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# Planetary Health Report Card (Medicine): *Imperial College London*

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# IMPERIAL

## 2024-2025 Contributing Team

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Land acknowledgment: N/A

## Summary of Findings

Overall Grade	A
Curriculum	A
<ul style="list-style-type: none"> <li>Imperial's Lifestyle Medicine and Prevention (LMAP) module provides the bulk of content on planetary health in early year teaching, especially on the link between extreme heat and health risks, climate change's impact on infectious disease spread transmission, and information on health promotion and prevention.</li> <li>A fairly good range of elective modules, e.g. research projects related to sustainability during year 2's Clinical Research Innovation (CRI) placement and Student-Selected Component (SSCs) in year 3 are offered.</li> <li>Planetary health curriculum is integrated through all phases of the six-year course.</li> </ul> <p><b>Recommendations:</b></p> <ul style="list-style-type: none"> <li>A greater coverage of system-specific content e.g. risk of air pollution on respiratory health within respiratory lectures, or impact of extreme heat on cardiovascular conditions within cardiology teaching would supplement teachings delivered from a public health perspective during LMAP.</li> <li>A greater emphasis of the outsized impact of environmental degradation on certain marginalised populations and highlighting the role of indigenous knowledge in creating planetary health solutions.</li> <li>A greater focus on the beneficial impacts of a plant-based diet on <u>both</u> planetary and human health.</li> <li>A greater focus of planetary health within clinical placements e.g. how to have conversations with patients about the effect of climate change and how this may impact their condition/health, or a focus on the impact of surgical healthcare on the environment (e.g. anaesthetic gases).</li> </ul>	
Interdisciplinary Research	A+
<ul style="list-style-type: none"> <li>Imperial College London has faculty members who have a primary research focus in planetary health e.g. those working for the Grantham Institute, and there are members of the Primary Care department within the School of Medicine directly researching and developing curriculum teaching on sustainable healthcare.</li> <li>Imperial College London has a sustainability section on the main website and hosts an annual sustainability conference.</li> </ul> <p><b>Recommendations:</b></p> <ul style="list-style-type: none"> <li>Imperial could host conferences directly related to sustainable healthcare aimed at a medical audience rather than a general sustainability event.</li> <li>Imperial college London could consider joining the Planetary Health Alliance and the Global Consortium on Climate and Health Education.</li> <li>Imperial could develop a stronger process by which communities disproportionately impacted by climate change and environmental injustice give input or make decisions about the <u>research</u> agenda, though they do well in incorporating community perspectives in curriculum planning.</li> </ul>	
Community Outreach and Advocacy	A+
<ul style="list-style-type: none"> <li>Imperial College Medical School partners with an abundance of local community organisations as part of the many community collaboration projects throughout Primary Care placements and elective modules e.g. Reducing Health Inequity SSC</li> <li>Members of the Primary Care department have been conducting focus groups with local community partners to gather their input on what elements of sustainable healthcare should be focused on within new curriculum development.</li> <li>Patient experience from certain communities are incorporated into a large proportion of the content with help from the Expertfocus group.</li> </ul>	

<b>Recommendations</b> <ul style="list-style-type: none"> <li>Imperial College Medical School could consider adding a section on planetary health news/updates to the existing weekly bulletin to improve communication of regular issues related to planetary health.</li> </ul>	
<b>Support for Student-Led Initiatives</b>	<b>A</b>
<ul style="list-style-type: none"> <li>Imperial College Medical School supports student groups dedicated to planetary health including Students for Global Health who work closely with faculty members.</li> <li>QI projects during primary and secondary care placements have a marking point for considering sustainability principles and community action projects during year 1's primary care placement must explicitly link to sustainable healthcare.</li> <li>Student representation is good: The student union's council has an Ethics and Environment Officer and Student Shapers recruited by the faculty of medicine have an integral role in the development of the curriculum.</li> </ul> <b>Recommendations:</b> <ul style="list-style-type: none"> <li>Scope to increase support to students interested in sustainable initiatives e.g. creating a website that advertises opportunities or grants related to sustainability research within healthcare</li> <li>A specific role for sustainability representation within Imperial College School of Medicine Student Union would be great.</li> </ul>	
<b>Campus Sustainability</b>	<b>B+</b>
<ul style="list-style-type: none"> <li>Imperial College London has made good progress to become a more sustainable campus including beginning to divest from fossil fuels and increasing energy efficiency in buildings, as well as having fairly ambitious strategies for transport and catering.</li> <li>There are thorough initiatives in place to maintain sustainability in laboratory spaces, with scope to increase student awareness of these.</li> </ul> <b>Recommendations:</b> <ul style="list-style-type: none"> <li>Considering Imperial's reputation for its commitment to sustainability, it could have a more ambitious target for achieving carbon neutrality (currently it's 2040, which is the legal target for all universities).</li> <li>Greater transparency is needed in the university's existing relationships with fossil fuel companies; they have made a good start at divesting but more covert partnerships apparently remain.</li> <li>Recycling programmes especially for organic composting on campuses needs improving.</li> </ul>	

# Statement of Purpose

*Planetary health is human health.*

The Planetary Health Alliance describes planetary health as “a solutions-oriented, transdisciplinary field and social movement focused on analysing and addressing the impacts of human disruptions to Earth’s natural systems on human health and all life on Earth.” This definition is intentionally broad, intended to encompass the multitude of ways that the environment can affect health, including water scarcity, changing food systems, urbanisation, biodiversity shifts, natural disasters, climate change, changing land use and land cover, global pollution, and changing biogeochemical flows. The health of humanity is dependent on our environment, and our environment is changing rapidly and in disastrous ways. Although the World Health Organization has called climate change “the greatest threat to global health in the 21st century,” many medical school’s institutional priorities do not reflect the urgency of this danger to human health.

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

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

# Definitions & Other Considerations

## Definitions:

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

specifically targeted for medical students, can meet this metric.

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

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

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

**Other considerations:**

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

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

# Planetary Health Curriculum

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

## Curriculum: General

<b>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?</b>	
Yes, the medical school has offered <b>more than one</b> elective whose primary focus is ESH/planetary health in the past year. (3 points)	
Yes, the medical school has offered <b>one</b> elective whose primary focus is ESH/planetary health in the past year. (2 points)	
The medical school does <b>not</b> have any electives whose primary focus is ESH/planetary health, but there are one or more electives that include a <b>lecture</b> on planetary health. (1 points)	
No, the medical school has <b>not</b> offered any electives on planetary health or electives that include ESH/planetary health topics in the past year. (0 points)	
Score Assigned:	3
<p>Score explanation: In year 1, students have access to optional <i>Horizons</i> modules with a sustainability focus including <i>Global Challenges:Sustainable Innovation</i> and <i>Environmental Economics</i>. In year 2, it is mandatory for all students to undertake a <i>Horizons i-explore</i> module for one term - there is one option with a sustainability focus: <i>Climate Change: Science and Solutions</i>. In the final term of year 2, all students must undertake a CRI (clinical research and innovation) project; two projects have a ESH focus: <i>Effect of diesel particle exposure on senescence markers</i> and <i>Exploring sustainability in medical education</i>. In year 3, all students during their MICA (Medicine in the Community) placement must undertake a student selected choice (SSC) module: <i>Promoting Health Equity</i> and <i>Social Prescribing</i> modules touch on topics related to ESH including patient empowerment and health promotion. In year 4, students must take a mandatory iBsc course, one of which is Global Health which includes teaching on climate change and environmental health. One of the module outcomes is: <i>Outline the impact of climate change, conflict and other natural and anthropogenic processes on the health of populations across geographical and social boundaries</i></p>	

