

APRIL 2021

PLANETARY HEALTH REPORT CARD



2020-2021 SUMMARY REPORT
AN INTERNATIONAL MEDICAL SCHOOL
INITIATIVE

Prepared by:

Medical students and faculty from 62
medical schools in the U.S., U.K., Ireland, and Canada

With Support from:

Medical Students for a Sustainable Future
Planetary Health Alliance
Practice Greenhealth
Healthcare Without Harm
Students for Global Health
Global Consortium on Climate and Health Education
Human Health & Climate Change Club at UCSF

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ABOUT THE INITIATIVE

The Planetary Health Alliance defines planetary health as “a field focused on characterizing the human health impacts of human-caused disruptions of Earth's natural systems.” 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 schools' institutional priorities do not reflect the urgency of this danger to human health.

As future health professionals, we must be prepared to address the impacts of human-caused environmental changes on our patients' health. This preparation is in the hands of the institutions providing our medical training. It is imperative that we hold our institutions accountable for educating medical students about the health impacts of climate change and other anthropogenic environmental changes, generating research to better understand health impacts and solutions, supporting related student initiatives, embracing sustainable practices as much as possible, and engaging with surrounding communities that are most affected by environmental threats. Because climate change and environmental threats disproportionately affect marginalized 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 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.

GOALS

- Operate as a “needs assessment” tool to identify institutions’ planetary health strengths and opportunities for growth.
- Assemble synthesized, institution-specific information on planetary health resources useful for faculty and students.
- Facilitate cross-institutional dialogue and sharing of planetary health resources.
- Track progress in implementing planetary health curriculum and resources.
- Advance the global planetary health movement in pursuit of a healthier and more equitable world.

SECTIONS OF THE REPORT CARD

Planetary Health Curriculum



Today's medical students will be on the frontlines of tackling climate change's impacts on human health. Therefore, it is critical that medical students are trained to understand the health effects of climate change, as well as planetary health 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.

Interdisciplinary Research in Health and Environment



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.

Community Outreach and Advocacy



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 marginalized populations. 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.

Support for Student-Led Planetary Health Initiatives



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.

Campus Sustainability



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 health systems operate, from where energy is sourced, to how health systems' infrastructure is built, to what companies systems invest in. Medical schools, clinics, and hospitals must set the standard for sustainable practices.

METRICS



PLANETARY HEALTH CURRICULUM

Today's medical students will be on the frontlines of tackling the health effects of climate change. Therefore, it is critical that medical students are trained to understand the health effects of climate change, as well as planetary health 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.

General

- 1.1** Did your medical school offer elective courses to engage students in Education for Sustainable Healthcare or Planetary Health in the last year?

Health Effects of Climate Change

- 1.2** Does your medical school curriculum address the relationship between extreme temperature health risks and climate change, as well as the socioeconomic/racial disparities in extreme heat exposure?
- 1.3** Does your medical school curriculum address the impacts of extreme weather events on individual health and/or on healthcare systems?
- 1.4** Does your medical school curriculum address the impact of climate change on the changing patterns of infectious diseases?
- 1.5** Does your medical school curriculum address the cardiorespiratory health effects of climate change, including air pollution?
- 1.6** Does your medical school curriculum address the mental health and neuropsychological effects of environmental degradation and climate change?
- 1.7** Does your medical school curriculum address the relationships between health, individual patient food and water security, ecosystem health, and climate change?

For more detailed information on metric scoring, please visit our website at phreportcard.org.

METRICS

- 1.8 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, children, homeless populations, and older adults?
- 1.9 Does your medical school curriculum address the unequal health impacts of climate change globally?

Environmental Health & the Effects of Anthropogenic Toxins on Human Health

- 1.10 Does your medical school curriculum address the reproductive health effects of industry-related environmental toxins (e.g. air pollution, pesticides)?
- 1.11 Does your medical school curriculum address important human-caused environmental threats that are relevant to the university's surrounding community?
- 1.12 Does your medical school curriculum address the unique climate and environmental health challenges that have impacted and are impacting Indigenous communities?
- 1.13 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, and older adults?

Sustainability

- 1.14 Does your medical school curriculum address the environmental and health co-benefits of a plant-based diet?
- 1.15 Does your medical school curriculum highlight the waste generated by the healthcare system and identify ways to advocate for and implement sustainable best practices in health care?

Clinical Applications

- 1.16 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?
- 1.17 In training for patient encounters, does your medical school's curriculum introduce strategies for taking an environmental history or exposure history?

For more detailed information on metric scoring, please visit our website at phreportcard.org.

METRICS

Administrative Support for Planetary Health

- 1.18** Is your medical school currently in the process of improving Education for Sustainable Healthcare (ESH)/planetary health education?
- 1.19** How well are the aforementioned planetary health/Education for Sustainable Healthcare topics integrated longitudinally into the core curriculum?
- 1.20** Bonus: Does your medical school have a program that offers incentives for faculty/departments to develop new planetary health/ESH courses and/or incorporate planetary health/ESH into existing courses?

*For more detailed information on metric scoring,
please visit our website at phreportcard.org.*

METRICS



INTERDISCIPLINARY RESEARCH IN HEALTH AND ENVIRONMENT

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 support 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.

- 2.1 Are there researchers engaged in planetary health research and healthcare sustainability research at your medical school?
- 2.2 Is there a dedicated department or institute for interdisciplinary planetary health research at your institution?
- 2.3 Is there a process by which communities disproportionately impacted by climate change and environmental injustice give input or make decisions about the research agenda at your medical school?
- 2.4 Does your institution have a planetary health website, or a website centralizing various campus resources related to health and the environment?
- 2.5 Has your institution recently hosted a conference or symposium on topics related to planetary health?
- 2.6 Has your institution or medical school joined the Planetary Health Alliance and/or the Global Consortium on Climate and Health Education?

For more detailed information on metric scoring, please visit our website at phreportcard.org.

METRICS



COMMUNITY OUTREACH AND ADVOCACY

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.

-
- 3.1** Does your medical school partner with community organizations to promote planetary and environmental health?
 - 3.2** Does your medical school offer community-facing courses or events regarding planetary health?
 - 3.3** Does your medical school have regular coverage of issues related to planetary health and/or sustainable healthcare in university update communications?
 - 3.4** Does the medical school offer continuing medical education (CME) courses that address planetary health and/or sustainable healthcare?
 - 3.5** Do hospitals affiliated with your medical school have accessible educational materials for patients about environmental health exposures?
 - 3.6** Do hospitals affiliated with your medical school have accessible educational materials for patients about climate change and health impacts?

For more detailed information on metric scoring, please visit our website at phreportcard.org.

METRICS



SUPPORT FOR STUDENT-LED PLANETARY HEALTH INITIATIVES

Planetary health is a young field and, as young people facing a future deeply shaped by climate change, students are often some of the first at an institution to engage with it. Institutions should provide support for students to engage in sustainability quality improvement (QI) initiatives, discover mentors in their area of interest, and receive funding for planetary health projects.

- 4.1 Does your institution offer support for medical students interested in enacting a sustainability initiative?
- 4.2 Does your institution offer opportunities for medical students to do research related to planetary health and/or sustainable healthcare?
- 4.3 Does the medical school have a webpage where medical students can find specific information related to planetary health and/or sustainable healthcare activities and mentors within the medical school? For example, projects achieved, current initiatives underway at the medical school and/or contact of information of potential mentors.
- 4.4 Does your medical school have funded, registered student groups dedicated towards fostering a culture of planetary health engagement, scholarship, and advocacy on campus, supported by faculty advisors?
- 4.5 Is there a student liaison representing sustainability interests who serves on a medical school or institutional decision-making council to advocate for sustainability best practices?

For more detailed information on metric scoring, please visit our website at phreportcard.org.

METRICS

- 4.6** In the past year, has the institution had one or more co-curricular planetary health programs or initiatives in the following categories?
- 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.
 - Panels, speaker series, or similar events related to planetary health that have students as an intended audience.
 - 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.
 - Cultural arts events, installations or performances related to planetary health that have students as an intended audience.
 - Local volunteer opportunities related to building community resilience to anthropogenic environmental impacts.
 - Wilderness or outdoors programs (e.g., that organize hiking, backpacking, kayaking, or other outings for students) that follow Leave No Trace principles.

