



Planetary Health Report Card (Medicine): *University College London*



2022-2023 Contributing Team:

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Summary of Findings

| | |
|--|-----------|
| Overall | A- |
| <u>Curriculum</u> | B+ |
| <p>While the level of longitudinal integration can still be improved, UCLMS is constantly striving to embed planetary health teaching widely across its curriculum, with the goal of exploring topics in depth in the relevant lectures. While the majority of planetary health learning is found in pre-clinical years through for example the Year 1 Citizenship Toolkit module, there is an overarching Intended Learning Outcome for every year of the MBBS stating “Appreciate the impact of climate change and sustainability in healthcare”.</p> | |
| <u>Interdisciplinary Research</u> | B |
| <p>There has been little change since last year with regards to UCL’s interdisciplinary research. The same improvements can still be made concerning the quality of centralised resources, the inclusion of disadvantaged communities in research agenda decision making, and encouraging a primary focus of planetary health in some researchers. However, the many relevant projects that are funded every year by UCL, and the number of sustainability and planetary health conferences, the UCL Challenge of Global Earth and the quantity of researchers contributing to this field, keeps UCL as a strong research institution.</p> | |
| <u>Community Outreach and Advocacy</u> | B |
| <p>Since last year, community outreach by the FMS has improved in two main ways, namely the introduction of further opportunities for continuing professional development with regards to planetary health, and in improving communications with students about climate and sustainability news. In order to improve further, the FMS could look into helping its partnered hospitals reach their goals of increased community engagement by working on the provision of planetary health educational materials.</p> | |
| <u>Support for Student-Led Initiatives</u> | A |
| <p>UCL supports and encourages student-led initiatives through funding, offering and/or advertising opportunities related to sustainability and planetary health. A wide range of different event types are present for UCL members to develop their understanding of planetary health and sustainability, and it is clear by the support given from UCL Careers through ‘Careers in Sustainability’ workshops, that the institution is keen on supporting and preparing students for integrating sustainability in their lives beyond UCL. A focus for future years would be to provide paid research opportunities for planetary health/sustainable healthcare projects.</p> | |
| <u>Campus Sustainability</u> | A+ |
| <p>Year on year UCL has been continually improving the sustainability of its campus, taking on projects and initiatives that show UCL is trying to lead the way in reducing an institution’s environmental impact. They have achieved ISO14001 certification in recognition of this commitment, and they appear on their way to achieving net zero carbon buildings by 2024. One main area for improvement though, would be to introduce compulsory, rather than recommended, guidelines for making events more sustainable.</p> | |

Statement of Purpose

Planetary health is human health.

The Planetary Health Alliance describes planetary health as “a solutions-oriented, transdisciplinary field and social movement focused on analyzing and addressing the impacts of human disruptions to Earth’s natural systems on human health and all life on Earth.” This definition is intentionally broad, intended to encompass the multitude of ways that the environment can affect health, including water scarcity, changing food systems, urbanization, 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 color, older adults sensitive to health threats, and individuals in low-resource settings), these issues are inherently ones of equity and justice.

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

Definitions & Other Considerations

Definitions:

- **Planetary Health:** is described by the Planetary Health Alliance as “the health of human civilisation and the state of the natural systems on which it depends.” For example, topics such as climate change, declining biodiversity, shortages of arable land and freshwater, and pollution would all fall under the realm of planetary health. Both planetary health and traditional ‘environmental health’ examine the relationship between human health and the external environment, including extreme temperatures, chemicals, vector-borne diseases, etc. Planetary health explicitly concerns itself with the potential health harms associated with human-caused perturbations of natural systems. Therefore, the human health focus of planetary health makes the field well-adapted for the context of medical school education. Throughout this report card, we use the term planetary health to refer to this broad swath of topics, but resources do not need to explicitly include the term “planetary health” to satisfy the metric.
- **Sustainable Healthcare:** As defined by the Academy of Royal Colleges, sustainable healthcare involves ensuring the ability to provide good quality care for future generations by balancing the economic, environmental, and social constraints and demands within health care settings. A sustainable healthcare system maintains population health, reduces disease burden and minimises use of healthcare services.
- **Education for Sustainable Healthcare (ESH):** is defined as the process of equipping current and future health professionals with the knowledge, attitudes, skills and capacity to provide environmentally sustainable services through health professional education, thus working to decrease the enormous environmental impact of the healthcare industry. Planetary Health Education is an integral part of this education rather than an end in itself. This is because knowledge on Planetary Health is required to be able to fully understand the necessity of sustainable healthcare as well as being part of the broader knowledge needed to fully protect and promote health. In summary, ESH is covered by the three Priority Learning Outcomes of the Centre of Sustainable Healthcare below, and Planetary Health Education is embraced in the first learning objective and is a fundamental requirement to achieve learning outcomes 2 and 3:
 1. Describe how the environment and human health interact at different levels.
 2. Demonstrate the knowledge and skills needed to improve the environmental sustainability of health systems.
 3. Discuss how the duty of a doctor to protect and promote health is shaped by the dependence of human health on the local and global environment.
- **Medical School vs. Institution:** When “medical school” is specified in the report card, this only refers to curriculum and resources offered by the School of Medicine and does not include offerings from other parts of the university (e.g. undergraduate departments (USA), other related departments (e.g. Public Health, Population Health departments). In contrast, when “institution” is specified in the report card, we are referring to the university more

broadly. Any resource reasonably accessible by medical students, no matter where in the institution the resource comes from or if it is specifically targeted for medical students, can meet this metric.

- **Environmental history (Metric #19 in Curriculum Section):** This is a series of questions providers are taught to ask during medical encounters that elicits patients' exposures and environmental risk factors. Historically, this has included consideration of exposures like pesticides, asbestos, and lead, though in the modern era shaped by climate change, it can be expanded to include things like wildfire smoke exposure, air pollution and mold after flooding. Key components include place of residence over the lifecourse, occupational history, food and water sources (e.g. meat from industrial feeding operations, regular fishing in contaminated water, access to clean drinking water), and exposure to air pollution.
- **Elective:** The word "elective" refers to an optional course or lecture series that a medical student can opt to take part in but is not a requirement in the core curriculum. Generally, these elective courses take place in the preclinical curriculum but vary by school.
- **Clerkship:** This is a term used in the USA to refer to placements that medical students go on e.g. Pediatrics, General medicine, Psychiatry. In the UK these are referred to as rotations or placements.

Other considerations:

- If there are more than one "tracks" at your medical school with two different curricula (for example, Harvard Medical School has a Pathways and HST curriculum track), you can choose to fill out a report card for each track, or fill out just one report card and average the scores received by each track in cases where the scores are different (see the 2021 Harvard or Oxford report cards as examples).

Added to our resources last year, the Planetary Health Report Card [Literature Review by Metric](#) collates the evidence behind each of the metrics in the Planetary Health Report Card. It serves as a collection of references for further learning and a resource for those advocating for increased planetary health engagement at their institutions.

