability focus in its strategy so overall a score of 1 was awarded.</i></p>	

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.

There are no sustainability guidelines in place for events at the Oxford medical school. For example, UCSF have created useful [sustainable event guidelines for UCSE](#), in case the University chooses to adopt them.

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.

In the preclinical teaching labs, the work to assist making lab spaces more environmentally sustainable is carried out by the Estates Directorate Environmental Sustainability Team. This Team has visited the building several times to find opportunities to improve the environmental efficiency of the building and teaching labs.

Recently, initiatives including the [Green Impact Scheme](#) have also been introduced in the Medical School's Clinical Skills lab, with recycling policies put in place where possible. The members of the clinical skill lab have worked extremely hard alongside students to radically change the way the skills lab functions. This has reduced waste dramatically and also encourages students to be conscious about their decisions regarding their usage of materials, disposal of packaging and recycling.

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

4	The institution is entirely divested from fossil fuels and has made a commitment to reinvest divested funds into renewable energy companies or renewable energy campus initiatives.
3	No, the institution is entirely divested from fossil fuels.
2	The institution has partially divested from fossil fuel companies 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.

Oxford University [announced](#) divestment from fossil fuels in April 2020. The university has also committed to reinvesting in businesses that conform to the Oxford Martin principles ([here](#)) to request evidence of net zero business plans across Oxford's entire portfolio of investments, but this is not at the stage yet to fulfil level 4.

We acknowledge that this divestment is at institution level and is not true of all Oxford colleges. However, to maintain consistency for the PHRC we have kept all answers at institution level especially as the medical school is not linked with all colleges. For example, funding for student initiatives are consistently available at college level, but not institution level so we have not given credit for this in earlier questions where it may have been applicable.

Section Total (17 out of 31)	17
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Grading

Section Overview

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

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

Planetary Health Grades for the Oxford Medical School

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

Section	Raw Score	Letter Grade
Planetary Health Curriculum (30%)	$(40 / 69) \times 100 = 58\%$	C+
Interdisciplinary Research (17.5%)	$(10 / 17) \times 100 = 59\%$	C+
Community Outreach and Advocacy (17.5%)	$(1 / 14) \times 100 = 7\%$	F
Support for Student-led Planetary Health Initiatives (17.5%)	$(9 / 15) \times 100 = 60\%$	B-
Campus Sustainability (17.5%)	$(17 / 31) \times 100 = 54\%$	C
Institutional Grade	49%	C

Report Card Trends

Section Overview

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

Planetary Health Report Card Trends for University of Oxford Medical School