## Curriculum: Health Effects of Climate Change

<b>1.2. Does your <u>medical school</u> curriculum address the relationship between extreme heat, health risks, and climate change?</b>
This topic was explored <b>in depth</b> by the <b>core</b> curriculum. (3 points)

This topic was <b>briefly</b> covered in the <b>core</b> curriculum. (2 points)	
This topic was covered in <b>elective</b> coursework. (1 point)	
This topic was <b>not</b> covered. (0 points)	
Score Assigned:	3
<p><i>Score explanation:</i> In year 2, all students must complete a guided online learning (GOL) session under <i>Global Health and Governance</i> module within the LMAP (lifestyle medicine and prevention) domain. This session addresses extreme weather events/climate shocks and the impact this can have on food security, AMR, and geo-political implications. This content is assessed at the end of the year. If students selected the Global Health Bsc in year 4 there are lectures on the link between extreme weather and food insecurity and subsequent effect on health.</p>	

<b>1.3. Does your <u>medical school</u> curriculum address the impacts of extreme weather events on individual health and/or on healthcare systems?</b>	
This topic was explored <b>in depth</b> by the <b>core</b> curriculum. (3 points)	
This topic was <b>briefly</b> covered in the <b>core</b> curriculum. (2 points)	
This topic was covered in <b>elective</b> coursework. (1 point)	
This topic was <b>not</b> covered. (0 points)	
Score Assigned:	3
<p>Score explanation: In year 2, all students must complete a guided online learning (GOL) session under <i>Global Health and Governance</i> module within the LMAP (lifestyle medicine and prevention) domain. This session addresses extreme weather events/climate shocks and the impact this can have on food security, AMR, and geo-political implications. This content is assessed at the end of the year. If students selected the Global Health Bsc in year 4 there are lectures on the link between extreme weather events on the provision of healthcare in a range of global settings.</p>	

<b>1.4. Does your <u>medical school</u> curriculum address the impact of climate change on the changing patterns of infectious diseases?</b>	
This topic was explored <b>in depth</b> by the <b>core</b> curriculum. (3 points)	
This topic was <b>briefly</b> covered in the <b>core</b> curriculum. (2 points)	
This topic was covered in <b>elective</b> coursework. (1 point)	
This topic was <b>not</b> covered. (0 points)	
Score Assigned:	3

*Score explanation:* In year 2, all students must complete a guided online learning (GOL) session under *Global Health and Governance* module within LMAP that addresses extreme weather events/climate shocks and the impact this can have on antimicrobial resistance and the spread of infectious disease. If students selected the Global Health Bsc in year 4 there is a lecture titled '*Climate change and Infectious Diseases*'

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

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

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

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

This topic was **not** covered.

Score Assigned:

3

*Score explanation:* In year 1, all students must complete a two-hour long GOL session followed by a 90-minute in-person tutorial that focuses on climate change and sustainable health delivered as a joint PVB (professional values and behaviours) and LMAP session. The sessions are called Sustainability in Healthcare Improvement Part 1 and Part 2. In the session the health impacts of climate change are explored, including respiratory health. We also explore, using a case study of a child with asthma living in a built-up area, the role of the wider determinants of health on asthma, where we discuss the impact of air pollution, green and blue spaces. If students choose to undertake the Global Health iBsc in year 4, there are lectures that cover the effect of air pollution on health.

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

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

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

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

This topic was **not** covered.

Score Assigned:

2

*Score explanation:* In year 1, all students must complete a two-hour long GOL session followed by a 90-minute in-person tutorial that focuses on climate change and sustainable health delivered as a joint PVB (professional values and behaviours) and LMAP (lifestyle medicine and prevention) session. The sessions are called Sustainability in Healthcare Improvement Part 1 and Part 2. In the session the health impacts of climate change are explored, including cardiovascular health.

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

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

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

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

This topic was **not** covered.

Score Assigned:

1

*Score explanation:* If students decide to take the Global Health iBSc course in year 4, the effect of climate change on populations and the subsequent creation of 'climate refugees' is mentioned throughout the course, and emphasised when these situations often overlap with conflict - this is included in the Healthcare in Conflict module.

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

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

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

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

This topic was **not** covered.

Score Assigned:

3

*Score explanation:* In year 2, all students must complete a guided online learning (GOL) session under *Global Health and Governance* module within LMAP (lifestyle medicine and prevention). This session addresses extreme weather events/climate shocks and the impact this can have on food security, AMR. The connections between human health, animal health, plant health and environmental sustainability is covered in this session. If students selected the Global Health Bsc in year 4 there are lectures on the link between extreme weather events and climate change on food and water insecurity in a range of global settings all found within *Climate Change and Environmental Health* module.

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

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

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

This topic was covered in <b>elective</b> coursework.	
This topic was <b>not</b> covered.	
Score Assigned:	3
<p><i>Score explanation:</i> In year 2 all students must complete a guided online learning (GOL) session under <i>Global Health and Governance</i> module within LMAP that addresses the unequal effects of climate change globally and emphasises that those that contribute the least to climate change will likely feel its worst effects. It highlights the fact that the effects of climate change often exacerbate existing health inequalities. In year 3 MICA (medicine in the community) students must undertake a community action project (CAP). This is designed to enable students to work with community organisations, including those working with diverse population groups e.g. BAME, people experiencing homelessness and older adults to address health inequalities, including those which are widened due to climate change. [Elective] Students who undertake the Global Health iBSc in year 4 have a two-part lecture on Indigenous Health: learning objectives including to: appreciate the social determinants that influence health of Indigenous health and Analyse the impact of colonial practices on Indigenous health and identify social, cultural, political, environmental, spiritual, organizational, and economic factors that influence health and well-being of Indigenous people.</p>	

1.10. Does your <u>medical school</u> curriculum address the unequal regional health impacts of climate change globally?	
This topic was explored <b>in depth</b> by the <b>core</b> curriculum.	
This topic was <b>briefly</b> covered in the <b>core</b> curriculum.	
This topic was covered in <b>elective</b> coursework.	
This topic was <b>not</b> covered.	
Score Assigned:	3
<p><i>Score explanation:</i> In year 2, all students must complete a guided online learning (GOL) session under <i>Global Health and Governance</i> module within LMAP that addresses the unequal effects of climate change globally and emphasises that those that contribute the least to climate change will likely feel its worst effects. A substantial portion of the lecture is on the UN's Sustainable Development Goals (SDGs) and highlights that the effects of climate change exacerbate existing health inequalities. In Year 4, students who undertake the Global Health iBSc touch on the unequal regional effects of climate change globally throughout the Climate Change and Environmental Health module, especially when this unequal effect overlaps with areas subject to conflict and/or high infectious disease burden (Climate Change and Infectious Disease lecture).</p>	

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

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

This topic was <b>briefly</b> covered in the <b>core</b> curriculum.	
This topic was covered in <b>elective</b> coursework.	
This topic was <b>not</b> covered.	
Score Assigned:	1
<i>Score explanation:</i> In Year 4, students who undertake the Global Health iBSc in year 4 have a lecture on the health effects of air pollution which touches on the reproductive effects of particulate matter.	