Planetary Health Curriculum

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

Curriculum: General

| 1. Did your <u>medical school</u> offer elective courses (student selected modules) to engage students in Education for Sustainable Healthcare or Planetary Health in the last year? | |
|--|---|
| 3 | Yes, the medical school has offered more than one elective whose primary focus is ESH/planetary health in the past year. |
| 2 | Yes, the medical school has offered one elective whose primary focus is ESH/planetary health in the past year. |
| 1 | The medical school does not have any electives whose primary focus is ESH/planetary health, but there are one or more electives that include a lecture on planetary health. |
| 0 | No, the medical school has not offered any electives on planetary health or electives that include ESH/planetary health topics in the past year. |
| <p><i>In Year 1, there is an SSC (student selected component) titled Sustainability & Climate Change in Healthcare, led by Dr Adesh Sundaresen.</i></p> | |

Curriculum: Health Effects of Climate Change

| 2. Does your <u>medical school</u> curriculum address the relationship between extreme heat, health risks, and climate change? | |
|--|--|
| 3 | This topic was explored in depth by the core curriculum. |
| 2 | This topic was briefly covered in the core curriculum. |
| 1 | This topic was covered in elective coursework. |
| 0 | This topic was not covered. |
| <p><i>In Year 2, in the 'Social Determinants of Health' course in the Clinical and Professional Practice (CPP) module, there is a lecture given by Professor Hugh Montgomery OBE called 'Health & Sustainability: Matters of Life and Death', which addresses the relationship between extreme temperature health risks and climate change.</i></p> <p><i>In the elective SSC 'Sustainability & Climate Change in Healthcare', led by Dr Adesh Sundaresen, there is a lecture titled 'Heat, Health and the Economics of Climate Change'.</i></p> | |

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

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

In Year 2, in the 'Social Determinants of Health' course in the Clinical and Professional Practice (CPP) module, there is a lecture given by Professor Hugh Montgomery OBE called 'Health & Sustainability: Matters of Life and Death', which addresses in detail the impacts of extreme weather events on individual health and healthcare systems. For example, the impact of heatwaves and floods.

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

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

In Year 2, in the 'Social Determinants of Health' course in the Clinical and Professional Practice (CPP) module, there is a lecture given by Professor Hugh Montgomery OBE called 'Health & Sustainability: Matters of Life and Death', which addresses the impact of climate change on the changing patterns of infectious diseases. Professor Montgomery highlights climate change's impact on the worsening spread of vector-borne diseases, specifically dengue and malaria.

In the elective SSC 'Sustainability & Climate Change in Healthcare', led by Dr Adesh Sundaresen, there is a lecture titled 'Vector Borne Diseases and Climate Change'.

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

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

In Year 2, there is a lecture called 'Climate Change and Sustainability', which addresses the respiratory health effects of climate change and air pollution, specifically focusing on particulate matter and touching upon biological parts of air pollution and ground level ozone.

The elective SSC 'Sustainability & Climate Change in Healthcare', led by Dr Adesh Sundaresen, also addresses the respiratory health effects of climate change in some of its lectures.

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

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

The elective SSC 'Sustainability & Climate Change in Healthcare', led by Dr Adesh Sundaresen, addresses the cardiovascular health effects of climate change in some of its lectures.

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

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

In Year 2, there is a lecture called 'Climate Change and Sustainability', which addresses the mental health and neuropsychological effects of environmental degradation and climate change, covering for example eco-anxiety and the effect on indigenous communities.

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

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

In Year 2, in the 'Social Determinants of Health' course in the Clinical and Professional Practice (CPP) module, there is a lecture given by Professor Hugh Montgomery OBE called 'Health &

Sustainability: Matters of Life and Death, which addresses in detail the relationships between health, individual patient food and water security, ecosystem health, and climate change. Within the lecture, topics such as unsustainable fishing practices, deforestation and the meat industry, and coral bleaching are discussed.

In the elective SSC 'Sustainability & Climate Change in Healthcare', led by Dr Adesh Sundaresen, there is a lecture titled 'Food Insecurity, Malnutrition and Thermal Impacts of Climate Change on Health'.

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

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

In the elective SSC 'Sustainability & Climate Change in Healthcare', led by Dr Adesh Sundaresen, there is a lecture titled 'Women, Climate Change and Health'.

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

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

In Year 2, in the 'Social Determinants of Health' course in the Clinical and Professional Practice (CPP) module, there is a lecture given by Professor Hugh Montgomery OBE called 'Health & Sustainability: Matters of Life and Death', which addresses the unequal health impacts of climate change globally.

In the elective SSC 'Sustainability & Climate Change in Healthcare', led by Dr Adesh Sundaresen, there is a lecture titled 'Impacts of Climate Change on Human Health in Africa'.

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

| 11. Does your <u>medical school</u> curriculum address the reproductive health effects of industry-related environmental toxins (e.g. air pollution, pesticides)? | |
|--|--|
| 3 | This topic was explored in depth by the core curriculum. |
| 2 | This topic was briefly covered in the core curriculum. |
| 1 | This topic was covered in elective coursework. |
| 0 | This topic was not covered. |
| <p><i>In Year 2, there is a lecture called 'Climate Change and Sustainability', which addresses the reproductive health effects of climate change, and specifically industry-related environmental toxins such as air pollution.</i></p> | |

| 12. Does your <u>medical school</u> curriculum address important human-caused environmental threats that are relevant to the university's surrounding community? | |
|--|--|
| 3 | This topic was explored in depth by the core curriculum. |
| 2 | This topic was briefly covered in the core curriculum. |
| 1 | This topic was covered in elective coursework. |
| 0 | This topic was not covered. |
| <p><i>Yes, there are sessions under the 'Patient Pathway in Integrated and Community Care' course in the Clinical and Professional Practice (CPP) module, which include community based placements, where students listen to patients exposed to health concerns within the vicinity of the university across all years.</i></p> | |

| 13. To what extent does your <u>medical school</u> emphasize the importance of Indigenous knowledge and value systems as essential components of planetary health solutions? | |
|--|--|
| 3 | Indigenous knowledge and value systems are integrated throughout the medical school's planetary health education |
| 2 | Indigenous knowledge and value systems as essential components of planetary health solutions are included briefly in the core curriculum. |
| 1 | Indigenous knowledge and value systems as essential components of planetary health solutions are included in elective coursework. |
| 0 | This topic was not covered. |
| <p><i>In Year 2, there is a lecture called 'Climate Change and Sustainability', which emphasises the importance of Indigenous knowledge and value systems and how they play an essential role in planetary health solutions.</i></p> | |

14. Does your medical school curriculum address the outsized impact of anthropogenic environmental toxins on marginalized populations such as those with low SES, women, communities of color, children, homeless populations, Indigenous populations, and older adults?

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

In Year 2, health inequalities across different groups in the population are addressed in the ‘Social Determinants of Health’ course in the longitudinal Clinical and Professional Practice (CPP) module.

There is a lecture and online self-paced learning material discussing how people in different socioeconomic groups have different levels of exposure to environmental toxins, based on multiple factors such as their occupation, where they live, type of accommodation and food buying habits. There is a dedicated session on the impact of homelessness on health.

This issue is also covered in CPP in Year 4 by Sir Michael Marmot, who delivers a lecture entitled ‘Health inequalities’, and in Year 5 by Dr Ines Campos Matos’s lecture entitled ‘Migrant Health’ and Professor Dougall’s lecture entitled ‘Public Health in Clinical Practice’.

In the elective SCC ‘Sustainability & Climate Change in Healthcare’, led by Dr Adesh Sundaresen, there is a lecture titled ‘Women, Climate Change and Health’.

There is an overarching Intended Learning Outcome (ILO) under Clinical and Professional Practice (CPP) in Social Determinants of Health stating “Discuss the role of health professionals in reducing inequalities in health; the economic evaluation of health interventions; population health screening; and health promotion for vulnerable groups (homeless health)”.