For more detailed information on metric scoring, please visit our website at phreportcard.org.

METRICS



CAMPUS SUSTAINABILITY

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.

- 5.1** Does your medical school and/or institution have an Office of Sustainability?
- 5.2** Does your medical school and/or institution have a stated goal of carbon neutrality by 2050?
- 5.3** Do buildings/infrastructure used by the medical school for teaching (not including the hospital) utilize renewable energy?
- 5.4** 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 rating system or sustainable building code/guideline?
- 5.5** Has the medical school implemented strategies to encourage and provide environmentally-friendly transportation options for students and reduce the environmental impact of commuting?
- 5.6** Does your medical school have an organics recycling program (compost) and a conventional recycling program (aluminum/paper/plastic/glass)?
- 5.7** Does the medical school apply sustainability criteria when making decisions about the campus food and beverage selections?
- 5.8** Does the medical school or associated institution apply sustainability criteria when making decisions about supply procurement?

For more detailed information on metric scoring, please visit our website at phreportcard.org.

METRICS

- 5.9 Are there sustainability requirements or guidelines for events hosted at the medical school?
- 5.10 Does your medical school have programs and initiatives to assist with making lab spaces more environmentally sustainable?
- 5.11 Does your institution's endowment portfolio investments include fossil-fuel companies?

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2020-2021 Summary Report
North America: United States & Canada

Planetary Health Report Card

Overall
Curriculum
Research
Community Outreach & Advocacy
Support for Student-led Initiatives
Campus Sustainability

	Overall	Curriculum	Research	Community Outreach & Advocacy	Support for Student-led Initiatives	Campus Sustainability
Emory University	A-	B+	A-	B	A	A-
UC Berkeley-UCSF Joint Medical Program	A-	C+	A-	A	A+	A
University of California San Francisco	B+	B	A+	B	A-	B+
Stanford Medical School	B	B	B	C	A	A
Perelman SOM at University of Pennsylvania	B	C+	A-	B	B	B+
Harvard Medical School	B	C+	B+	B-	A-	B
Brown University	B-	C+	B	C	B	B-
University of Washington	B-	D	A-	B	B-	B
University of California Los Angeles	C+	C-	B	C	B	A-
University of Massachusetts Medical School	C+	B-	D	B-	B	C+
Boston University	C+	D	B+	D+	A-	B-
Georgetown University	C+	C	C	D+	B	B
University of Virginia	C	D-	B-	D+	B	B
University of Arkansas for Medical Sciences	C	B	D	B-	C	F+

80-100% = A, 60-79% = B, 40-59% = C, 20-39% = D, 0-19% = F

Scores within top or bottom 5% awarded + or -, respectively




= School that participated in the 2019-2020 PHRC



2020-2021 Summary Report
North America: United States & Canada (Continued)

Planetary Health Report Card

Overall
Curriculum
Research
Community Outreach & Advocacy
Support for Student-led Initiatives
Campus Sustainability

McGill University 	C	C	C	C-	C-	B-
University of Hawai'i 	C	C-	C	C-	C	C
University of North Carolina	C	C-	B+	D	B-	D
Columbia University	C	D	A-	D-	B-	B-
University of Utah	C-	C-	C-	D+	B-	C
University of Minnesota 	C-	C-	C-	F	B	C+
University of Rochester	C-	C-	D+	D+	B-	C-
Creighton University	C-	C	D	D+	B	D
Indiana University	D+	C-	D	F	C	C
Geisel School of Medicine at Dartmouth	D	D-	D+	F	A-	D
Loyola Stritch School of Medicine	D	D	D+	D	D-	C+
Virginia Commonwealth University	D	F	D	D	C	D+

80-100% = **A**, 60-79% = **B**, 40-59% = **C**, 20-39% = **D**, 0-19% = **F**

Scores within top or bottom 5% awarded + or -, respectively

 = School that participated in the 2019-2020 PHRC

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2020-2021 Summary Report
United Kingdom

Planetary Health Report Card

Overall
Curriculum
Research
Community Outreach & Advocacy
Support for Student-led Initiatives
Campus Sustainability

	Overall	Curriculum	Research	Community Outreach & Advocacy	Support for Student-led Initiatives	Campus Sustainability
Keele University	B	B	B	D	B+	A+
University College London	B-	B	C+	F+	B	A+
University of Exeter	B-	B-	A+	D	C	A-
Brighton and Sussex Medical School	B-	B	B+	D	B	B-
Peninsula Medical School	B-	B	B	C	C+	B-
University of Aberdeen	B-	C+	C	B	C+	B
Queens University Belfast	B-	B	C	D	B+	C+
Norwich Medical School (UEA)	C+	C	B	D	B+	B+
University of Edinburgh	C+	C	B	C	B-	B+
Queen Mary University of London	C+	B	C	C	C+	B-
King's College London	C+	C	C	C+	C	B-
Imperial College London	C	C+	C	C-	C+	A-
Leeds Medical School	C	B	D+	C-	C	C+
University of Nottingham	C	C	C	F+	B-	B+

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Scores within top or bottom 5% awarded + or -, respectively

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2020-2021 Summary Report
United Kingdom (Continued)

Planetary Health Report Card

Overall

Curriculum

Research

Community Outreach & Advocacy

Support for Student-led Initiatives

Campus Sustainability

	Overall	Curriculum	Research	Community Outreach & Advocacy	Support for Student-led Initiatives	Campus Sustainability
University of Bristol	C	D+	C+	C	B-	C
University of Sheffield	C	C+	C	C-	C-	C
University of Dundee	C	C+	B	F+	C	C-
Newcastle University United Kingdom	C	C+	C-	F	C-	B+
University of Birmingham	C	D-	B	F	C+	B
University of Oxford	C-	C-	B-	F	C+	C+
Lancaster University	C-	C+	D-	D-	C-	C+
Swansea University	C-	C-	F+	F+	C-	A+
University of Manchester	C-	F+	C+	D	D+	A+
University of Glasgow	C-	D	C+	F+	B-	C
University of Cambridge	C-	C	D+	F	C	C
Warwick Medical School	D	D	D+	F+	D	C
St. George's Medical School	D	F+	D	D	D-	B
Hull York Medical School	D	D-	C-	F-	C	C

80-100% = A, 60-79% = B, 40-59% = C, 20-39% = D, 0-19% = F
Scores within top or bottom 5% awarded + or -, respectively

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2020-2021 Summary Report
United Kingdom (Continued)

Planetary Health Report Card

Overall
Curriculum
Research
Community Outreach & Advocacy
Support for Student-led Initiatives
Campus Sustainability

	Overall	Curriculum	Research	Community Outreach & Advocacy	Support for Student-led Initiatives	Campus Sustainability
Newcastle University Medicine Malaysia	D-	C	D-	F-	F-	D
Leicester Medical School	D-	F	D-	F-	C-	C-
Cardiff Medical School	F+	D-	D-	F	F	F

80-100% = **A**, 60-79% = **B**, 40-59% = **C**, 20-39% = **D**, 0-19% = **F**
Scores within top or bottom 5% awarded + or -, respectively

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2020-2021 Summary Report
Ireland

Planetary Health Report Card

Overall

Curriculum

Research

Community Outreach & Advocacy

Support for Student-led Initiatives

Campus Sustainability

University College Cork	C	D	C+	C-	C	B+
National University of Ireland Galway	C-	D+	B-	F+	C-	B+
Royal College of Surgeons in Ireland	C-	C	D+	D	C+	C-
Trinity College Dublin	C-	D	D	F+	D	A-
University College Dublin	D+	C-	D+	F+	D	C

80-100% = **A**, 60-79% = **B**, 40-59% = **C**, 20-39% = **D**, 0-19% = **F**
Scores within top or bottom 5% awarded + or -, respectively

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RECOMMENDATIONS

Based on the information compiled in these school-specific planetary health report cards, we present the following 13 recommendations:

1. Utilize Existing Resources

Appreciate the work that has already been done in advancing planetary health across the world and draw upon resources from other institutions and organizations when developing learning objectives or generating new resources. *(Hopefully, examples highlighted throughout these recommendations will help. For more resources, please see our [website](#).)*

Examples

In creating their climate curriculum proposals, the [Stanford Climate and Health](#) team drew from resources like the [MS4SE Curriculum Guide](#), the [THEESUS framework and other social determinants framing](#) from Dr. Cheryl Holder, the [U.S. National Climate and Health Assessment](#), the Global Consortium on Climate and Health Education's "[key competencies](#)", and APHA's [Climate Change, Health, and Equity Guide](#), among others.