<b>1.12. Does your <u>medical school</u> curriculum address important human-caused environmental threats that are relevant to the university's surrounding community?</b>	
This topic was explored <b>in depth</b> by the <b>core</b> curriculum.	
This topic was <b>briefly</b> covered in the <b>core</b> curriculum.	
This topic was covered in <b>elective</b> coursework.	
This topic was <b>not</b> covered.	
Score Assigned:	3
<i>Score explanation:</i> In year 1, students must undertake a Community Action Project (CAP) during their primary care placement, which must explicitly link to sustainability: this may involve assessing the effect of environmental threats on the local community surrounding the university. All students must complete a two-hour long GOL session followed by a 90-minute in-person tutorial that focuses on climate change and sustainable health delivered as a joint PVB (professional values and behaviours) and LMAP session. The sessions are called Sustainability in Healthcare Improvement Part 1 and Part 2. In the session the health impacts of climate change are explored, including respiratory health. We also explore, using a case study of a child with asthma living in a built-up area, the role of the wider determinants of health on asthma, where we discuss the impact of air pollution, green and blue spaces. As Imperial College is in London, these examples and case studies refer directly to the environmental threats relevant to the university's surrounding community. In year 3 MICA (medicine in the community) students must undertake a community action project (CAP). This is designed to enable students to work with community organisations, including those working with diverse population groups e.g BAME, people experiencing homelessness and older adults to address health inequalities, including those which are widened due to climate change. If students decide to undertake the Global Health iBSc, there is a lecture on Air Pollution that covers the effects of air pollution on health and uses London as a case study.	

<b>1.13. To what extent does your <u>medical school</u> emphasise the importance of Indigenous knowledge and value systems as essential components of planetary health solutions?</b>	
This topic was explored <b>in depth</b> by the <b>core</b> curriculum.	

This topic was <b>briefly</b> covered in the <b>core</b> curriculum.	
This topic was covered in <b>elective</b> coursework.	
This topic was <b>not</b> covered.	
Score Assigned:	1
<p><i>Score explanation:</i> Students who undertake the Global Health iBSc in year 4 have a two-part lecture on Indigenous Health - with the following learning objectives: Appreciate the social determinants that influence health of Indigenous health; be able to explore racism and stereotypes in context of Indigenous people; demonstrate a clear understanding of Indigenous Health in the historical and contemporary contexts; analyse the impact of colonial practices on Indigenous health and identify social, cultural, political, environmental, spiritual, organizational, and economic factors that influence health and well-being of Indigenous people. This lecture emphasises the importance of involving indigenous knowledge and value systems in creating innovative solutions to climate change.</p>	

<b>1.14. Does your <u>medical school</u> curriculum address the outsized impact of anthropogenic environmental toxins on marginalised populations such as those with low SES, women, communities of colour, children, homeless populations, Indigenous populations, and older adults?</b>	
This topic was explored <b>in depth</b> by the <b>core</b> curriculum.	
This topic was <b>briefly</b> covered in the <b>core</b> curriculum.	
This topic was covered in <b>elective</b> coursework.	
This topic was <b>not</b> covered.	
Score Assigned:	3
<p><i>Score explanation:</i> In year 2 all students must complete a guided online learning (GOL) session under <i>Global Health and Governance</i> module within LMAP that addresses the unequal effects of climate change globally and emphasises that those that contribute the least to climate change will likely feel its worst effects. It highlights the fact that the effects of climate change often exacerbate existing health inequalities, including the disproportionate effects of environmental toxins e.g. air pollution. In year 3 MICA (medicine in the community) students must undertake a community action project (CAP). This is designed to enable students to work with community organisations, including those working with diverse population groups e.g. BAME, people experiencing homelessness and older adults to address health inequalities, including those which are widened due to climate change. [Elective] Students who undertake the Global Health iBSc in year 4 have a two-part lecture on Indigenous Health: learning objectives including to: appreciate the social determinants that influence health of Indigenous health and Analyse the impact of colonial practices on Indigenous health and identify social, cultural, political, environmental, spiritual, organizational, and economic factors that influence health and well-being of Indigenous people. There is also a Global Health lecture on Globalisation and the impact of international corporations on health, with a case study of Monsanto pesticide spray affecting the low income local area of Ituzaingó Anexo in Argentina. Additionally, a lecture on the health effects of air pollution touch on</p>	

the fact they may have a disproportionate impact on women as they can lead to reproductive impacts.

*Curriculum: Sustainability*

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

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

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

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

This topic was **not** covered.

Score Assigned:

2

*Score explanation:* In LMAP in year 1, students learn about the optimal diet for human health which is predominantly made up of plant-based foods. Students who undertake the Global Health iBSc in Year 4 have a session on the Double Burden of Malnutrition which touches upon the impact of animal agriculture on the planet as well as on human health. The Grantham institute has created a video and web page on *9 things you can do for your health and the planet*, one of which is to move towards a plant-based diet.

**1.16. Does your medical school curriculum address the carbon footprint of healthcare systems?**

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

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

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

This topic was **not** covered.

Score Assigned:

3

*Score explanation:* In year 1, all students must complete a two-hour long GOL session followed by a 90-minute in-person tutorial that focuses on climate change and sustainable health delivered as a joint PVB (professional values and behaviours) and LMAP (lifestyle medicine and prevention) session. This touches on quality improvement and looks at the carbon footprint of healthcare systems. In year 3, all students must complete the Guided Online Learning session on Managing Resources which looks at the carbon footprint of testing, treatment and accessing healthcare. The Community Action Project (CAP) in year 3 MICA as well as Quality Improvement Project (QIP) completed during surgical rotations may address measures to reduce the carbon footprint of the healthcare institution.