Curriculum: Sustainability

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

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

In Year 5, students undergo The Culinary Medicine in Primary Care Course as part of their primary care placement. This core teaching is spread over the 18 days spent in a GP practice over a period of six weeks, where students are given guidance and support to have conversations with patients on sustainable and healthy living, with some focus on how they can reduce the carbon footprint of their food.

| 16. Does your <u>medical school</u> curriculum address the carbon footprint of healthcare systems? | |
|---|---|
| 3 | This topic was explored in depth by the core curriculum |
| 2 | This topic was briefly covered in the core curriculum. |
| 1 | This topic was covered in elective coursework. |
| 0 | This topic was not covered. |
| <p><i>In Year 2, there is a lecture as of the academic year 2021/2022 called 'Climate Change and Sustainability', which addresses the carbon footprint of healthcare systems, specifically that of the NHS.</i></p> | |

| 17. Does your <u>medical school</u> curriculum cover these components of sustainable clinical practice in the <u>core</u> curriculum? (points for each) | |
|---|--|
| 2 | The health and environmental co-benefits of avoiding over-medicalisation, over-investigation and/or over-treatment |
| 2 | The environmental impact of pharmaceuticals and over-prescribing as a cause of climate health harm. Alternatively teaching on deprescribing where possible and its environmental and health co-benefits would fulfill this metric. |
| 1 | The health and environmental co-benefits of non-pharmaceutical management of conditions where appropriate such as exercise or yoga classes for type 2 diabetes; social group activities such as gardening for mental health conditions; active transport such as bicycle schemes. This is commonly known as social prescribing in the UK. |
| 1 | Environmental impact of surgical healthcare on planetary health and the climate crisis, and how can it be mitigated |
| 1 | The impact of anaesthetic gases on the healthcare carbon footprint and ways to reduce anaesthesia environmental impacts, such as total intravenous anaesthesia or choosing less environmentally harmful anaesthetic gas options with reduced greenhouse gas emissions |
| 1 | The impact of inhalers on the healthcare carbon footprint and the environmental benefit of dry powdered inhalers over metered dose inhalers. |
| 1 | Waste production within healthcare clinics and strategies for reducing waste in clinical activities (e.g. single use items in the inpatient or outpatient setting) |
| <p><i>In Year 2, there is a lecture called 'Climate Change and Sustainability' which addresses, amongst other topics:</i></p> <ul style="list-style-type: none"> • <i>How the choice of inhalers given to patients can affect the environment.</i> • <i>Why desflurane is to be decommissioned by 2024.</i> • <i>The environmental impact of over-prescribing.</i> • <i>The benefits of social prescribing.</i> | |

Curriculum: Clinical Applications

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

| | |
|---|---|
| 2 | Yes, there are strategies introduced for having conversations with patients about climate change in the core curriculum. |
| 1 | Yes, there are strategies introduced for having conversations with patients about climate change in elective coursework. |
| 0 | No, there are not strategies introduced for having conversations with patients about climate change |

No, the medical school has not introduced specific strategies to have conversations with patients about the health effects of climate change. While there may not be systematic teaching for having discussions with patients, students on placement are taught about the environmental impact of medications such as asthmatic inhalers, and the importance of safe environmental disposal by patients.

In the elective SSC 'Sustainability & Climate Change in Healthcare', there is a lecture entitled 'Communicating Climate Change Data and Encouraging Behaviour Change'.

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

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

Yes, at the beginning of Year 4 in their two-week Introduction and Orientation Module in preparation for their full-time clinical placements. Students are taught to elicit a full social history, which includes an environmental history and occupational exposures as part of a full clerking of a patient and detailed information-gathering.

This included discussion about asking patients questions about their living circumstances, occupation, hobbies, habits and travel history. Students are taught to consider the impact of certain environmental exposures such as pesticides, heavy metals, toxic synthetic chemicals, air pollution and urban living environments.

20. Is your medical school currently in the process of implementing or improving Education for Sustainable Healthcare (ESH)/planetary health education?

| | |
|---|--|
| 4 | Yes, the medical school is currently in the process of making major improvements to ESH/planetary health education. |
| 2 | Yes, the medical school is currently in the process of making minor improvements to ESH/planetary health education. |
| 0 | No, there are no improvements to planetary health education in progress. |

Professor Deborah Gill and Dr Faye Gishen have worked to establish the relatively new SSC on Sustainability & Climate Change in Healthcare in Year 1, and also additional teaching on sustainability in the new core Citizenship Toolkit module.

There is an overarching Intended Learning Outcome (ILO) under Clinical and Professional Practice (CPP) stating “Appreciate the impact of climate change and sustainability in healthcare”.

Tor Wright, the curriculum mapping project manager, leads a ‘Climate Change and Sustainability Working Group’, where students discuss how well the issues surrounding climate change and sustainability and their impact on healthcare are covered in the curriculum, and how teaching might be implemented or improved. The group’s aim is to generate ideas on how climate change and sustainability can be embedded, discussed and signposted within the MBBS curriculum – bringing the conversation close to senior management within the medical school.

In another note, as of 2020 a Planetary Health Report Card (PHRC) Board ensures the longevity of this project. The faculty of UCLMS have been very enthusiastic about the initiative and hope to utilise the results of the PHRC in order to improve upon metrics which received lower scores. The board, including the director of UCLMS, Dr Faye Gishen, is chaired by the current Dean of the UCL Faculty of Medical Sciences, Professor Mark Emberton.

21. How well are the aforementioned planetary health/Education for Sustainable Healthcare topics integrated longitudinally into the core curriculum?

| | |
|---|--|
| 6 | Planetary health/ESH topics are well integrated into the core medical school curriculum. |
| 4 | Some planetary health/ESH topics are appropriately integrated into the core medical student curriculum. |
| 2 | Planetary health/ESH is not integrated and is primarily addressed in (a) standalone lecture(s) . |
| 0 | There is minimal/no education for sustainable healthcare. |

In the MBBS curriculum map there is an overarching Intended Learning Outcome (ILO) for all years under the longitudinal Clinical and Professional Practice (CPP) module stating “Appreciate the impact of climate change and sustainability in healthcare”.

The ‘Climate Change and Sustainability Working Group’, has exactly this aim – that the issues of climate change and sustainability in healthcare can be embedded in the curriculum for present and future students at UCLMS.

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

1

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

0

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

No, the medical school does not currently 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.

Section Total (56 out of 72)

78%

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

Interdisciplinary Research

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

| 1. Are there researchers engaged in planetary health research and healthcare sustainability research at your <u>medical school</u> ? | |
|--|---|
| 3 | Yes, there are faculty members at the medical school who have a primary research focus in planetary health or healthcare sustainability. |
| 2 | Yes, there are individual faculty members at the medical school who are conducting research related to planetary health or healthcare sustainability, but it is not their primary research focus. |
| 1 | There are planetary health and/or healthcare sustainability researchers at the institution , but none associated with the medical school. |
| 0 | No, there are no planetary health and/or healthcare sustainability researchers at the institution or medical school at this time. |

There is a high number of researchers at UCL working on planetary health, at several levels within the institution, which are hierarchically closely or far related to the medical school. UCL medical school belongs to the Faculty of Medical Sciences, which itself belongs to the School of Life and Medical Sciences. Summarised below is the hierarchical structure where UCL Medical School is situated:

Faculty of Life Sciences

- Faculty of Population Health
 - Institute of Global Health
 - Institute of Epidemiology and Health Care
 - Elizabeth Garrett Anderson Institute for Women's Health
- Faculty of Brain Sciences
- Faculty of Medical Sciences
 - UCL Medical School

UCL Medical school itself conducts [research](#) on medical education assessment, selection and work-based learning. However, it is also worth considering planetary health research done, for example, at the Faculty of Medical Sciences and at the Faculty of Population Health where many of the medical school students take elective courses and intercalated years.