Other useful resources include:

- [Planetary Health Alliance education database](#)
- [Centre for Sustainable Healthcare Sustainable QI project resources](#) for educators and students

2. Learning Objectives

Formalize curricular content on both planetary health and sustainable healthcare with students by developing testable learning objectives. The curricular content should emphasize skill-building as well as clinical knowledge.

Examples

A team of medical students at Emory University School of Medicine established and published [this set of climate and health learning objectives](#) for preclinical medical education, creating an integrated curricular plan of climate and health content.

RECOMMENDATIONS

3. Curricular Thread

Planetary health (PH) and Education for Sustainable Healthcare (ESH) is relevant to every organ system, and spaced repetition is more effective for learning. Therefore, PH and ESH should be a cross-curricular theme integrated into existing lectures, small groups, and projects whenever possible, rather than a standalone lecture. Faculty members should be empowered, educated, and incentivized to integrate the topics into their existing content.

Examples

As mentioned above, Emory's newly accepted curriculum proposal contains planetary health topics integrated throughout the curriculum, including in at least three small-group cases and in the Community Learning and Social Medicine community-based requirement. At the University of California, San Francisco, a team of students and faculty have created a novel, longitudinal climate change and sustainability curriculum infused into the core preclinical education, called the CHASE initiative. In the new curriculum at Queen's University Belfast, "Global and Population Health" is one of the main four themes for longitudinal integration, and "Social Accountability and Sustainable Healthcare" is one of seven emphasized sub-themes.

4. Electives and Student Selected Components

In addition to the core curricular content on planetary health and environmental health required for all students, provide opportunities for deeper exploration for interested students, such as electives, community engagement opportunities, and optional reading.

Examples

At Queen's University Belfast, students have the opportunity to join one of three ESH/PH student selected components: "Healthcare needs smaller feet- Sustainable Healthcare: Theory into practice", "SusQI", and "Global Health: Concepts, Trends, and Priorities" which includes discussions on climate change. Plymouth Medical School offers a "Green Practice Special Study Unit" elective which focuses on applying the UK national "[Greener Practice](#)" model to a rural general practice. University of Massachusetts has an eight-week Climate Action lecture-series course. UCSF School of Medicine offers three student-organized electives related to PH: 1. Earth Health, 2. Women's Health, Environment, and Health Professional Activism, and 3. Rethinking Farm-Food-Health-Climate Connections. A course on climate change is also one of UCSF's options for a required two-week deep-dive research-based "[Inquiry Immersion](#)" for medical and pharmacy students.

RECOMMENDATIONS

5. Communication in Clinical Scenarios

[Research](#) shows that community members rely on their primary care doctor for information on climate change. However, most medical students feel unprepared to answer patient questions on climate change. Therefore, medical schools should include clinical curriculum on taking an environmental history and communicating information on planetary health to patients.

Examples

At Georgetown University SOM, there is an “Environmental Health and Climate Change Workshop” where climate change communication specialists present strategies for talking about climate change with patients, followed immediately by a role-play exercise. In an optional lecture at Harvard, opportunities for bringing up climate change with patients were proposed, such as counseling patients on the risks that extreme heat might pose to them. University of Nottingham provides medical students with a “Sustainable Healthcare” resource bank that includes websites, papers and podcasts to increase students’ knowledge of planetary health and sustainable healthcare. The resource bank includes resources on speaking to patients about the health impacts of climate change.

6. Planetary Health in the Global Context

The ecological crisis is a global issue and given the interconnected nature of human health globally, medical students should understand the health impacts of climate change throughout the world, its disproportionate effects on low-resource nations, and impacts on global stability through mechanisms such as food security. In teaching about planetary health and climate change, curriculum should acknowledge how Indigenous communities who have long lived in harmony with the planet are disproportionately affected by climate change and many climate solutions require partnerships with Indigenous populations.

Examples

In partnership with [Green at Barts Health](#), Queen Mary University London raises awareness of the unequal impacts of climate change globally, exploring the topic in depth both in lectures and seminars. Brighton and Sussex medical school have lectures titled ‘Global & Social responsibility in healthcare’, ‘Global Health’ and a Global Health day. At University of Hawaii JABSOM, the core curriculum addresses Native Hawaiian health disparities in great depth and additional webinars, such as “Connecting Racism, the Climate Crisis, and Indigenous Knowledge” address the interconnected nature of Native Hawaiian health philosophy and environmental health. At University of Massachusetts, a required lecture on climate change, social justice, and health organized and presented by medical students discussed the environmental, health, and humanitarian impacts of the Dakota Access Pipeline.

RECOMMENDATIONS

7. Equity Focus

Ensure that planetary health and environmental health curricular content and auxiliary opportunities center the disproportionate impact of all health effects on vulnerable populations, such as communities of color, low-income communities, Indigenous populations, and older adults.

Examples

At the University of Virginia, [The Equity and Environment Fund](#), supported by the Civic Engagement Subcommittee, is available for students/student groups for community-based initiatives or projects that sit at the intersection of equity, justice, and sustainability. Keele Medical School has an emphasis on health inequalities, providing lectures and workshops on global health and public health that look at inequalities affecting marginalized communities, including impacts of air pollution, droughts and migration on refugees and low-income populations. At University of Massachusetts, these topics are covered in several different optional and required lectures; lecturers discuss the consequences of redlining, disparities in exposure to pollution, and disparities in healthcare delivery as it relates to climate-change-related disease.

8. Support Students

Create funded opportunities for students to engage with planetary health, environmental health, and sustainability, such as sustainability grants, research fellowships, student groups, and community-based projects. Support student advocacy efforts and take action in response to student input.

Examples

UCSF's [EaRTH center](#) recently launched the Environmental Scholars Program, a funded, three-year, longitudinal community engagement and research fellowship for medical and nursing students interested in Environmental Health including a summer internship at a community clinic or community health organization. Many schools also have grants for student sustainability projects, such as Penn's [Green Fund Grant](#), McGill's [Sustainability Projects Fund](#), Keele University's [Sustainable Fund](#), Queen's University Belfast's [Green Fund](#), and University of Virginia's [Green Initiatives Funding Tomorrow](#) grant.

RECOMMENDATIONS

9. Mentorship

Facilitate accessible mentorship of students with an interest in planetary health.

Examples

Brighton and Sussex Medical School's (BSMS) Sustainable Healthcare Group has a comprehensive [website](#) which includes faculty members, their contact information, and their research projects. Similarly, the online faculty lists of Harvard's interdisciplinary research institutes, [C-CHANGE](#) and [NIEHS](#) provide contact information and research abstracts for potential research project mentors in planetary and environmental health.

To maximise implementation of all aspects from curriculum development to mentorship a dedicated post at the medical school is advised such as Dr Anna Jones (BSMS) and Dr Sarah Ainsley at Keele Medical School.

10. Community Engagement

Partner with community organizations, develop community-facing courses on planetary health, and include planetary health in patient educational materials and marketing.

Examples

Alpert Medical School students currently work with [Groundwork Rhode Island](#), a non-profit focused on improving urban environmental stewardship, through the Applied Community Engagement Partnership program run by the Family Medicine Interest Group. At University of Edinburgh, there is a 5-session community practical through which groups of students work with community organizations, including Edinburgh & Lothian Green Space and the Royal Society for the Protection of Birds. Through the Stanford Climate and Health student group, the medical school interfaces meaningfully with residents and community partners in the city of Stockton including CARB and Valley Air District to work on issues related to air pollution and environmental justice. At UCSF, faculty members developed two public-facing online lecture "Mini Medical School for the Public" series on the [Health Emergency of Climate Change](#) and [Environmental Justice](#).

RECOMMENDATIONS

11. Research

Encourage interdisciplinary research on planetary health and environmental health topics by facilitating research networks, awarding funding, hosting conferences, and recruiting researchers actively exploring these subjects.