1.17. Does your <u>medical school</u> curriculum cover these components of sustainable clinical practice in the <u>core</u> curriculum? (points for each)	Score
The health <b>and</b> environmental <b>co-benefits</b> of <b>avoiding</b> over-medicalisation, over-investigation and/or over-treatment (2 points)	2
The environmental impact of <b>pharmaceuticals</b> and over-prescribing as a cause of climate health harm. Alternatively teaching on <b>deprescribing</b> where possible and its environmental and health co-benefits would fulfil this metric. (2 points) .	2
The health <b>and</b> environmental <b>co-benefits</b> of <b>non-pharmaceutical management</b> of conditions where appropriate such as exercise or yoga classes for type 2 diabetes; social group activities such as gardening for mental health conditions; active transport such as bicycle schemes. This is commonly known as social prescribing in the UK. (1 point)	1
Environmental impact of <b>surgical</b> healthcare on planetary health and the climate crisis, and how can it be mitigated. (1 point)	0
The impact of <b>anaesthetic</b> gases on the healthcare carbon footprint and ways to reduce anaesthesia's environmental impacts, such as total intravenous anaesthesia or choosing less environmentally harmful anaesthetic gas options with reduced greenhouse gas emissions. (1 point)	0
The impact of <b>inhalers</b> on the healthcare carbon footprint and the environmental benefit of dry powdered inhalers over metered dose inhalers. (1 point)	1
<b>Waste production</b> within healthcare <b>clinics</b> and strategies for reducing waste in clinical activities (e.g. single use items in the inpatient or outpatient setting) (1 point)	1
<p><i>Score explanation:</i> In year 3, all students must complete the Guided Online Learning session on Managing Resources which looks at the carbon footprint of testing, treatment and accessing healthcare. In years 1 and 3 students in their primary care placements must undertake a community action project (CAP). This is designed to enable students to work with community organisations, many of whom contribute to the social prescribing infrastructure of the NHS. Students are encouraged to communicate with their general practice's social prescriber or link worker to learn more about these non-pharmaceutical management options. A lecture delivered to year 3 students on the environmental impacts of inhalers discusses the environmental benefit of prescribing dry powdered inhalers over metered dose inhalers.</p>	

### *Curriculum: Clinical Applications*

1.18. In training for patient encounters, does your <u>medical school's</u> curriculum introduce strategies to have conversations with patients about the health effects of climate change?
Yes, there are strategies introduced for having conversations with patients about climate change in the <b>core</b> curriculum. (2 points)
Yes, there are strategies introduced for having conversations with patients about climate change in <b>elective</b> coursework. (1 points)
No, there are <b>not</b> strategies introduced for having conversations with patients about climate change. (0 points)

Score Assigned:	2
<p><i>Score explanation:</i> During the Year 3 primary care placement, there is an online GOL (guided online learning) module on Sustainability in which there is teaching on strategies to have conversations with patients about the health effects of climate change. In the context of air pollution and examples of air pollution in clinical practice a real life case is discussed: a patient's mother who shared that had she been made aware of the dangers of air pollution, she would have taken measures to protect her child. The GOL acknowledges that discussing the health effects of climate change with patients can be challenging and signposts to an <a href="#">article</a> which discusses barriers to these conversations and has strategies, resources and simulated conversation videos to help with person-centred, climate conversations. In addition, in the context of climate change, it's discussed how it is important for healthcare professionals to understand these associations, advocate for change and have conversations with patients about the health effects of climate change. This is further explored in this <a href="#">article</a> which is included in the lesson's additional resources section. Plans are in place to include a role play and activities for patient conversations about health effects of climate change in the Sustainability student-selected component module in Year 3 MICA from Term 3 onwards. In year 6, there is a The Quality Healthcare GOL which integrates with the other Professional Values and Behaviour domains to explore quality improvement, patient safety, team working, and the effects of various factors and environments on health behaviours and outcomes. There is a subsection on Sustainability which covers Climate Change and its effects on human health, delivering sustainable healthcare and communicating with patients on planetary health and sustainability.</p>	

<b>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?</b>	
Yes, the <b>core</b> curriculum includes strategies for taking an environmental history. (2 points)	
Only <b>elective</b> coursework includes strategies for taking an environmental history. (1 point)	
No, the curriculum does <b>not</b> include strategies for taking an environmental history. (0 points)	
Score Assigned:	2
<p><i>Score explanation:</i> History taking sessions across the six year course in the Communication Skills module emphasise the importance of asking for exposure to any environmental toxins and this is emphasised in respiratory teaching concerning exposure to toxins like asbestos.</p>	

***Curriculum: Administrative Support for Planetary Health***

<b>1.20. Is your <u>medical school</u> currently in the process of implementing or improving Education for Sustainable Healthcare (ESH)/planetary health education?</b>	
Yes, the medical school is currently in the process of making <b>major</b> improvements to ESH/planetary health education. (4 points)	
Yes, the medical school is currently in the process of making <b>minor</b> improvements to ESH/planetary health education. (2 points)	

No, there are <b>no</b> improvements to planetary health education in progress. (0 points)	
Score Assigned:	4
<p><i>Score explanation:</i> Imperial College Primary Care Department led a ‘Student Shaper’ programme with two students in academic year 2023/24 in which students evaluated the current ESH teaching and identified areas for improvement. These improvements have been acted upon for the current year and continue to be reviewed. The primary care department at Imperial co-led a Think-tank event called <i>Reimagining Undergraduate Primary Care Education</i> with the University of Manchester which brought together students, faculty members and members of community-based organisations to help improve the curriculum. Ideas discussed included adapting the curriculum so doctors are better suited to help marginalised groups and to be able to practice sustainably with the planet in mind.</p>	

<b>1.21. How well are the aforementioned planetary health/Education for Sustainable Healthcare topics integrated longitudinally into the <u>core</u> curriculum?</b>	
Planetary health/ESH topics are <b>well integrated</b> into the core medical school curriculum. (6 points)	
<b>Some</b> planetary health/ESH topics are appropriately integrated into the core medical student curriculum. (4 points)	
Planetary health/ESH is not integrated and is primarily addressed in <b>(a) standalone lecture(s)</b> . (2 points)	
There is <b>minimal/no</b> education for sustainable healthcare. (0 points)	
Score Assigned:	6
<p><i>Score explanation:</i> ESH is introduced in year 1 with a 2-part session on Sustainable Healthcare focusing on quality improvement and the CAP in primary care placement which must link to sustainability. The LMAP course across both year 1 and 2 focuses on climate change and the effect on human health, spread of infectious disease and influence on antimicrobial resistance as well as recommendations for a healthy diet both for human and planetary health. In year 3, the Managing Resources session touches upon the impacts of overprescribing and waste production in healthcare. Community Action Projects throughout the 6 year course focus on continuous engagement with the local community and relation to sustainability is on the mark scheme within these in-placement projects e.g. CQIPs and CAP projects. Students undertaking Global Health iBSc in year 4 learn about the link between planetary health and human health on a population scale, and have the chance to conduct a planetary health based research project. Those undertaking other BSc pathways e.g. Infection and Immunity may have to use laboratory spaces and would have to follow sustainable lab practice guidelines. In year 6, students must complete The Quality Healthcare GOL which integrates with the other Professional Values and Behaviour domains to explore quality improvement, patient safety, team working, and the effects of various factors and environments on health behaviours and outcomes. There is a subsection on Sustainability which covers Climate Change and its effects on human health, delivering sustainable healthcare and communicating with patients on planetary health and sustainability.</p>	

**1.22. Does your medical school employ a member of faculty to specifically oversee and take responsibility for the incorporation of planetary health and sustainable healthcare as a theme throughout the course?**

**Yes, the medical school has a specific faculty/staff member responsible for overseeing curricular integration of planetary health and sustainable healthcare. (1 point)**

**No, the medical school does **not** have a specific faculty/staff member responsible for overseeing curricular integration of planetary health and sustainable healthcare. (0 points)**

Score Assigned:

1

*Score explanation:* Imperial is part of the national Medical Schools Council forum on Sustainable Healthcare in Education and two members of faculty staff are the Imperial representatives and oversee the curricular integration of planetary health.