Planetary Health Research in Faculty of Brain Sciences

- [Climate Change and Epilepsy](#)

Planetary Health Research in the Faculty of Population Health

- Institute of Global Health
 - [China Lancet Countdown Case Study](#)
 - [Lancet Commission on Health and Climate Change: Policy Responses to Protect Public Health](#)

- [Lancet Countdown: Tracking Progress on Health and Climate Change](#)
- [Many Strong Voices](#)
- [Sustainability and Petroleum Extraction: Corporate and Community Perspectives in Northern Norway and the Russian Arctic](#)
- [UCL-Lancet Commission on Managing the Health Effects of Climate Change](#)
- [UK Lancet Countdown Case Study](#)

Some examples of planetary health research in other faculties and interdisciplinary partnerships:

1. [UCL Anthropocene](#) – “UCL Anthropocene works as a virtual school by assembling projects, people, courses, and events from across the social sciences, arts, humanities, life, environmental, and health sciences to articulate and address the problems that the Anthropocene poses for our collective future.” – based at the Faculty of Social and Historical Sciences.
2. [ClimaCare Research Initiative](#) – SPF UK Climate Resilience Programme, Governing the Climate Adaptation of Care Settings (ClimaCare) Study of Climate Health Risks in HealthCare Settings – based at the Faculty of the Built Environment.
3. [OVERCOME Project](#) – “The OVERCOME (digital innOVation in climatE hazaRd early warning and related disease prevention for COMmunity capacity building and rEsilience) project is funded by UKRI Global Challenges Research Fund (GCRF) Digital Innovation for Development in Africa (DIDA).” – includes faculty from the Department of Civil, Environmental and Geomatic Engineering, UCL Environmental Science and Policy at STEaPP.
4. [CUSSH: Complex Urban Systems for Sustainability and Health](#) – “is a four-year international research project. Starting in 2018, CUSSH is working with thirteen partner organisations across four continents to help cities develop in ways which improve population health and environmental sustainability.” – based at the Faculty for the Built Environment.
5. [UCL Health of the Public Initiative](#) – “UCL Health of the Public will harness the wealth of expertise in social sciences, the built environment, engineering sciences, maths and physical sciences, laws, education, arts and humanities, as well as biomedical sciences. Our aim is to improve health in the round, on a regional, national and global scale.” – interdisciplinary partnership.
6. [Institute for Risk and Disaster Reduction \(IRDR\)](#) – part of the Faculty of Mathematical and Physical Sciences (MAPS) deals with several aspects of climate and health.

2. Is there a dedicated department or institute for interdisciplinary planetary health research at your institution?

| | |
|---|--|
| 3 | There is at least one dedicated department or institute for interdisciplinary planetary health research. |
| 2 | There is not currently a department or institute for interdisciplinary planetary health research, but there are plans to open one in the next 3 years. |
| 1 | There is an Occupational and Environmental Health department , but no interdisciplinary department or institute for planetary health research. |
| 0 | There is no dedicated department or institute. |

Yes, the [Institute of Global Health \(IGH\)](#) which belongs to the Faculty of Life Sciences.

Several other departments work on the interaction between health and the environment but the IGH has an extensive focus on this. See the above link for examples of research initiatives hosted at the centre.

This includes the [Lancet Countdown on Climate Change and Health](#), one of the central annual reports investigating climate effects on human health.

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

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

No, there is currently no process at the medical school.

It seems to be a crucial criterion in any grant application/project proposal and maybe explains the lack of a centralised process. However, we have not found a centralised processes/criterion requirement by which this happens at the university level.

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

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

Yes, UCL has several webpages centralising various campus resources related to health and the environment.

For example, UCL Institute of Global Health has an [Environment and Health page](#) which compiles several research projects on planetary health. This page fits the description most accurately but is by no means comprehensive of the breadth of planetary health research that exists at UCL.

The [Environment Research Domain page](#) describes the work of academics across the institution and their aims for future research.

On the other end of the spectrum, there is the [UCL Climate Hub](#) website that collects all of UCL's

interdisciplinary research projects, courses and opportunities on the topic of climate. Not all of them touch upon health directly, but many could be considered to be inside the realm of planetary health (e.g. urbanism and climate research).

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

| | |
|---|--|
| 4 | Yes, the medical school has hosted at least one conference or symposium on topics related to planetary health in the past year. |
| 3 | Yes, the institution has hosted at least one conference or symposium on topics related to planetary health in the past year. |
| 2 | Yes, the institution has hosted a conference on topics related to planetary health in the past three years. |
| 1 | The institution has not hosted any conferences directly, but they have provided financial support for a local planetary health event. |
| 0 | No, the institution has not hosted a conference on topics related to planetary health in the past three years. |

Yes, UCL Medical School and Faculty of Medical Sciences has hosted several conferences or symposiums related to planetary health. Examples from 2022–2023.

1. [*The Hot Brain - Climate Change and Neuroscience*](#) – to be held 18th May 2023. A one day hybrid conference to raise awareness, share knowledge and discuss and promote action around the impacts of climate change across the spectrum of neuroscience.
2. [*CBC Conference 2022: Behaviour Change for Health and Sustainability*](#) – held 7th – 9th November 2022. This conference aimed to address such themes as: The Science of Behaviour Change, The Digital Transformation of Health, Creating a Sustainable Future, and Innovations in Design & Methodology in Intervention Development.
3. [*Fevers, Frets and Futures: Uncertainty & New Ecologies for Post-Covid Healthcare*](#) – scheduled for 10th February 2023; rescheduled to 4th – 7th July 2023. This conference aims to discuss how the last two and a half years exposed points of encounter between existing anxieties about climate change and environmental collapse and new crises of health and well-being in the face of the Covid pandemic.
4. [*Low-Carbon, Intelligent and Healthy Buildings*](#) – held on 21st September 2022. To promote international cooperation and interaction, the School of Architecture (Tsinghua University) and The UCL Institute for Environmental Design and Engineering jointly launched two international seminars on "Low Carbon, Intelligent and Healthy Buildings" on 21st September and in October 2022. Each seminar featured multiple presentations from Chinese and British scholars and provided a platform for exchange and discussion.
5. [*UCL IEDE Annual Symposium on Net Zero Roadmaps, Challenges and Solutions*](#) – held 31st March 2023. A symposium on the transition to Net Zero, global experts will explore the challenges and opportunities of the move to a zero-carbon world.