Examples

UC Berkeley has the [Environmental Change Research Network](#), a hub for interdisciplinary research to address climate change. Penn recently announced the creation of the [Environmental Innovations Initiative](#), which will recruit faculty members and facilitate interdisciplinary research in climate change, sustainability, and environmental equity. Brighton and Sussex Medical school annually host the [Sustainable Healthcare Academic Research and Enterprise \(SHARE\)](#) conference which aims to facilitate collaboration among healthcare professionals, students and service users on topics related to sustainability and health and healthcare practice.

12. Interdisciplinary Centre

Institutions should create interdisciplinary centers with education, research, policy, and community engagement pillars that focus on the intersections between climate change, the environment, and health, bridging traditional divides among disciplines to ensure collective vision, problem-solving and action.

Examples

University College Cork launched the [Environmental Research Institute](#) that brings together over 350 researchers from 17 of their schools and departments to work in an interdisciplinary manner to address global sustainability challenges. Glasgow University recently created [The Centre for Sustainable Solutions](#). Exeter Medical School has [The European Centre for Environment and Human Health \(ECEHH\)](#). National University of Ireland Galway has the [Centre for One Health](#). University of Virginia has the [Environmental Resilience Institute](#).

RECOMMENDATIONS

13. Sustainability

Divest from fossil fuels, set carbon neutrality goals, and create an environmentally sustainable learning and working environment by setting guidelines for supply procurement, lab spaces, events, and buildings.

Examples

Already entirely [divested from fossil fuels](#), University College London is committed to investing in renewable energy and 100% of medical school buildings are already powered by renewable energy. By 2024, UCL has the ambitious goal of achieving [net zero carbon buildings](#) and having a campus free of single-use plastic. Also already divested from fossil fuels, [National University of Ireland Galway](#) is committed to re-invest energy cost savings into new sustainability technologies and has an ambitious but clear [2021-2025 sustainability strategy](#).

SCHOOL-SPECIFIC REPORT CARDS



McGill University Faculty of Medicine and Health Sciences

Overall

C

Planetary Health Curriculum

C

- Planetary Health (PH) connections exist within the core medical curriculum but they are only briefly covered and are mostly found within a solitary lecture dedicated to climate change and health.
- PH connections in the curriculum should be made more explicit, with more dedicated time allocated consistently throughout the medical education. The medical school should identify PH (including climate change) as a priority theme and include that material in learning objectives and test questions, in addition to filling in content gaps.

Interdisciplinary Research in Health and the Environment

C

- McGill University hosts an annual Sustainability Research Symposium (SRS), as well as other conferences, events, and workshops relating to PH.
- McGill lacks a dedicated institute for interdisciplinary PH research that emphasizes the impacts of anthropogenic environmental changes on health. The medical school may draw from groups such as the Environmental Epidemiology Research Group or the McGill Global Environmental Health group. Within the Faculty of Medicine and Health Sciences itself, it is difficult to find faculty members who have a primary research focus in PH or healthcare sustainability.

Community Outreach and Advocacy

C-

- The Faculty of Medicine and Health Sciences does not offer community-facing education opportunities on PH. This extends to a lack of patient materials regarding environmental health exposures, as well as climate change and health impacts.
- There is limited partnership between the medical school and community organizations to promote planetary and environmental health. The faculty could augment meaningful partnerships and promote medical student involvement through the addition of relevant community organizations in the Community Health Alliance Project (CHAP) course.

Support for Student-led Initiatives

C-

- Overall, the administration is supportive of student-led PH initiatives. The McGill Sustainability Projects Fund has a mandate to build a culture of sustainability on McGill campuses. They offer their time, funding, and enthusiasm for student projects from all faculties.
- Within the Faculty of Medicine and Health Sciences, the administration could further support student-led initiatives by facilitating connections between research mentors and students, creating grant opportunities, and developing a student fellowship program designated for PH.

Sustainability

B-

- The McGill University Climate and Sustainability Strategy 2020-2025 includes a stated goal of carbon neutrality, as well as objectives pertaining to waste management, food systems, procurement, and more. However, it is unclear how these strategies translate to the medical school buildings.
- Despite having initiatives to make laboratories more environmentally sustainable, the Faculty of Medicine and Health Sciences should work towards extending sustainable practices through composting, sustainable food and beverage options, and waste management.



National University of Ireland Galway

School of Medicine

Overall

C-

Planetary Health Curriculum

D+

- Planetary health (PH) topics are covered briefly and scattered across the core curriculum, but PH could be applied to many of the current learning objectives. Thus, our impression is that there is potential for increased PH teaching within the framework of the present curriculum.
- PH and how it relates to different aspects of medicine should be made more explicit in learning objectives, lectures, and tests. PH should be a priority theme and integrated longitudinally in the curriculum.
- The Social determinants of health is an example of a topic which is successfully integrated longitudinally. Expanding social determinants to also include ecological determinants of health could potentially be a way to adequately integrate planetary health throughout the core medical curriculum.

Interdisciplinary Research in Health and the Environment

B-

- The NUIG medical school should draw from existing centers such as the Centre for One Health and the growing list of academic staff conducting research in the area.
- The School of Medicine has an excellent undergraduate research summer program to which it would be feasible and desirable to include research opportunities in PH topics

Community Outreach and Advocacy

F+

- With a community drive to achieve 'National Park City' status for Galway, NUIG is in an exciting position to further develop their community outreach and advocacy program on PH.
- While the university has many great initiatives on community engagement and sustainability, the School of Medicine is not very visible, and almost absent, from these. To increase visibility, the School should engage more with current initiatives by adding the medical perspective to public discussions and events on PH.
- A medical school-specific website that gather PH news, events, resources and opportunities is also advisable.

Support for Student-Led Initiatives

C-

- Overall, there is support for student-led PH initiatives, with staff offering their time and advice.
- To further incentivize student initiatives and engage staff, providing funding, easily accessible information and networking opportunities is advisable. This could for instance be done through a medical school-specific website with contact information to staff mentors, resources, news and events relating to PH.

Sustainability

B+

- The Green lab initiative is an example of excellent sustainability efforts being made by NUIG.
- NUIG is impressively committed to ensuring university sustainability, with many excellent initiatives across the different disciplines. The School of Medicine would benefit from engaging more actively in the work already being done, but also contemplate the unique knowledge and skills medical professionals can offer in the intersection between medicine and sustainability.



2020-2021 Summary Report Ireland

Royal College of Surgeons in Ireland

Overall

C-

Planetary Health Curriculum

C

- At RCSI, Planetary health (PH) connections exist throughout the medical curriculum. The Public Health and Epidemiology module addresses planetary health in several lectures, although the focus on PH could be expanded. The administration also made a concerted effort to increase the PH content as a result of the ongoing curriculum reform process which will see a new curriculum introduced in 2022.
- PH connections in the curriculum should be made more explicit, with more dedicated time. Planetary health should be included as a comprehensive portion of a module (and labelled as such) as opposed to just one learning outcome under the umbrella of a Public Health / Epidemiology module. The medical school should identify PH (including climate change) as a priority theme and include that material in learning objectives and test questions, in addition to filling in content gaps. Student interest is quite strong in this area and therefore the curriculum should reflect this.

Interdisciplinary Research in Health and the Environment

D+

- RCSI lacks an institute for interdisciplinary PH research that emphasizes the impacts of environmental changes on health. While some Public Health, Epidemiology and International Health research efforts overlap with the field of environmentalism / sustainability, there is no sub-specialization or collective research group which focuses solely on PH and the intersection of environmental health and human health.
- The medical school should commit to recruitment of PH researchers, and endeavor to establish at least one collective research group which is dedicated exclusively to planetary health research.

Community Outreach and Advocacy

D

- RCSI does not partner with any PH-oriented community organizations or engage in any community-based PH advocacy efforts.
- Any efforts to engage with the community in environmental advocacy and awareness are poor or absent. University support of student-led community-based PH initiatives would considerably improve RCSI's performance in this area. The RCSI Green Campus initiative website should include links and specific references to all PH community programs, courses, research, funding opportunities, and events. This information should be regularly publicized via a sustainability newsletter and highlighted in the RCSI News publications.

Support for Student-Led Initiatives

C+

- Overall, RCSI performed the strongest in this area. The administration is supportive of student-led initiatives, including planetary health initiatives, offering their time, funding, and enthusiasm for student-led work.
- This could be further enhanced by facilitating more planetary health-specific connections between research mentors and students, and by developing a student fellowship program designated for PH.