**Section Total (62 out of 72)**

**86%**

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# Interdisciplinary Research

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

<b>2.1. Are there researchers engaged in planetary health research and healthcare sustainability research at your <u>institution</u>?</b>	
Yes, there are faculty members at the <b>institution</b> who have a <b>primary</b> research focus in planetary health <b>or</b> sustainable healthcare/vetcare. (3 points)	
Yes, there are individual faculty members at the <b>institution</b> who are conducting research <b>related</b> to planetary health or healthcare sustainability, OR are part of a national/international sustainability working group, but it is not their primary research focus. (2 points)	
There are sustainability researchers at the <b>institution</b> , but not specifically associated with healthcare/vetcare. (1 point)	
No, there are <b>no</b> planetary health and/or sustainability researchers at the <b>institution</b> at this time. (0 points)	
Score Assigned:	3
<i>Score explanation:</i> Imperial has the Grantham Institute of Climate Change research department which is established as a leading authority on climate and environmental science. Staff within the medical school's primary care department are conducting research on sustainable healthcare by conducting focus groups and interviews with local community members to guide curriculum development as well as create a GREEN toolkit for GPs to use.	

<b>2.2. Is there a dedicated department or institute for interdisciplinary planetary health research at your <u>institution</u>?</b>	
There is <b>at least one</b> dedicated department or institute for interdisciplinary planetary health research. (3 points)	
There is <b>not currently</b> a department or institute for interdisciplinary planetary health research, but there are <b>plans</b> to open one in the next 3 years. (2 points)	
There is an <b>Occupational and Environmental Health department</b> , but no interdisciplinary department or institute for planetary health research. (1 points)	
There is <b>no</b> dedicated department or institute. (0 points)	

Score Assigned:	3
<p><i>Score explanation:</i> Imperial has the Grantham Institute of Climate Change research department which is established as a leading authority on climate and environmental science. This brings researchers from a range of disciplines including public health, engineering and earth sciences. There is also the School of Public Health which houses students from Global/Public Health degree courses as well as staff from a range of environmental health research groups e.g. those looking at London air pollution levels or microplastic exposure.</p>	

<p><b>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 <u>institution</u>?</b></p>	
<p>Yes, there is a process in which community members impacted by climate and environmental injustice have <b>decision-making power</b> in the climate + environmental research agenda. (3 points)</p>	
<p>Yes, there is a process in which community members impacted by climate and environmental injustice <b>advise</b> the climate + environmental research agenda. (2 points)</p>	
<p><b>No</b>, but there are <b>current efforts</b> to establish a process for community members to advise or make decisions on the research agenda. (1 points)</p>	
<p>There is <b>no</b> process, and <b>no</b> efforts to create such a process. (0 points)</p>	
Score Assigned:	3
<p><i>Score explanation:</i> Within the School of Public Health, there is a patient experience research centre which aims to communicate with local community organisations and their community groups to hear their perspective to inform our research agenda MEdIC (Medical Education Innovation and Research Centre) are leading a study on sustainable healthcare education, and has conducted focus groups with community members to explore their priorities for what should be covered in the curriculum: perspectives from three demographically different UK communities were examined using a novel card-sort approach. Community members were asked to sort learning outcomes from the Medical School Council's Sustainable Healthcare Curriculum into levels of importance, describing their decision making and reaching consensus on their top priorities. These priorities, and rationale for the decisions were then shared with General Practitioners who teach medical students, to seek their perspectives on the opportunities and challenges of integrating these into Primary Care education. The aim of the study is to produce a practical, socially accountable toolkit that can support educators to embed sustainability into medical education curricula.</p>	

<p><b>2.4. Does your <u>institution</u> have a planetary health website that centralises ongoing and past research related to health and the environment?</b></p>	
<p>There is an <b>easy-to-use, adequately comprehensive</b> website that <b>centralises</b> various campus resources related to health and the environment including all of the following: upcoming events, leaders in planetary health at your institution, and relevant funding opportunities. (3 points)</p>	

There is a website that <b>attempts to centralise</b> various campus resources related to health and the environment, but it is hard-to-use, not updated, or not adequately comprehensive. (2 points)	
The <b>institution</b> has an <b>Office of Sustainability website</b> that includes <b>some</b> resources related to health and the environment. (1 point)	
There is <b>no</b> website. (0 points)	
Score Assigned:	3
<i>Score explanation:</i> Imperial College's main website has a sustainability section which centralises information on sustainability news and information across campuses, within education, research and transparency on partnerships. There is a section of the website for the Grantham Institute which includes research vacancies and information on sustainable practices. There is a video co-created with the Imperial College NHS Trust which covers <i>9 things you can do for your health and planet</i> .	

<b>2.5. Has your <u>institution</u> recently hosted a conference or symposium on topics related to planetary health?</b>	
Yes, the <b>institution</b> has hosted at least one conference or symposium on topics related to planetary health in the past year. (4 points)	
Yes, the <b>institution</b> has hosted at least one conference or symposium on topics related to sustainable healthcare/vetcare in the past year. (3 points)	
Yes, the <b>institution</b> has hosted a conference on topics related to planetary health / sustainable healthcare/vetcare in the past three years. (2 points)	
The <b>institution</b> has not hosted any conferences directly, but they have provided financial support for a local planetary health event. (1 point)	
No, the <b>institution</b> has not hosted a conference on topics related to planetary health in the past three years. (0 points)	
Score Assigned:	4
<i>Score explanation:</i> Imperial College hosts an London Student Sustainability Conference (LSSC) which brings together six London universities: King's, Imperial, UCL, LSE, Westminster and City showcasing student projects with a sustainability focus. Imperial also hosts an annual sustainability fortnight which runs over the last two weeks of February. There are a range of fairs, talks, workshops and panel events on topics related to planetary health. Additionally, Students for Global Health run an annual conference that touches upon the disproportionate impacts of climate change on certain groups.	