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

| | |
|---|---|
| 1 | Yes, the medical school is a member of a national or international planetary health or ESH organization |
| 0 | No, the medical school is not a member of such an organization |
| <i>UCLMS is a member of the Planetary Health Alliance as of 2021.</i> | |

Section Total (12 out of 17)

71%

Back to summary page [here](#)

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

Community Outreach and Advocacy

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

| 1. Does your medical school partner with community organizations to promote planetary and environmental health? | |
|--|--|
| 3 | Yes, the medical school meaningfully partners with multiple community organizations to promote planetary and environmental health. |
| 2 | Yes, the medical school meaningfully partners with one community organization to promote planetary and environmental health. |
| 1 | The institution partners with community organizations, but the medical school is not part of that partnership. |
| 0 | No, there is no such meaningful community partnership. |
| <p><i>UCL Medical School meaningfully partners with Royal Free London NHS Foundation Trust, where medical students have been invited to the sustainability working groups of which there are 8 at the Royal Free Hospital itself. The projects offered aim to promote planetary health and sustainable healthcare.</i></p> <p><i>As aforementioned, UCLMS resides within the wider institution of UCL. Healthy Planet UCL, is a student-led volunteering society within the Student's Union UCL, a charity linked to the UCL institution, in which the medical school is part of. This society is part of the Healthy Planet UK organisation, which raises awareness of how climate change affects health. Healthy Planet UCL school project delivers workshops to local primary schools about climate change, pollution and health.</i></p> | |

| 2. Does your medical school offer community-facing courses or events regarding planetary health? | |
|---|---|
| 3 | The medical school offers community-facing courses or events at least once every year. |
| 2 | The medical school offers courses or events open to the community at least once per year, but they are not primarily created for a community audience. |
| 1 | The institution has offered community-facing courses or events, but the medical school was not involved in planning those courses or events. |
| 0 | The institution/medical school have not offered such community-facing courses or events. |

Yes, UCL medical school and our parent institution offer community-facing courses or events regarding planetary health. Examples in the last year include:

1. *Medical Sciences Lecture Series* – a virtual public lecture series hosted by the Faculty of Medical Sciences, features talks such as “Room 1 for Dr Climate” by Adesh Sundaresan, focussing on how climate change can impact human health.
2. UCL has a ‘Lunch Hour Lectures’ series which is free to the public, including talks like ‘The Future of Global Health Systems’, which discussed whether global health systems will deliver on sustainable development goals, and ‘Our Planet, Our Health’, which explored the links and interdependencies between our health and the health of our planet.

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

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

Yes, planetary health and sustainable healthcare is included in communication updates to medical students, for example in the Sustainability Section of the medical students newsletter, RUMS Review. Example articles included in the [latest RUMS Review](#):

- *Under the Weather - The Threat of Zoonotic Viruses*
- *‘Why are we learning about this?’*
- *Climate Education at RUMS*

Sustainability topics, sometimes including planetary health, are regularly covered in the communication sent to all students from UCL Student’s Union via email.

There is also a UCL sustainability focussed podcast, called ‘[Generation One: The Climate Podcast](#)’, which discusses climate topics weekly with experts, and features a look back at relevant climate news.

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

| | |
|---|---|
| 2 | Yes, the institution or main affiliated hospital trust offers multiple in-person or online courses relating to planetary health and/or sustainable healthcare for post-graduate providers, including at least one with a primary focus of planetary health. |
| 1 | Yes, the institution or main affiliated hospital trust offers one course relating to planetary health and/or sustainable healthcare for post-graduate providers |
| 0 | There are no such accessible courses for post-graduate providers |

The CPD (continuing professional development) accredited conference [‘The Hot Brain – Climate Change and Neuroscience’](#) is to be held in May 2023, which aims to begin dialogue on how the field of neuroscience can respond to the health effects of climate change.

The ‘Conducting a Life Cycle Assessment (LCA)’ course, which is held twice a year, for £1,350, is open to all professionals, but is aimed at those who are trying to increase sustainability in their place of work, such as sustainability consultants.

There are also various modules and one-day courses that contain content related to planetary health; for example, a 2-week short course in Urban Health exposes learners to information about environmental science and urban health (by Professor David Osrin and Shivani Singh), and a shorter 1 day course ‘Healthy Urbanism’ provides strategies to understand and improve the health and wellbeing impacts of urban development through the framework THRIVES.

The information is accessible through [UCL Website on CPD and Short Courses](#).

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

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

No, to our knowledge the only educational materials that have been provided have been via smoking cessation leaflets, which are online in the respective hospital websites.

6. Does your medical school or its primary affiliated hospital have accessible educational materials for patients about climate change and health impacts?

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

One of our affiliated hospitals, UCLH, holds events for the public on the health impacts of climate change, and is improving its community engagement on the topic of climate change, as outlined in their [Green Plan 2020-2025](#). UCLH was awarded a 2021 Sustainability Award for public engagement.

Section Total (10 out of 14)

71%

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

Support for Student-Led Planetary Health Initiatives

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

| 1. Does your medical school or your institution offer support for medical students interested in enacting a sustainability initiative/QI project? | |
|---|---|
| 2 | Yes, the medical school or institution <i>either</i> offers grants for students to enact sustainability initiatives/QI projects <i>or</i> sustainability QI projects are part of the core curriculum. |
| 1 | The medical school or institution encourages sustainability QI projects (to fulfill clerkship or longitudinal requirements) and offers resources to help students succeed in these projects, but there is no student funding available and there is no requirement to participate. |
| 0 | No, neither the medical school or the institution offer opportunities or support for sustainability initiatives or QI projects. |

The institution provides support for a range of different [innovation & enterprise competitions](#) relating to sustainability, which medical students are eligible to apply to.

For example, the Green Alley Award has a chance to access £25,000, alongside mentoring in marketing, networking and learning opportunities. Similarly, there is the global IMAGINE IF! accelerator programme, for ventures improving wellbeing which could include sustainability initiatives, or the [Clean Tech Challenge](#) and the [Stephen Lloyd Awards](#) for a practical, sustainable initiative for addressing social issues (with a £2,000 grant and expert support). The £1m Hult Prize-winning student social enterprise Rice Inc, is tackling global food insecurity.

The [Laidlaw Research and Leadership Programme](#) is a programme open only to 25 first year undergraduates in any discipline, and provides a stipend of £3,300 per year for the first and second years, and training and 6 weeks of full-time research and leadership activities in the first- and second-year summer holidays; thus medical students are eligible to apply. Within this, students can propose a research project of their own and contact supervisors they're interested in working with. One such research project, carried out by Imran Mannan, is now used by farms and crop-processing plants in Ethiopia, Uganda and Malawi as part of AGRICEN.

[UCL ChangeMakers](#) offers funding (£450 or £850) for departments and faculty to work on education enhancement projects with their students.

The information for these schemes are accessible on the UCL Website. Although these initiatives are available for all students, it may be worth advertising or targeting specific initiatives towards medical students through relevant communication pathways to promote and enable student participation.

2. Does your institution offer opportunities for medical students to do research related to planetary health and/or sustainable healthcare?

| | |
|---|---|
| 2 | The institution has a specific research program or fellowship for students interested in doing planetary health/sustainable healthcare research. |
| 1 | There are research opportunities for students to perform research related to planetary health/sustainable healthcare, but these require student initiative to seek these out and carry them out in their spare time. |
| 0 | There are no opportunities for students to engage in planetary health/sustainable healthcare research. |

Through UCL's [Living Lab Project](#), students are able to undertake research related to planetary health and/or sustainable healthcare as part of their studies. Living Lab Project gives students the opportunity to solve UCL's sustainability challenges through research, teaching, dissertations and projects.