2020-2021 Summary Report
Ireland

Royal College of Surgeons in Ireland (Continued)

Sustainability

C-

- RCSI has shown strong initiative in this area by developing a Sustainability Committee consisting of both student and staff members, as well as by developing the RCSI Green Campus Initiative which serves to champion and inform University policies with respect to Sustainability.
- Further progress could be made through formal commitment to divestment from fossil fuels and carbon neutrality. The development of a formal Sustainability office with salaried staff who would assist in oversight of the implementation and progress of sustainability initiatives would also be hugely beneficial.

Expanded score explanations can be found at phreportcard.org.



2020-2021 Summary Report Ireland

Trinity College Dublin

Overall

C-

Planetary Health Curriculum

D

- The medical curriculum at TCD includes a module called 'Global Health' which covers aspects of sustainable development. However, it does not fully cover the concepts of Planetary Health or Climate Change. Similarly, the core curriculum does not fully cover the aforementioned topics but does cover it in some relevant modules such as Parasitology.
- The use of online modules such as the 'global health' module is an interesting approach, allowing for quick implementation, taking advantage of existing learning materials. We believe this approach should be developed further.

Interdisciplinary Research in Health and the Environment

D

- TCD as institution has research opportunities and investment in planetary health and advocacy but most of it remains outside the domain of school of medicine.

Community Outreach and Advocacy

F+

- Neither the medical school or its affiliated hospitals have any significant involvement with any community outreach or advocacy programmes. However, the institution overall does run a number of events in association with organisations focused on planetary health and the environment. There are plenty of opportunities for students to get involved in such organisations.

Support for Student-led Initiatives

D

- There are few funded opportunities for student-led initiatives within the medical school. There are some prizes for environment-related art exhibitions etc., run by the university, but no direct funding for student research. In terms of the School of Medicine's curriculum, there may be some essay or project choices that relate to planetary health.

Sustainability

A-

- TCD regularly publishes sustainability reports, the latest being in 2018 where it targets, reflects and sets new goals for sustainability in the coming years. Overall, has TCD made impressive efforts to become more sustainable.
- The school of medicine could benefit from taking a more active role in the work being made by the institution, especially in relation to potentially influencing affiliated hospitals and other healthcare settings affiliated with the school.



2020-2021 Summary Report Ireland

University College Cork

Overall

C

Planetary Health Curriculum

D

- While some PH connections do exist in the curriculum, there is very little in the way of how planetary health or the environment plays a role in our health. There is some mention in passing during respiratory lectures, when looking specifically at environmental exposures to smoke inhalation, living on a farm (with cattle), or living in “old” housing. However, PH connections can be made more explicit, and with more dedicated time. For example, in components with “nutrition” – emphasis can be made on why plant-based diets could be better, instead of focusing only on the anemia aspect. It might also be worth noting that perhaps highlighting PH in learning objectives and test questions will make them more easily incorporated into our day-to-day lectures and tutorials.

Interdisciplinary Research in Health and the Environment

C+

- UCC as an institution has a strong academic environment on the topic of planetary health. However, there is little research led or with direct input from the School of Medicine, resulting in the lower score. However, there are many conferences, workshops, and events that medical students can participate in, as long as they are made aware of it.
- One important aspect that can be improved, is making it easier to find and contact faculty members with conducting research on healthcare sustainability and planetary health.

Community Outreach and Advocacy

C-

- The School of Medicine does not offer community-facing education opportunities, but UCC’s School of Public Health does cover planetary health education opportunities for the general public. The HSE website – through which all Irish schools and public hospitals are affiliated – does contain information on planetary health and its impacts on human health. It is important to make these more readily available in hospitals and to patients.

Support for Student-led Initiatives

C

- UCC has many environmental-based societies, available to all UCC students, but this is limited in context of the School of Medicine. However, the School of Medicine allows for students to undertake a research project in any specialty they prefer, including planetary health, and will offer time and enthusiasm for this. Individuals from the School of Public Health have also reached out to offer their support on any initiatives by students, whether medical or not.

Sustainability

B+

- The school is doing well in this respect. There were a lot of things that we didn’t even know until we were doing this project e.g., how Western Gateway Building is a “near zero” building, harnessing the River Lee’s energy to power itself. This, paired with the school’s dedication to reducing their carbon footprint, and reducing their overall carbon usage overall, makes for an impressive score.



2020-2021 Summary Report Ireland

University College Dublin

Overall

D+

Planetary Health Curriculum

C-

- Planetary health (PH) exists throughout medical education. However, the level of detail remains sparse, and inclusion of PH relies on individual lectures.
- PH connections in the curriculum should be made more explicit, with more dedicated time. The medical school should identify PH (including climate change) as a priority theme and include that material in learning objectives and test questions, in addition to filling in content gaps.
- We want to emphasise that UCD recently partook in the Climate and Health in Medical Education (CHIME) workshop. A workshop aimed at improving PH teaching in Irish medical schools, with a particular focus on public health.

Interdisciplinary Research in Health and the Environment

D+

- UCD lacks an institute for interdisciplinary PH research, but the medical school may draw from existing centres such as the Occupational and Environmental Health department, and that of individual faculty members.
- Student-led research within PH currently relies too heavily on students' initiative. Thus we would like to see a greater level of facilitation from the medical school to further enhance research opportunities within PH.

Community Outreach and Advocacy

F+

- This is the medical school's weakest metric. There is poor awareness of environmental advocacy programming amongst the students and faculty and a clear lack of community engagement from the institution, medical school and hospital trusts.
- We also suggest that related material such as events are communicated to the student body as a means to encourage engagement and advocacy.

Support for Student-led Initiatives

D

- The faculty and administration are supportive of student-led PH initiatives. However, we would like to see a greater level of support of such initiatives e.g., facilitating connections between research mentors and students, and providing stipends for research projects.
- We would like to see students actively being involved in the process of improving the level of PH teaching and research opportunities, a UCD specific webpage for locating planetary health and/or sustainable healthcare projects, and increased support of student-led QI initiatives.

Sustainability

C

- UCD as an institution are showing commitment to improving their carbon footprint. However, we would like to see a greater level of involvement from the medical school, as we believe the medical school should be at the forefront of this movement, both in terms of influencing the university, but also affiliated hospitals and other healthcare settings.
- A crucial starting point would be to assign one or more staff members to this.



2020-2021 Summary Report
United Kingdom

Brighton and Sussex Medical School

Overall

B-

Planetary Health Curriculum

B

Planetary health connections appear throughout the curriculum from years 1 to 4 both in the form of dedicated lectures, brief mentions and elective content. Coverage of some content such as the cardiorespiratory health effects of climate change (metric 5) and human-caused environmental health threats were done in great detail. The following metrics scored poorly in the 19/20 curriculum identifying areas for improvement: Metric 6,7,10,12,13 &16. Of note we felt there was a distinct lack of teaching around the disproportionate health effects of climate change on marginalised communities and lack of training on addressing the health impacts of climate change with patients.

Interdisciplinary Research in Health and the Environment

B+

This report identifies the multiple researchers at BSMS with a focus on planetary health and sustainable healthcare. The addition of the new Sustainable Healthcare Group is a great asset to the school and testimony to the progressive research agenda. However there was a lack of opportunity for communities disproportionately affected by the health impacts of climate change to have an input into the research agenda.

Community Outreach and Advocacy

D

This report has identified that BSMS lacks meaningful community partnerships that promote planetary health. The affiliated hospital, BSUH has no easily accessible patient education material on the health impacts of climate change or dangers of pollution.

Support for Student-led Initiatives

B

The enthusiasm for planetary health projects at BSMS has always been well supported by members of faculty and there are multiple societies with a focus on sustainable healthcare/global health. There is a lack of student sustainability representation at leadership meetings and little to no funding for student societies from the medical school.

Sustainability

B-

BSMS as part of Brighton and Sussex Universities scores well here with ongoing development of renewable energy on campus and other sustainability initiatives. However we identified a lack of sustainable transport planning from the medical school and a lack of sustainability guidelines for hosting events both faculty and student run.