<b>2.6. Is your <u>institution</u> a member of a national or international planetary health or ESH/ESV organisation?</b>
--

Yes, the institution is a member of a national or international planetary health <b>or</b> ESH/ESV organisation. (1 points)	
No, the institution is <b>not</b> a member of such an organisation. (0 points)	
Score Assigned:	1
<i>Score explanation:</i> Imperial is part of the national Medical Schools Council forum on Sustainable Healthcare in Education and two members of faculty actively contribute to this forum as Imperial representatives. Imperial is also part of the UK universities climate network: <a href="https://uucn.ac.uk/">https://uucn.ac.uk/</a>	
Section Total (17 out of 17)	
100%	

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# Community Outreach and Advocacy

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

## 3.1. Does your **institution** partner with community organisations to promote planetary and health?

Yes, the **institution** meaningfully partners with **multiple** community organisations to promote planetary and environmental health. (3 points)

Yes, the **institution** meaningfully partners with **one** community organisation to promote planetary and environmental health. (2 points)

The **institution** does not partner with community organisations, but has participating in community focused events relating to planetary health. (1 point)

No, there is **no** such meaningful community partnership. (0 points)

Score Assigned:

3

*Score explanation:* In year 1, students undertake a community survey project in their primary care placement which explores patients' perspectives on health by connecting with local community based organisations. In year 2, students undertake a community collaboration project which is focused on a local community based organisations to improve access to healthcare for certain communities. This can improve healthcare in multiple ways aligned with the sustainable healthcare principles [patient empowerment, health promotion, streamline of services of sustainable healthcare]. Imperial medical school hosts a Community Collaboration Day which looks at the role of communities and community organisations in supporting local health. In year 3, students may pick a student-selected component, one of which is *Promoting Health Equity* where students can partner with community based organisations. In their primary care placement they must also complete a Community Action Project - some projects engage the community through gardening programmes or some focus on the reduction of resource wastes/overprescribing. Imperial co-creates a lot of its curriculum material with community groups e.g. through Expertfocus -> one example is speaking to those experiencing homelessness to hear how best to streamline services for groups e.g. homeless population to ensure efficiency and accessibility

## 3.2. Does your **institution** offer community-facing courses or events regarding planetary health?

The **institution** offers community-facing courses or events at least once every year. (3 points)

The **institution** offers courses or events open to the community at least once per year, but they are not primarily created for a community audience. (2 points)

The **institution** has promoted community-facing courses or events, but was not involved in planning those courses or events. (1 point)

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

Score Assigned:

3

*Score explanation:* Imperial College has previously hosted “Imperial Lates” talks, which provided information on the planetary health topic “Food for thought” (including the impact of plant-based diets upon the planet), and “Back to nature”. Past lectures are still available to view online. The annual Great Exhibition Road festival holds exhibitions with a focus on planetary health e.g. stalls on healthy eating education and encouraging health promotion and bringing community together. Students can volunteer to help out at these stalls. Ongoing research to develop a sustainable healthcare toolkit works with community organisations to identify community priorities to shape the curriculum. Some CAP projects during students’ year 3 primary care placements may hold community facing educational projects e.g. sessions with patients encouraging vaccine uptake, information provision e.g. leaflets, videos for waiting rooms, educational events in community centres - these have a sustainable healthcare focus e.g. through health promotion or streamlining of services.

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

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

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

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

Score Assigned:

2

*Score explanation:* Imperial College’s Grantham Institute sends weekly bulletins covering recent updates on their planetary health research, vacancies for education and training opportunities and event adverts.

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

Yes, the <b>institution</b> or <b>main affiliated hospital trust</b> offers multiple in-person or online courses relating to planetary health and/or sustainable healthcare for post-graduate providers, including at least one with a primary focus of planetary health. (2 points)	
Yes, the <b>institution</b> or <b>main affiliated hospital trust</b> offers one course relating to planetary health and/or sustainable healthcare for post-graduate provider. (1 point)	
There are <b>no</b> such accessible courses for post-graduate providers. (0 points)	
Score Assigned:	2
<p><i>Score explanation:</i> The college offers education for GP tutors / CPD for faculty including wider community GP faculty. There are also workshops on sustainable healthcare within the annual Teacher's Conference : <i>for people and planet</i> theme. There is a video and blog post created by 'student shapers' detailing tips for GP tutors on how to support students with learning about planetary health/sustainable healthcare. This was circulated via newsletter and exists on the webpage. There is accredited health coaching training for GP tutors, which aligns with supporting patient empowerment pillar of sustainable healthcare. There is also a Health coaching conversations MOOC on promoting personalised health promotion which is designed for a postgraduate audience, available globally and tutors are sign posted to this. There is CAP facilitation training for faculty (post-graduate trainees i.e. FY1/2s), with education around sustainable healthcare pillars and the triple bottom line.</p>	

<b>3.5. Does your <u>institution</u> or its <u>affiliated teaching hospitals</u> have accessible educational materials for patients about environmental health exposures?</b>	
Yes, the <b>medical school</b> or <b><u>all</u> affiliated hospitals</b> have accessible educational materials for patients. (2 points)	
<b>Some</b> affiliated hospitals have accessible educational materials for patients. (1 point)	
<b>No</b> affiliated medical centres have accessible educational materials for patients. (0 points)	
Score Assigned:	2
<p><i>Score explanation:</i> In the Sustainability Guided Online Learning - which is part of the core curriculum in MICA for year 3 students - there are links embedded to accessible educational materials for patients about environmental health exposures and the health impacts of climate change. Links include one from The UK Health Security Agency on <a href="#">Understanding the Health Effects of Climate Change</a> , another signposting to the <a href="#">Centre for Sustainable Healthcare</a> website, and a link from the <a href="#">NHS showcasing their net zero plan</a>, some of which cover air pollution and particulates. Additionally, in MICA Year 3 as part of the core curriculum in the consolidation weeks, there are cases involving asthma and COPD. During the teaching materials for this there are links and references to accessible educational materials for patients which include: a patient-facing <a href="#">resource</a> by The Chartered Society of Physiotherapy which refers to the impact of air pollution on chronic obstructive pulmonary disease (COPD), and another patient-facing resource on <a href="#">Green Inhaler Blog</a> that refers to the climate crisis being a health crisis and the impact of climate change on health. Imperial College NHS Trust co-produced a public facing set of educational materials with the College's Grantham Institute on <a href="#">9 practical things you can do for your health and the planet</a>.</p>	

Imperial College NHS trust have a clean air collaboration across Trust, College and Hammersmith and Fulham Council.

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

Yes, the **medical school** or **all affiliated hospitals** have accessible educational materials for patients. (2 points)

**Some** affiliated hospitals have accessible educational materials for patients. (1 point)

**No** affiliated hospitals have accessible educational materials for patients. (0 points)

Score Assigned:

2

*Score explanation:* In the Sustainability Guided Online Learning - which is part of the core curriculum in MICA with allocated time for its completion there are links embedded to accessible educational materials for patients about environmental health exposures and the health impacts of climate change. Links include one from The UK Health Security Agency on [Understanding the Health Effects of Climate Change](#), another signposting to the [Centre for Sustainable Healthcare](#) website, and a link from the [NHS showcasing their net zero plan](#). Imperial College NHS Trust co-produced a public facing set of educational materials with the College's Grantham Institute on [9 things you can do for your health and the planet](#). Imperial College NHS trust have a clean air collaboration across Trust, College and Hammersmith and Fulham Council.

**Section Total (14 out of 14)**

**100%**

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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.