There is also the [Laidlaw Research and Leadership Programme](#) is open to 25, first year undergraduates in any discipline and provides bursaries, training, six weeks of full-time research, and leadership activities in the first- and second-year summer holidays. Within this, students can propose a research project of their own and contact supervisors they're interested in working with. This includes research in planetary health or sustainable healthcare.

One such research project, carried out by Imran Mannan, is now used by farms and crop-processing plants in Ethiopia, Uganda and Malawi as part of AGRICEN.

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

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

Yes, there is the [Sustainability at UCLMS website](#), where students can find specific information related to planetary health and/or sustainable healthcare activities and mentors within the medical school.

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

| | |
|---|---|
| 2 | Yes, there is a student organization with faculty support at my medical school dedicated to planetary health or sustainability in healthcare. |
| 1 | Yes, there is a student organization at my medical school dedicated to planetary health or sustainability in healthcare but it lacks faculty support . |
| 0 | No, there is not a student organization at my institution dedicated to planetary health or sustainability in healthcare. |

There is a 'UCL Planetary Health Report Card' student group that is dedicated towards fostering a culture of planetary health engagement, scholarship, and advocacy on campus. The group runs several projects during the academic year to improve the Faculty of Medical Sciences' engagement in sustainability with the continued support of the Faculty and the UCL Sustainability Team.

The curriculum mapping project manager at the medical school, is currently leading a 'Climate Change and Sustainability Working Group'. The group's aim is to generate ideas on how climate change and sustainability can be embedded, discussed and signposted within the MBBS curriculum – bringing the conversation close to senior management within the medical school.

5. Is there a student liaison representing sustainability interests who serves on a medical school or institutional decision-making council to advocate for curriculum reform and/or sustainability best practices?

| | |
|---|--|
| 1 | Yes, there is a student representative that serves on a medical school or institutional decision-making council/committee. |
| 0 | No, there is no such student representative. |

There is a Student Sustainability Council formed by 20 students. They advocate for sustainability interests, inclusion of planetary health measures and improvements throughout the institution. The council is also the chance for students to shape and amend UCL and the Students Union's Sustainability Visions. There is one council per term, each lasting two hours. Other topics covered include items such as making societies sustainable or vegetarian catering in cafes.

As of 2020, there is a Planetary Health Report Card (PHRC) Board that will ensure the longevity of this project. The results of the report card will help identify strengths and areas for improvement, and thus push the Faculty of Medical Sciences to improve on sustainability measures where possible, while the Board itself will endeavour to address these points and ensure UCL's progress is built upon each year. The project is student-led and the Board is chaired by the current Dean of the UCL Faculty of Medical Sciences. Other members of the newly appointed Board include the MBBS Programme Lead, the Faculty of Medical Sciences Green Champion, the UCL Medical School Green Champion and a member of the UCL Sustainability Team.

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

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

Projects to Gain Experience in Sustainable/Urban Agriculture (Some Examples):

- [Wild Bloomsbury Project](#)
 - *Bentham's Farm: UCL's student-led allotment project. UCL's first urban agriculture project, working to improve UCL's access to sustainably sourced vegetables. Bentham's Farm is a community of food growers who have established allotment space at the back of University Halls. They offer UCL staff and students a space to learn about and experience food production.*
 - *IOE Garden project: student-led gardening project to boost biodiversity in UCL Institute of Education.*
 - *UCL has made a commitment to create 10,00m² of more biodiverse green space on campus by 2024. For more information on this commitment click [here](#).*
- *The Global Generation Skip Garden: The Skip Garden, run by charity Global Generation, is an innovative and sustainable space geared towards providing links to, and benefits for, the local community. Throughout the project, the students developed design concepts, raised funding, gained planning permission and realised their work on a real site in central London.*
 - *For more information on Community Food Growing Projects click [here](#).*

Events/Talks Related to Planetary Health (Some Examples):

- [Lunch Hour Lecture](#) series including talks like 'The Future of Global Health Systems', which discussed whether global health systems will deliver on sustainable development goals, and 'Our Planet, Our Health', which explored the links and interdependencies between our health and the health of our planet.

Learning from Local Environmental Justice Leaders

- ['Public Health Voices'](#) is a webinar series, which aims to engage with and showcase the importance of interdisciplinarity in public health research and training. By working together with multiple disciplines, and in collaboration with local communities, local government, the NHS, the third sector, and industry, we can have a real impact on public health research and practice. One such event ['Voices from COP27'](#) held in November 2022 discussed climate change, health and justice, and what needs to be done to take action towards achieving the world's collective climate goals.

Cultural Events Related to Planetary Health:

- ['Public Value of Art: Connecting Value Creation and Culture'](#) was an event held in July 2022 by the UCL Institute for Innovation and Public Purpose (IIPP) as part of the ['Walking the talk: Getting serious about the UN Sustainable Development Goals'](#) event series.

Local Volunteering Opportunities (Some Examples):

UCL's student union has a Volunteering Directory that offers over 500 active local volunteering opportunities across London, which include some of the following related to building community resilience to anthropogenic environmental impacts.

- The Green Gym – keep fit whilst doing some hands-on conservation work.
- The Calthorpe Project – help out at this community-run organic garden and green oasis, in the middle of Kings Cross.
- FoodCycle – use perfectly good food that would otherwise get thrown away, and use it to operate community cafes for people on low incomes.
- Sustrans – UK's leading sustainable transport charity. Their vision is a world in which people choose to travel in ways that benefit their health and the environment.
- Healthy Planet UCL Schools Project provides free workshops for primary school children on topics related to our environments and health. The organisation, Healthy Planet UK, raises awareness of the links between climate change and health.

Students at UCL also have the opportunity to become [Sustainability Ambassadors](#). They are trained in sustainability by the organisation ['Students Organising for Sustainability'](#), and can focus on bringing about change in accordance with the UN's Sustainable Development Goals (for more information on how UCL is helping achieve these, click [here](#)) and UCL's own sustainability goals for a greener institution.

Outdoor Programme

- [Urban Walks](#) – a London based series designed to engage with those outside academia to look at a wide variety of issues facing urban life. Each walk is also free and open to the public. One such walk explored the design of green and blue infrastructure, tensions between urban development and natural resources, and included discussion of possible actions to increase biodiversity.

| | |
|-------------------------------------|------------|
| Section Total (14 out of 15) | 93% |
|-------------------------------------|------------|