2020-2021 Summary Report
United Kingdom

Bristol Medical School

Overall

C

Planetary Health Curriculum

D+

- There are extracurricular opportunities to learn about health impacts of climate change; however, few are integrated within the curriculum. Global Health as a topic in MB16 is limited to 2 weeks of core teaching, during which one lecture thoroughly covered the health impacts of climate change. Over the last 3 years in the new MB21 curriculum there has been implementation of HUB sessions which tend to focus on less traditionally covered topics, including climate change and sustainability.
- Recommendations are more relevant to the MB21 course as MB16 will no longer exist in 2021/22.

Interdisciplinary Research in Health and the Environment

C+

- There are currently a limited number of researchers engaged in planetary health research at Bristol medical school. The Elizabeth Blackwell Institute for Health research, at the university, are in the process of forming a new cross faculty group around the themes of climate and health. The Elizabeth Blackwell Institute and Cabot Institute have recently started a scheme where funding is available for interdisciplinary research projects in the area of climate change and health. This is hopefully a step in the right direction for increasing planetary health research output from the medical school.
- There is a dedicated institute for interdisciplinary planetary health research in the form of the Cabot Institute.
- Recommendations for improving in this metric would be to implement a process by which communities disproportionately impacted by climate change and environmental injustice give input or make decisions about the research agenda.
- Another recommendation would be to join the Planetary Health Alliance and/or the Global Consortium on Climate and Health Education.

Community Outreach and Advocacy

C

- Whilst there is evidence of some meaningful partnership with the community, often courses and initiatives are directed mainly towards university students rather than the community as a whole.
- There is no regular communication of planetary issues to the students.
- There is some educational material available for patients regarding climate change and health; however, not all material is made obvious or accessible via online platforms.
- The medical school could consider including planetary health issues in their regular bulletins to students and look to promote courses to the wider community.

Support for Student-Led Initiatives

B-

- University are very supportive of students wanting to engage with researching and learning more about the health impacts of climate change; however, financial support is rarely available.
- Recommendation: Publicise research opportunities and potential funding opportunities.

Sustainability

C

- Institutionally the University of Bristol has made some very strong commitments and put in good work promoting planetary health in its operations. It has often been ahead of the rest of the sector on this front.
- The University has declared a climate emergency, set a carbon neutrality target of 2030, has divested from fossil fuels, constructs with sustainability in mind and has programmes to improve lab sustainability.
- The University is lacking in guidelines and procedures regarding procurement and catering.



2020-2021 Summary Report
United Kingdom

Cardiff Medical School

Overall

F+

Planetary Health Curriculum

D-

- Planetary health (PH) has started to become a topic of consideration within the medical school, but it is still very limited at present. There are opportunities to explore the topic within student selected components, but not much focus is made within the core curriculum.
- PH connections in the curriculum should be made more explicit, with more dedicated time. The medical school should identify PH (including climate change) as a priority theme and include that material in learning objectives and test questions, in addition to filling in content gaps.

Interdisciplinary Research in Health and the Environment

D-

- There is some element of planetary health within the research being done at Cardiff Medical school, but there is a lack of research focusing primarily on this.
- The medical school could join groups such as the Planetary Health Alliance or the Global Consortium on Climate and Health Education and become more involved in hosting conferences. Additionally, a commitment to contributing towards research in planetary health could be made.

Community Outreach and Advocacy

F

- There is little advocacy of PH within the medical school.
- PH could be more widely covered in media, informing students and staff about planetary health topics as well as spreading information further into the community. This could be done, for example, by including articles in 'weekly updates' from the campus.

Support for Student-led Initiatives

F

- The score doesn't reflect the support shown by faculty of the school to support student led initiatives. Whilst funding is not available for the areas listed, it is important to note that this will not always prevent a project or initiative from being arranged.
- A way of further improving this area could be to educate staff about how funding might be obtained for those students who need financial support to enable them to participate in PH related opportunities.

Sustainability

F

- There is very little addressing of sustainability within the medical school but as part of Cardiff University the medical school is entirely divested from fossil fuels.
- More effort could be made to make the medical school more sustainable in terms of actions as well as in the curriculum.



Hull York Medical School

Overall

D

Planetary Health Curriculum

D-

- The curriculum at Hull York Medical School (HYMS) fails to explicitly address planetary health (PH) and education for sustainable healthcare (ESH). The Health and Society theme covers topics such as population health and global health, and a poor grade is reflective of the content gap in topics such as climate change and its relation to human health, and sustainable healthcare. HYMS does address the impacts of urbanisation and its effect on cardiorespiratory health but does not explicitly include teaching on PH. PH and ESH are not well integrated and are primarily addressed briefly in standalone lectures. The medical school should identify PH as a priority theme and include this material in learning objectives.

Interdisciplinary Research in Health and the Environment

C-

- HYMS lacks a dedicated institute for interdisciplinary PH research. The medical school may draw from existing centres at the University of York, such as the [Stockholm Environment Institute at York](#), [Sustainability Institute Waste Network](#), [The Centre for Urban Research \(CURB\)](#) and [York Environmental Sustainability Institute](#), and the [Energy and Environment Institute](#) at the University of Hull. Both institutions have comprehensive research on PH but lack focus on ESH. HYMS has joined the Global Consortium on Climate and Health Education and is the only medical school in Europe to do so. The medical school should commit to involvement in various research centres and recruitment of PH researchers.

Community Outreach and Advocacy

F-

- HYMS scored 0 points in this category. HYMS needs to be more supportive of student advocacy for planetary health. They could work with Students for Global Health to promote opportunities such as policy writing and lobbying to improve in this category. A solution is to offer regular coverage of issues related to PH and ESH in university update communications. A medical student led blog/newsletter dedicated to PH/ESH, actively promoted by the medical school through email, is another solution. Regarding community outreach, HYMS could offer public courses/events on the topic of PH/ESH. They could work with the York Teaching Hospital NHS Foundation Trust to produce accessible educational materials for patients about climate change and health impacts.

Support for Student-led Initiatives

C

- HYMS does support student-led initiatives, especially through the INSPIRE Student Research Project, but lacks explicit support and enthusiasm for PH initiatives. The medical school could facilitate connections between research mentors and students, create grant opportunities, and develop a student fellowship program designated for PH. There is also potential for a student representative that serves on a medical school or institutional decision-making council to advocate for sustainability best practices.

Sustainability

C

- HYMS lacks a dedicated Office of Sustainability and goals for carbon neutrality, and should consider the use of renewable energy sources. The University of Hull urgently needs to address its investments with fossil-fuel companies, and should follow the University of York's divestments.



Imperial College

Overall

C+

Planetary Health Curriculum

C

While the majority of core teaching in the MBBS curriculum doesn't have a focus on climate change and sustainability, we believe that with the Curriculum review, Imperial College School of Medicine (ICSM) are integrating and embedding more teaching about Planetary Health. The new elective student selected component (SSC) in Year 1 and 2 give students the opportunity to learn new and different aspects of Sustainable Healthcare and Planetary Health. We believe that more efforts need to be made to integrate more sustainability topics and have lectures dedicated to them rather than just being mentioned in the learning outcomes (LOs). Looking to the future, as the new curriculum develops, it is important to ensure these topics are integrated throughout the whole curriculum.

Interdisciplinary Research in Health and the Environment

C

Imperial is committed to supporting and funding environmental and sustainability research, as evidenced by its Grantham Institute - Climate Change and the Environment which focuses on research for Climate Change and Environment topics. Nevertheless, there is still a lack of research towards planetary health. In particular there needs to be more focus on the inclusion of communities disproportionately impacted by climate change and environmental injustice in the research agenda, and more visibility should be given to planetary health by organising conferences on such topics.

Community Outreach and Advocacy

C-

While Imperial has various initiatives, at institutional level, for students and the wider public to introduce concepts such as veganism and the beneficial impact on both health and the planet, ICSM lost points as it does not offer accessible educational materials for patients about climate change, health impacts and environmental health exposures. This is where we feel the School of Medicine and its partner hospitals has scope for improvement.

Support for Student-led Initiatives

C

Imperial supports and encourages student-led initiatives through funding, offering and/or advertising opportunities, nevertheless these opportunities remain general and are not specifically related to sustainability and planetary health. Furthermore, ICSM lost points due to the lack of co-curricular planetary health programs or initiatives.