<b>4.1. Does your <u>institution</u> offer support for students interested in enacting a sustainability initiative/QI project?</b>	
Yes, the <b>institution</b> <i>either</i> offers grants for students to enact sustainability initiatives/QI projects <i>or</i> sustainability QI projects are part of the core curriculum. (2 points)	
The <b>institution</b> encourages sustainability QI projects (to fulfil clerkship or longitudinal requirements) and offers resources to help students succeed in these projects, <b>but</b> there is no student funding available and there is no requirement to participate. (1 point)	
No, <b>neither</b> the medical school or the institution offer opportunities or support for sustainability initiatives or QI projects. (0 points)	
Score Assigned:	2
<i>Score explanation:</i> All community action projects (CAPs) conducted by first year students in their primary care placements need to link to sustainable healthcare. Students must explicitly describe how this links. Wording has been improved to extend beyond sustainability in terms of longevity of their projects - projects must state how they link to environmental, financial, social sustainability.	

<b>4.2. Does your <u>institution</u> offer opportunities for students to do research related to planetary health and/or sustainable healthcare/vetcare?</b>	
The <b>institution</b> has a <b>specific</b> research program or fellowship for students interested in doing planetary health/sustainable healthcare/vetcare research. (2 points)	
There are research opportunities for students to perform research related to planetary health/sustainable healthcare, but these <b>require student initiative</b> to seek these out and carry them out in their spare time. (1 point)	
There are <b>no opportunities</b> for students to engage in planetary health/sustainable healthcare research. (0 points)	
Score Assigned:	2
<i>Score explanation:</i> Students are free to choose the Global Health iBSc in year 4 which offers research projects on planetary health and/or sustainable healthcare in their final module. The Grantham Institute regularly offers vacancies for research roles for both students and graduates which are advertised on their website and newsletter.	

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

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

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

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

Score Assigned:

2

*Score explanation:* Imperial College's main website has a [sustainability section](#). This doesn't touch upon sustainable healthcare specifically but does cover planetary health topics and sustainability initiatives happening across their campuses, developments in the course curricula and news on research. The Grantham Institutes video (co-produced with Imperial College Healthcare Trust) showing [9 things you can do for your health and the planet](#) which has been advertised across Imperial College School of Medicine's bulletins with an acronym to help communicate the information to students. There are resources available to all students on their curriculum pages on sustainable QI projects.

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

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

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

No, there is **not** a student organisation at my institution dedicated to planetary health or sustainability in healthcare. (0 points)

Score Assigned:

2

*Score explanation:* Imperial Climate Action is supported by faculty staff within the Grantham Institute, and Students for Global Health society is supported by ICSM faculty. There is also a primary care and public health society.

<b>4.5. Is there a student liaison representing sustainability interests who serves on a <u>department or institutional</u> decision-making council to advocate for curriculum reform and/or sustainability best practices?</b>	
Yes, there is a student representative that serves on a department or institutional decision-making council/committee. (1 points)	
No, there is no such student representative. (0 points)	
Score Assigned:	1
<i>Score explanation:</i> Institution wide, there is an elected Ethics and Environment Officer who sits on Union council within the student union. There are also student shapers who work with the primary care department. One project last year looked at <a href="#">improving the sustainability education provision within the core medicine curriculum</a> .	

<b>4.6. In the past year, has the <u>institution</u> had one or more co-curricular planetary health programs or initiatives in the following categories? (1 point each)</b>	<b>Score</b>
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.	0
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.	0
Wilderness or outdoors programs (e.g., that organise hiking, backpacking, kayaking, or other outings for students)	1
<i>Score explanation:</i> In year 3, students can undertake a student-selected component (SSC) in sustainable healthcare - where students can learn directly from community organisations, including in relation to environmental challenges and how health professionals can work with communities to address these. In the social prescribing SSC as well as community partnerships in the Global Health BSc, students have the opportunity to visit allotments/community gardens. There have been sustainability exhibitions hosted in the Natural History museum, next door to Imperial's South Kensington Campus in the past. There are many societies at Imperial including the watersports and outdoors society, which offer trips to medical students.	
<b>Section Total (13 out of 15)</b>	<b>87%</b>

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# Campus Sustainability

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

5.1. Does your <u>institution</u> have an Office of Sustainability?	
Yes, there is an Office of Sustainability with multiple full-time staff dedicated to campus sustainability. If the Office of Sustainability serves the entire campus, there is <b>at least one designated staff member</b> for sustainability at the hospital. (3 points)	
There is an Office of Sustainability with one or more full-time staff dedicated to campus sustainability, but <b>no specific staff member</b> in charge of hospital sustainability. (2 points)	
There are <b>no salaried sustainability staff</b> , but there is a sustainability task force or committee. (1 point)	
There are <b>no</b> staff members <b>or</b> task force responsible for overseeing campus sustainability. (0 points)	
Score Assigned:	3
<p><i>Score explanation:</i> Imperial College has a central Sustainability Hub which is led by the Academic Lead for Sustainability and Sustainability Strategy Director, working alongside sustainability leads in the Operational Teams and sustainability committees in our Academic Faculties. Imperial College Healthcare NHS Trust has a Board Lead for Sustainability; Prof Bob Klaber, a Programme Manager for the Green Plan; Darshan Patel and a Clinical Lead for Sustainability Dr Gareth Thompson. Their work is focused on delivering the <a href="#">Green Plan</a>. Chelsea and Westminster, Hillingdon and London and NorthWest hospital sites also have sustainability leads.</p>	

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

Score Assigned:	3
<i>Score explanation:</i> Imperial College London has a <a href="#">Sustainability Strategy 2021-26</a> which outlines steps on how it is committed to becoming a net-zero institution by 2040.	

5.3. Do buildings/infrastructure used by the institution for teaching (not including the hospital) utilize renewable energy?	
Yes institution buildings are <b>100%</b> powered by renewable energy. (3 points)	
Institution buildings source <b>&gt;80%</b> of energy needs from off-site and/or on-site renewable energy. (2 points)	
Institution buildings source <b>&gt;20%</b> of energy needs from off-site and/or on-site renewable energy. (1 point)	
Institution buildings source <b>&lt;20%</b> of energy needs from off-site and/or on-site renewable energy. (0 points)	
Score Assigned:	1
<i>Score explanation:</i> Imperial generates a large proportion of its energy on site in South Kensington through CHP (combined heat and power) and are buying electricity backed by Renewable Energy Guarantees of Origin (REGO). This OFGEM run scheme provides certificates called REGOs which demonstrate electricity has been generated from renewable sources.	

5.4. Are sustainable building practices utilised for new and old buildings on the <u>institution's</u> campus, with design and construction of new buildings and remodelling of old buildings conforming to a published sustainability rating system or building code/guideline?	
Yes, sustainable building practices are utilised for new buildings on the institution's campus and the <b>majority</b> of old buildings <b>have been retrofitted</b> to be more sustainable. (3 points)	
Sustainable building practices are utilised for new buildings on the institution's campus, but most old buildings have <b>not been retrofitted</b> . (2 points)	
Sustainable building practices are <b>inadequately or incompletely</b> implemented for new buildings. (1 point)	
Sustainability is <b>not considered</b> in the construction of new buildings. (0 points)	
Score Assigned:	2
<i>Score explanation:</i> New buildings (e.g. White City South etc) are built to an ambitious standard on sustainability that is beyond what building codes mandate. It will apply to up-coming building refurbishment also but that has yet to be widely applied. Some but not most older buildings including accommodation blocks e.g. Wilson House have had solar panels fitted.	