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

Campus Sustainability

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

| 1. Does your medical school and/or institution have an Office of Sustainability? | |
|--|--|
| 3 | Yes, there is an Office of Sustainability with multiple full-time staff dedicated to campus sustainability. If the Office of Sustainability serves the entire campus, there is at least one designated staff member for sustainability at the hospital and/or medical school. |
| 2 | There is an Office of Sustainability with one or more full-time staff dedicated to campus sustainability, but no specific staff member in charge of medical school and/or hospital sustainability. |
| 1 | There are no salaried sustainability staff , but there is a sustainability task force or committee |
| 0 | There are no staff members or task force responsible for overseeing campus sustainability |
| <p><i>UCL has a Sustainability Team with a large number of full-time staff dedicated to campus sustainability. The team is composed of: a Sustainability Director; three Senior Sustainability Managers (including one for Energy & Carbon, another one for the Built Environment and one for ESMS & EHS management systems); an Access and Inclusion Manager; an Assistant Sustainability Manager (Energy); a Sustainability Projects Lead; a Sustainability Officer; a Sustainability Labs Advisor; a Logistics Manager; a Senior Communications Manager; a Facilities Waste Manager; a Bloomsbury Heat and Power Manager; a Building Management System Energy Engineer; and last but not least, a Building Management System Principal Engineer.</i></p> <p><i>UCL Medical School has several voluntary members of staff dedicated to faculty sustainability, namely a 'Faculty of Medical Sciences Lead Green Champion' and a 'Medical School Green Lead' that work closely with the UCL Sustainability Team. They help make the office/teaching spaces more sustainable, advocate for events and inclusion of sustainability and planetary health teaching in the medical curriculum. Broadly, they help UCL in reaching its goals of becoming a net zero carbon institute by 2030 and providing sustainability education for all students by 2024.</i></p> <p><i>The implementation of a new role at the Faculty of Medical Sciences as Vice Dean of Sustainability is currently in the works and it is expected someone will fill the post in the near future.</i></p> <p><i>University College London Hospital has the UCLH Sustainability Steering Group, a team of senior managers and clinicians from pharmacy, radiography, procurement, information systems, and estates and facilities management. They work to reduce the hospital's carbon emissions, reduce waste and remain sustainable.</i></p> | |

2. How ambitious is your institution/medical school plan to reduce its own carbon footprint?

| | |
|---|--|
| 5 | The institution/medical school has a written and approved plan to achieve carbon neutrality by 2030 |
| 3 | The institution/medical school has a written and approved plan to achieve carbon neutrality by 2040 |
| 1 | The institution/medical school has a stated goal of carbon neutrality by 2040 but has not created a plan to reach that goal or the plan is inadequate |
| 0 | The institution/medical school does not meet any of the requirements listed above |

UCL (our parent institution) has a clear stated goal of carbon neutrality by 2030, with a [plan](#) in place to achieve this goal. Moreover, UCL also set a goal in 2019 to have [net zero carbon buildings by 2024](#). Carbon saving is planned to be embedded in every aspect of UCL, from operation of buildings, processing of waste, buying products, upgrading UCL heating systems, to travel and teaching.

For more information on how UCL is achieving this change, look at the report [Degrees of Change – Reducing UCL's Carbon Emissions](#).

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

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

As of the 1st August 2019 UCL's electricity supply is 100% from renewable electricity (sources include solar, wind or hydro). Each unit of electricity bought by the university is backed by an externally verified Renewable Energy Guarantee of Origin (REGO) certificate. There are 413 solar panels on campus, which in 2019 generated a total power of 96,750 kWh.

For more information on where UCL gets its energy, click [here](#), or read the report [Degrees of Change – Reducing UCL's Carbon Emissions](#).

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

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

In order to address the ambitious institutional sustainability strategy of being carbon neutral by 2030, the [UCL Sustainable Building Strategy](#) was created to set out minimum sustainability targets for new builds, refurbishment, fit-out and minor works done on existing buildings. The strategy guidelines are outlined below:

- *All major projects (>£10m) must be presented with proposals to minimise energy use intensity (EUI).*
- *BREEAM Excellent or above must be achieved on all new build and major refurbishment projects, with due regard for life cycle value (defined in the UCL Building Standard 2020 guidelines).*
- *For major projects, it is also a requirement to reduce embodied carbon of superstructure and substructure by 40% and/or to <500 kgCO₂ /m² (see RIBA Sustainable Outcomes Guide, modules A, B & C).*
- *Smaller refurbishment or fit out projects – must achieve Ska ‘Gold’ certification; or comply with all relevant Mini-Ska requirements, as agreed with Sustainable UCL.*
- *All construction projects target zero construction waste to landfill and provide clear documentation to demonstrate how this has been approached and achieved.*
- *For new build projects with standard facilities at least 40% improvement over baseline water consumption must be targeted (calculated in the BREEAM Wat 01 Calculator).*
- *All projects involving external landscaping are expected to target a net biodiversity gain. Off-site solutions may be agreed where onsite solutions are not feasible.*
- *All built environment projects will demonstrate a balanced approach to sustainable design that includes staff and student health, well-being, accessibility and inclusion.*
- *A Post Project Review will take place on all projects to capture lessons learned. For major and/or business critical projects (typically >£10m), Post Occupancy Evaluation will be carried out by an independent third party.*

For more information about the sustainable building practices used at UCL, visit the [Sustainable Construction](#) website.

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

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

UCL is located in London's city centre where unsustainable forms of transportation like cars are not generally used by students. Medical students walk or cycle to university and when travelling to hospitals placements that might be slightly away from the main campus, public forms of transport, like the underground (the tube) or London's public electric bus service are mostly used. The medical school is within walk-in distance to the rest of the university's teaching buildings.

The university published the [Green Travel Plan UCL](#) in 2015. These are guidelines for staff and students that aim to:

- *Enable more efficient and optimal travel and transport choices to be made.*
- *Improve sustainability and reduce our social and environmental impact from travel and transport.*
- *Improve staff and student health, well-being and work life balance.*
- *Enhance business resilience and contingency during periods of travel disruption.*
- *Contribute to and influence the delivery of regional and local transport policies.*

Moreover, environmentally friendly transportation strategies are heavily advertised and encouraged by the university. Advertisement is done in the form of articles published on UCL's main webpage or even podcasts in which walking/cycling routes are suggested, the benefits of walking/cycling both on health and sustainability and many other benefits are discussed.

Initiatives like [Cycle UCL](#) and [Walk UCL](#) are also heavily encouraged.

UCL has also implemented a [Bike Buddy Scheme](#) that aims to connect experienced cyclists with staff and students who are new to commuting by bike to assist them in feeling safe on their route.

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

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

UCL currently recycles ~60% of waste and are committed to dealing with waste responsibly, where none of UCL's office waste is sent to land-fill. There are composting bins and recycling bins throughout the medical school and the rest of the university available to students and faculty. See UCL's [Waste and Recycling](#) website.

To reduce items being disposed of, UCL encourages the re-use of any unwanted but re-usable items and furniture through our waste action re-use portal, known as [Warp-it](#). [Laboratory waste](#) is also being managed appropriately and compost and recycling options are available to users.

There are clear guidelines for [non-hazardous recyclable waste](#) and bins for recyclable materials are put around campus, including into offices, kitchens and laboratories:

- Approximately 95% of the load is sorted into recyclable fractions; the remaining 5% is taken to the Cory Energy from Waste plant at Belvedere where it is incinerated with energy recovery.
- There are large glass recycling bins located around UCL campus which are emptied once a week by Suez, the Sodexo waste contractor.
- Used toners are stored at 132 Hampstead Road for collection by Environmental Business Products. They are then remanufactured as part of the Each One Counts charity funding scheme.
- Many UCL buildings have a battery recycling bin located near the main building entrance or reception.

[Food waste](#) from catering is collected at facilities and is emptied once a week by bio-collectors where the waste is then taken to the bio-collectors plant where it is treated by anaerobic digestion. The methane is captured and released back into the national grid and the remaining material is used as high-quality fertiliser.

Composting is widely available throughout the campus albeit indirectly, however there is some room for improvement. There might be a benefit in advertising the existence of a composting program available and work needs to be done in educating and encouraging students and staff to properly separate their waste when disposing of it in the bins around campus.

Projects like the [Big Compost Experiment](#) are greatly encouraged and celebrated.