Sustainability

A-

Undoubtedly Imperial's strongest point. The Institution and the School of Medicine are both doing a great job in keeping with their objective to be a net zero carbon institution by 2040 and to achieve the ISO14001 Environmental Management standard. Imperial has already started divesting from fossil fuels, but we wish to see in the upcoming years a complete divesting from fossil fuels. Furthermore, ICSM is adopting sustainable building practices on the medical school campus, in particular with the new School of Public Health on the White City Campus, which is going to be BREEAM excellent. Imperial is also advertising the great recycling campaigns available to staff and students on campus. Nevertheless, more and compulsory sustainability criteria for events organised by ICSM could be put in place.



Keele University

Overall

B

Planetary Health Curriculum

B

- The current Keele Curriculum has strong integration of the effects of pollution, extreme weather and the effect on the pattern of infectious disease, with these sessions being delivered in a variety of ways (lectures, workshops, Academic Mini Reviews (AMR), etc). The importance of Planetary Health is revisited every year allowing students to build on their learning and to introduce them to new Planetary Health concepts. There is emphasis on health inequalities and the effect on health of marginalized communities, which is something Keele teaches very well.
- To further improve the Keele Curriculum, sessions on the link between Mental Health and Planetary Health or sessions on the effect on Reproductive Health of environmental exposure could be included.

Interdisciplinary Research in Health and the Environment

B

- The University as a whole has a strong research focus on sustainability and factors that affect planetary health, and this should be celebrated. From sustainable energy to food security, the sustainability research at Keele is very varied.
- Despite this, there are no research staff associated with the medical school solely focused on planetary health in regard to their research. There are staff who are involved in ongoing community engagement and planetary health projects but this is not their key research focus.

Community Outreach and Advocacy

D

- Keele University is involved with many different community groups and organisations aimed at promoting sustainability and planetary health to our local community. However, this is the institute as a whole that does this, not the medical school. Through our research, we haven't found a community facing event organized by the medical school that fits our criteria.

Support for Student-led Initiatives

B

- Funding is available for student led sustainability projects throughout the university, which medical students are eligible to apply for.
- In order to improve, a specific planetary health student group or society and a sustainability student representative at the medical school would be a good venture and may improve student engagement outside of the curriculum.

Sustainability

A+

- At Keele University, sustainability is very important, and this is evident throughout the current projects and initiatives on our main university campus. With all energy on campus being renewable, a clear carbon neutrality goal and an active retrofitting scheme, it is hard to suggest improvements. The only thing that could be improved is further guidance for student run events within the medical school on sustainability and making this a requirement in order for their event to run.
- On the hospital campus is where most of the progress should be made, in collaboration with the NHS and the UHNM Sustainability Manager.



2020-2021 Summary Report
United Kingdom

King's College London

Overall

C+

Planetary Health Curriculum

C

- Guy's, King's and St Thomas' (GKT) are leading the way by incorporating sustainability in healthcare in the core curriculum via QIPs, and should strive to update the rest of the curriculum to match this progress.
- Planetary health (PH) is solely covered in stand-alone lectures or optional modules, with a large proportion of points for this section coming from a student-led lecture delivered in final year. Fundamentally, introducing PH into the core curriculum should be faculty driven.
- We suggest that GKT commission an individual to specifically integrate PH into the curriculum. Further to this, PH topics should be introduced at an earlier stage and integrated into contextualised lectures and workshops.

Interdisciplinary Research in Health and the Environment

C

- King's College London (KCL) has an abundance of interdisciplinary health research centres and associated researchers highlighting PH issues, but there are no direct affiliations with GKT.
- We suggest incorporating projects from these centres within our Student Selected Components (SSCs) and Scholarly Projects.
- There is a robust BSc Global Health programme from which we could integrate teaching fellows to deliver lectures with GKT educators, and there are various conferences and symposiums which could be promoted to supplement the learning of medical students.

Community Outreach and Advocacy

C+

- KCL and GKT collaborate with community organisations and offer community-facing courses and events. Some of GKT's affiliated hospital trusts also offer limited PH information to patients. Although KCL provides news coverage on PH, medical students have scarce exposure to PH and sustainable healthcare issues.
- GKT can further improve by integrating PH community outreach into the medical school curriculum, increasing partnerships with local organisations, and encouraging affiliated hospital trusts to include more PH information to improve awareness in the community.

Support for Student-led Initiatives

C

- GKT offers opportunities for students to be involved in sustainability projects as part of the curriculum through QIPs and Scholarly Projects. However, there are no other opportunities for students to be involved further with initiatives, no funded opportunities or organised activities such as talks or expeditions.
- GKT should build relations with external organisations, including student organisations who run such activities in order to collaborate and support them.



2020-2021 Summary Report
United Kingdom

King's College London (Continued)

Sustainability

B-

- KCL has made great progress with campus sustainability and has dedicated policies in place to ensure improvements continue. Particular areas that require improvement include environmentally-friendly transportation, on-campus recycling and compost, supply procurement and sustainability requirements for events.
- Whilst this section scores well, the engagement from GKT has been minimal, with most sustainable initiatives run centrally by KCL. GKT could set up their own sustainability team to specifically advocate for sustainable practices on Guy's campus and to make health-related education less resource intensive.

Expanded score explanations can be found at phreportcard.org.



Lancaster University

Overall

C-

Planetary Health Curriculum

C+

Strengths: Dr Connolly does an incredible job integrating planetary health into the curriculum through workshops and lectures. Elective courses in the form of Study Skills Modules (SSMs) encourage students to engage with the topic.

Recommendations:

- Develop existing workshops to discuss areas of planetary health missing from the curriculum (see below for detail)
- Initiate a programme to offer incentives for faculty/departments to develop new planetary health/Education for Sustainable Healthcare (ESH) courses and/or incorporate planetary health/ESH into existing courses.

Interdisciplinary Research in Health and the Environment

D-

Strengths: Individual faculty members at the medical school conduct research related to planetary health or healthcare sustainability. There is also an occupational and environmental health department; Lancaster Environment Centre (LEC).

Recommendations:

- Initiate collaboration between LEC and the medical school to focus on interdisciplinary planetary health research
- Join the Planetary Health Alliance and/or Global Consortium on Climate and Health Education
- Work with the university and the local community to generate interest and communication around research.

Community Outreach and Advocacy

D-

Strengths: The year 2 project which teaches school students in the community about healthy eating and promotes low-carbon and plant-based diets.

Recommendations:

- Initiate partnerships with community organisations in Lancaster to promote planetary and environmental health
- Set up regular communications with students around planetary and sustainable healthcare
- Encourage associated hospitals to create educational materials for patients around climate change, environmental exposures, and health.

Support for Student-led Initiatives

C-

Strengths: SSMs offer research opportunities into planetary health for students. There are student organisations dedicated to planetary health, as well as a student representative that advocates for sustainability best practises.

Recommendations:

- Involve students more in decision making around sustainability best practises
- Create a medical school-specific webpage for locating planetary health and/or sustainable healthcare projects
- Begin encouraging and supporting student-led sustainability Quality Improvement (QI) projects.



2020-2021 Summary Report
United Kingdom

Lancaster University (Continued)

Sustainability

C+

Strengths: The university has a sustainability group with an extensive and informative website, and the university has a clear carbon neutrality goal. There are sustainability criteria when it comes to supply procurement and food/beverages.

Recommendations:

- Put pressure on the university to divest from fossil fuel companies
- Implement strategies to encourage and provide environmentally-friendly transportation options for students
- Assign one or more staff members the role of improving medical school/campus sustainability
- Implement clear medical school-specific sustainability requirements for guiding decisions around food and beverage selections.

Expanded score explanations can be found at phreportcard.org.



Leeds Medical School

Overall

C

Planetary Health Curriculum

B

There was some provision of Planetary Health (PH) teaching for all students and attempts to cover key themes such as health inequality of climate change. For students who are keen on PH, there is an option to take up Special Studies Projects (SSPs) and electives.

Our recommendation is for more teaching on how to talk to patients about PH/sustainability, consideration of health inequalities alongside PH, and integration into the general curriculum as opposed to confinement to early year modules.

Interdisciplinary Research in Health and the Environment

D+

The Annual Sustainability Research Conference encourages student involvement. It also provides the opportunity for students to promote their research. It was clear that their research commitment is strong, such titles relevant to PH include e.g. Effectiveness of interventions responding to the health impacts of climate change in lower middle income countries.