**5.5. Has the institution implemented strategies to encourage and provide environmentally-friendly transportation options for students and reduce the environmental impact of commuting?**

Yes, the institution has implemented strategies to encourage and provide **environmentally-friendly transportation options** such as safe active transport, public transport, or carpooling and these options are well-utilised by students. Alternatively, the campus location is not amenable to unsustainable forms of transportation by default. (2 points)

The institution has implemented **some** strategies to provide environmentally-friendly transportation options, but the options are **unsatisfactorily** accessible or advertised. (1 point)

The institution has **not** implemented strategies to encourage and provide environmentally-friendly transportation options. (0 points)

Score Assigned:

2

*Score explanation:* Travel for Commuting is covered by a travel working group. It was less of a priority compared to creating a policy for Business Travel (conferences and meetings) which is a much bigger issue in terms of contributing to Imperial's overall emissions from transport.. Most commuting in London is already low carbon; all imperial sites are accessible by public transport. Shuttle bus services are on offer for students and staff to travel in between campuses during the day. Bicycle storage spaces are available at all campuses and security equipment e.g. locks are on offer.

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

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

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

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

Score Assigned:

1

*Score explanation:* South Kensington campus main catering outlet food waste is collected and taken to a food storage tank called a Rothenburg Unit. This macerates all the food waste put inside it so that it becomes liquid. Once full the tank is emptied by a tanker vehicle and the liquid is taken to an anaerobic digestion plant where energy is recovered. There is food composting for staff and students at residences but not widely available on campuses. Aluminium, plastic, glass, etc are all recycled.

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

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

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

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

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

Score Assigned:

3

*Score explanation:* Taste Imperial, the catering department that oversees the main campus cafes have led a 'BEEF WITH BEEF' campaign to remove beef off the menu as part of meeting its goals outlined by [Imperial's Sustainable Food and Drink Policy](#).. They have also removed extra charges for dairy-free milks. The policy outlines how their catering is moving towards more sustainable diets and recognise that a move towards plant-proteins is needed.

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

Yes, the institution has **adequate** sustainability requirements for supply procurement **and is engaged** in efforts to increase sustainability of procurement. (3 points)

There are sustainability guidelines for supply procurement, but they are **insufficient or optional**. The institution is **engaged** in efforts to increase sustainability of procurement. (2 points)

There are sustainability guidelines for supply procurement, but they are **insufficient or optional**. The institution is **not engaged** in efforts to increase sustainability of procurement. (1 point)

There are **no** sustainability guidelines for supply procurement. (0 points)

Score Assigned:

3

*Score explanation:* Imperial College has a [Sustainable Procurement policy](#) which outlines steps to align procurement practices with the university's broader sustainability goals. Imperial College London is a member of the Southern Universities Purchasing Consortium (SUPC) which supports the principles of Electronics Watch, an independent monitoring organisation working to achieve respect for labour rights in the global electronics industry through socially responsible public purchasing in Europe.

**5.9. Are there sustainability requirements or guidelines for events hosted at the institution?**

Every event hosted at the institution <b>must</b> abide by sustainability criteria. (2 points)	
The institution <b>strongly recommends or incentivizes</b> sustainability measures, but they are <b>not required</b> . (1 point)	
There are <b>no</b> sustainability guidelines for institution events. (0 points)	
Score Assigned:	2
<i>Score explanation:</i> Events hosted by Imperial adopt Imperial's general Sustainability Strategy and environmental policy principles and abide by the sustainable food and drinks policy.	

<b>5.10. Does your <u>institution</u> have programs and initiatives to assist with making lab spaces more environmentally sustainable?</b>	
Yes, the institution has <b>programs</b> and <b>initiatives</b> to assist with making lab spaces more environmentally sustainable. (2 points)	
There are <b>guidelines</b> on how to make lab spaces more environmentally sustainable, but not programs or initiatives. (1 point)	
There are <b>no</b> efforts at the institution to make lab spaces more sustainable. (0 points)	
Score Assigned:	2
<i>Score explanation:</i> There are <u>two schemes</u> that are being used at Imperial: <u>My Green Lab</u> and the <u>Laboratory Efficiency Assessment Framework (LEAF)</u> . By the end of July 2024 there was 21% laboratory sustainability engagement across Imperial, saving 38 tons CO2/year and 169,436 kWh/year. From the college webpage: LEAF enables us to quantify environmental and financial impact of these sustainability measures, broken down into three levels (or awards) as bronze, silver and gold. Each of these levels have several categories with measures (or actions) to complete and once it is all completed and assessed, the laboratory is awarded at that level. Most of the actions are straightforward and likely to be done by laboratory users already, but the challenges include balancing sustainability actions against safety (e.g. destroying contaminated plastics versus recycling it) and costs (e.g. purchasing new equipment which are more energy efficient versus using existing older equipment).	

<b>5.11. Does your <u>institution's</u> endowment portfolio investments include fossil-fuel companies?</b>	
The institution is <b>entirely divested</b> from fossil fuels <b>and</b> has made a <b>commitment to reinvest divested funds</b> into renewable energy companies or renewable energy campus initiatives. (4 points)	
The institution is <b>entirely divested</b> from fossil fuels. (3 points)	
The institution has <b>partially divested</b> from fossil fuel companies <b>or</b> has made a <b>commitment to fully divest</b> , but <b>currently</b> still has fossil fuel investments. (2 points)	

The institution has <b>not divested</b> from fossil-fuel companies, but faculty and/or students are <b>conducting organised advocacy</b> for divestment. (1 point)	
Yes, the institution has investments with fossil-fuel companies and there have been <b>no efforts</b> to change that. (0 points)	
Score Assigned:	2
<i>Score explanation:</i> The DIVEST IMPERIAL campaign has lobbied for a divestment away from fossil fuel companies and tobacco and arms industries. The institution still partners with some of these companies for curriculum funding.	
Section Total (24 out of 32)	
75%	

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# Grading

## Section Overview

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

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

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

## Planetary Health Grades for the Imperial College School of Medicine

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

Section	Raw Score %	Letter Grade
<b>Planetary Health Curriculum (30%)</b>	$(67/72) \times 100 = 86\%$	A
<b>Interdisciplinary Research (17.5%)</b>	$(17/17) \times 100 = 100\%$	A+
<b>Community Outreach and Advocacy (17.5%)</b>	$(14/14) \times 100 = 100\%$	A+
<b>Support for Student-led Planetary Health Initiatives (17.5%)</b>	$(13/15) \times 100 = 87\%$	A
<b>Campus Sustainability (17.5%)</b>	$(24/32) \times 100 = 75\%$	B+
<b>Institutional Grade</b>	$(86 \times 0.3 + 100 \times 0.175 + 100 \times 0.175 + 87 \times 0.175 + 75 \times 0.175) = 89.1\%$	A

# Report Card Trends

## Section Overview

This graph demonstrates trends in overall and section grades for the years in which Imperial College London has participated in the Planetary Health Report Card initiative.