[ClubZero](#), a scheme incentivising the use of reusable hot drinks cups across UCL campus was launched early 2022, and aims to eliminate single-use cups at each of the university owned cafes.

[Food at UCL](#) also works with [Zero Food Waste UCL](#), a student-led group focussing on redistributing salvageable food from UCL cafes.

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

| | |
|---|---|
| 3 | Yes, the medical school has adequate sustainability requirements for food and beverages, including meat-free days or no red-meat, and is engaged in efforts to increase food and beverage sustainability. |
| 2 | There are sustainability guidelines for food and beverages, but they are insufficient or optional . The medical school is engaged in efforts to increase food and beverage sustainability. |
| 1 | There are sustainability guidelines for food and beverages, but they are insufficient or optional . The medical school is not engaged in efforts to increase food and beverage sustainability. |

| | |
|---|---|
| 0 | There are no sustainability guidelines for food and beverages. |
| <p>UCL has a Healthy and Sustainable Food Policy Strategy that ensures the university (including the medical school) meets high environmental and socially responsible standards for the food offered through its catering partners, and encourages and promotes healthy eating amongst students and staff.</p> <p>Some of UCL's sustainable food initiatives include:</p> <ul style="list-style-type: none"> • Selling and promoting Fairtrade products throughout all the outlets and relevant activities turning coffee waste into fuel. • At least 50% of all menus are vegetarian and vegan across catering and accommodation. • Hospitality service is vegetarian and vegan as standard. • Ditch the Disposable initiative where, in order to save 1 million single-use cups going to waste every year at UCL, disposable cups are now priced at 15p. • Community food growing projects • Eco-Takeout Scheme to help reduce single-use disposables. • Water fountains located throughout campus. • Powered by Plants initiative is a UCL-wide campaign to make all events and meetings 100% vegetarian. | |

| 8. Does the medical school or institution apply sustainability criteria when making decisions about supply procurement? | |
|--|---|
| 3 | Yes, the medical school has adequate sustainability requirements for supply procurement and is engaged in efforts to increase sustainability of procurement. |
| 2 | There are sustainability guidelines for supply procurement, but they are insufficient or optional . The medical school is engaged in efforts to increase sustainability of procurement. |
| 1 | There are sustainability guidelines for supply procurement, but they are insufficient or optional . The medical school is not engaged in efforts to increase sustainability of procurement. |
| 0 | There are no sustainability guidelines for supply procurement. |
| <p>UCL has a Sustainable Procurement Policy 2010 which applies to all UCL Procurement Activity and Governs UCL's approach to procurement.</p> <p>Responsible Procurement at UCL is a collaboration between the Sustainability and Procurement Team. They follow the Responsible Procurement Code, which is an external verification based on the Government's Flexible Framework Tool for Procurement. In 2019 UCL was audited and awarded Gold Certification, having achieved Silver in 2015. View the 2019 RPC Audit Report and 2015 RPC Audit Report for more detail.</p> <p>The aims for the Responsible Procurement Code include:</p> <ul style="list-style-type: none"> • Increasing engagement with suppliers – through launching the Net Positive tool, developing tailored action plans for all suppliers. This will address Modern Day Slavery in supply chains. • Developing a circular economy model – where reuse, repair and recycling is embedded into procurement strategies. • Up-skill UCL staff in sustainable procurement – by utilising the expertise of both the procurement and sustainability team; developing training for procurement staff so they can make responsible choices. • Ensuring sustainability is considered in ALL purchases – primarily through contributing to tender specifications, developing policies and processes and creating buying standards. | |

- Monitor procurement for sustainability risk and opportunity, to prioritise action accordingly – UCL have performed a Defra prioritisation exercise, which evaluates UCL's spend and identifies focus areas. The NETpositive tool helps in addressing risk down the procurement supply chain.

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

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

There are several guidelines to help make any event happening at the university more sustainable. However these guidelines are strongly recommended, they are not a requirement or incentivised.

Examples of guidelines or initiatives recommended by UCL:

- [Sustainable Events Guideline](#) available to staff and students
- [Sustainable Event Toolkit](#)
- [How to Order Sustainable Catering UCL](#)
- The initiative [Powered By Plants](#) aims to promote the creation of events that are vegetarian or vegan.
- A 'Ditch the Disposables Guide' has been made to aid event organisers in alerting invitees of the sustainable nature of the event.

UCL Students Union is currently looking into introducing a Sustainability Officer for each society that could, amongst other things, make sure club events follow the university's sustainability guidelines.

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

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

Sustainable UCL has developed a programme called [LEAF](#) (Laboratory Efficiency Assessment Framework) that aims to improve sustainability and efficiency of laboratories. LEAF is a standard that contains actions which lab users can take to save plastics, water, energy and other resources. By taking part in the programme, laboratories will reduce their carbon emissions and create an environment that supports research quality. LEAF is open to both staff and students working in laboratories or teaching facilities including medicine.

[Laboratory waste](#) is also being managed appropriately and compost and recycling options are available to all users.

UCL has a [Sustainable Procurement Policy 2010](#) which applies to all UCL Procurement Activity and Governs UCL's approach to procurement.

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

| | |
|---|--|
| 4 | The institution is entirely divested from fossil fuels and has made a commitment to reinvest divested funds into renewable energy companies or renewable energy campus initiatives. |
| 3 | The institution is entirely divested from fossil fuels. |
| 2 | The institution has partially divested from fossil fuel companies or has made a commitment to fully divest , but currently still has fossil fuel investments. |
| 1 | The institution has not divested from fossil-fuel companies, but faculty and/or students are conducting organized advocacy for divestment. |
| 0 | Yes, the institution has investments with fossil-fuel companies and there have been no efforts to change that. |

UCL announced it was to divest from existing stocks of fossil fuels by the end of 2019 in line with the [UCL sustainability strategy 2019-2024](#). [UCL's Ethical Investment Policy](#) included requirements to divest from companies involved in fossil fuel extraction or production. (Click [here](#) for more information.)

UCL's new 2020 [Policy for Socially Responsible Investment](#) has adopted investment strategies that seek to minimise and ideally eliminate irresponsible corporate behaviours, including environmental degradation, and campaigns to drive action within the institution, like [Positive Climate](#), were created to see to it that by 2030 UCL is generating all of its renewable energy.

Section Total (31 out of 32)

97%

Back to summary page [here](#)

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

Grading

Section Overview

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

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

**Within each grade bracket, a score in the top 5% (5 to 9%), receives a "+", and a score in the bottom 5% (0-4%) receives a "--". For example, a percentage score of 78% would be a B+.*

Planetary Health Grades for the UCL School of Medicine

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

| Section | Raw Score % | Letter Grade |
|---|---------------------------------|--------------|
| Planetary Health Curriculum (30%) | $(56 / 72) \times 100 = 77.8\%$ | B+ |
| Interdisciplinary Research (17.5%) | $(12 / 17) \times 100 = 70.6\%$ | B |
| Community Outreach and Advocacy (17.5%) | $(10 / 14) \times 100 = 71.4\%$ | B |
| Support for Student-led Planetary Health Initiatives (17.5%) | $(14 / 15) \times 100 = 93.3\%$ | A |
| Campus Sustainability (17.5%) | $(31 / 32) \times 100 = 96.9\%$ | A+ |
| Institutional Grade | 81.5% | A- |

Report Card Trends

Section Overview

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

PHRC Trends for University College London