Our recommendation is to consider joining the Planetary Health Alliance or the Global Consortium on Climate and Health Education and increase research opportunities for medical students.

Community Outreach and Advocacy

C-

The university received the lowest score in this category, where the university community outreach was more supported than specific to medical school.

Our recommendation is for the medical school to improve their communication with students regarding planetary health, and encourage teaching and sharing of sustainable healthcare or PH through the wide variety of outreach work carried out already.

Support for Student-led Initiatives

C

Overall, the medical school seems to have little availability for students to be involved in planetary health research, particularly funded projects, whilst the university as a whole is more supportive of such ventures. Our recommendation is to encourage better promotion and availability of sustainability projects, and to identify and promote ways to get involved within healthcare and through the medical school. The medical school could also be more receptive and responsive in taking into account students' feedback such as with regards to accommodation e.g. no recycling available at several hospital accommodations.

Sustainability

C+

The university achieved the highest score in this category, clearly evidencing well defined carbon neutral targets and appears committed to working towards them, for example full divestment from fossil fuels, however there is little information readily available on use of renewable energy sources.

Our recommendation for the medical school is to promote sustainable travel to placements, for example more official car sharing schemes, and should consider sustainability guidelines for events, particularly as we begin to return to 'in-person'.



2020-2021 Summary Report
United Kingdom

Leicester Medical School

Overall

D-

Planetary Health Curriculum

F

- Planetary health is not currently addressed in the medical curriculum except for mentions of environmental pollution as a trigger for asthma. However, students are taught to take a detailed respiratory history including environmental and occupational exposures.
- Improvements in the curriculum at Leicester need to be made to include the impact of global warming on changing disease patterns and health.

Interdisciplinary Research in Health and the Environment

D-

- The centre of environmental health and sustainability at Leicester aims to develop new areas of research that build on existing work in environment, health and sustainability.
- The centre is new with a planned official launch date in 2021 but a research team is currently operating.
- There is currently no website centralising campus resources regarding health and environment, and no planetary health conferences have been hosted.
- Due to the new Sustainable Medicine society, in the next academic year, conferences and talks are being planned.

Community Outreach and Advocacy

F-

- Currently the medical school and affiliated hospitals do not run any community outreach projects related to planetary health.

Support for Student-led Initiatives

C-

- The University of Leicester does not currently offer support specifically for sustainability initiatives or research opportunities related to sustainability. This needs to be improved. However, the medical school does have a student led society called the Sustainable Medicine society which aims to increase student education about sustainable medicine through talks and educational lectures.
- Student societies play a large role in Leicester's sustainability programs, examples of which include the Oadby student village vegetable plot, Go Green volunteering weeks and the Hiking society.

Sustainability

C-

- As a University, Leicester scores well in Campus Sustainability, however, the medical school itself can improve the role it plays.
- Environmentally friendly transport options and recycling regimes exist in the medical school and throughout the university.
- However, sustainability criteria for supply procurement, food and beverage selections, and retrofitting of old buildings could all be improved upon.



2020-2021 Summary Report
United Kingdom

Newcastle University United Kingdom

Overall

C

Planetary Health Curriculum

C+

Planetary health teaching is found throughout the curriculum at Newcastle University in both pre-clinical and clinical years. The current planetary health curriculum is well integrated, and it is hoped in the next year a sustainability and public health strand will be developed that runs in each case throughout the curriculum. There are some areas that are not covered such as the impact on marginalized communities and psychological effects of climate change. It is hoped over the next few years these gaps will be integrated into the curriculum, and the medical school is keen to implement this.

Interdisciplinary Research in Health and the Environment

C-

Newcastle University lacks a specific institute for planetary health or the impacts of environmental changes on health. There is a lot of sustainability research that takes place at the University through the One Planet research programme. The Medical School is able to utilize and draw from research in the Population Health Sciences Institute as well, however this could be better integrated to bring planetary health towards the forefront of research at the medical school.

Community Outreach and Advocacy

F

Newcastle University has many connections with community based environmental voluntary programmes that medical students are able to be involved in. However, there is poor awareness and coverage of planetary health and sustainable healthcare within the medical school. It is hoped a specific page for planetary health will be developed on the online learning platform for students to easily access, which will combine opportunities and events in one place. This could also be published in regular email updates. There is also little information regarding planetary health issues for patients at hospitals associated with the medical school.

Support for Student-led Initiatives

C-

The medical school is supportive of student-led initiatives for planetary health and is very enthusiastic and engaged in helping develop these initiatives. As planetary health continues to grow within the curriculum, it is hoped that more research opportunities and student led initiatives could be developed, for example sustainability quality improvement projects.

Sustainability

B+

Sustainability is a key area of focus for Newcastle University, having declared a climate emergency in 2019 and aiming to achieve net-zero emissions by 2040. There is a strong sustainability team within the University who are able to coordinate different aspects of sustainability. In the future, it is hoped a specific team working on improving sustainability within the medical school will enable further changes.



2020-2021 Summary Report
United Kingdom

Newcastle University Medicine Malaysia

Overall

D-

Planetary Health Curriculum

C

Newcastle University Medicine (NUMed) Malaysia covers planetary health (PH) topics throughout the pre-clinical and clinical years of the programme, where the coverage is more extensive in the latter. However, there are still a number of areas the curriculum lacks, namely the relevance of PH topics to mental health, neurophysiology, reproductive health, indigenous communities, plant-based diets, and approaches during patient encounters. Hence, the administration is planning to utilise this report as a reference point for future improvements to the programme's learning materials.

Interdisciplinary Research in Health and the Environment

D-

NUMed shows a great deal of interest in researching planetary health and healthcare sustainability, especially through a dedicated team of researchers who have a particular focus on tackling the United Nations Sustainability Goal Challenges. However, little action is taken to spread this interest, although some efforts have been made to make NUMed more sustainable. Neither the student body nor the general community are made aware of this team and their research, thus this research could be prioritized much better if a department dedicated to hosting more talks and creating a website to introduce concerns over sustainability, climate, etc was created.

Community Outreach and Advocacy

F-

Community-based environmental voluntary programmes that medical students could be involved in have not been introduced in NUMed. There is also poor awareness and coverage of planetary health and sustainable healthcare within the medical school. It is hoped a specific page for planetary health will be developed on the online learning platform for students to easily access, so that opportunities and events are combined in one place. There is also lack of information regarding planetary health issues for patients at hospitals associated with the medical school.

Support for Student-led Initiatives

F-

The NUMed administration has been supportive of student-led health-related initiatives though, not much could be recorded as the number of initiatives had been lacking in the past year due to various restrictions. Despite that, both the administration and medical students have expressed interest in future collaboration and plans to implement more initiatives. A number of efforts that could be implemented include organising more events, movements, and establishing a student-led club that centres around planetary health/sustainability in medicine. Furthermore, the administration could: offer incentives for Planetary Health events; facilitate collaborative connections between students, staff and/or research mentors to create initiatives related to planetary health; and offer grants to medical students to enact sustainability QI project initiatives.



2020-2021 Summary Report
United Kingdom

Newcastle University Medicine Malaysia (Continued)

Sustainability

D-

NUMed had set up a sustainability team in January 2020. The team has been working on various aspects of sustainability such as the compost program and sustainable catering policies. They have also started discussions on the potential use of solar power to meet the energy needs of the campus. NUMed has implemented strategies to provide environment-friendly transport for the students. Potential areas that the sustainability committee could work on could include, but are not limited to, making lab spaces more sustainable and having a stated goal of carbon neutrality would further drive the initiative in the long run.

Expanded score explanations can be found at phreportcard.org.



2020-2021 Summary Report
United Kingdom

Norwich Medical School

Overall

C+

Planetary Health Curriculum

C

- Planetary health connections exist throughout the medical course in the form of a few lectures, learning objectives for problem-based-learning, and in the public health and nutrition student selected study modules. There are also plans to review and include more teaching in the curriculum.
- The medical school should aim to create connections between planetary health teaching across different modules, and maybe have more lectures explicitly refer to the relationship between climate change and health.

Interdisciplinary Research in Health and the Environment

B

- With the university-wide initiative 'ClimateUEA', the institute is committed to interdisciplinary planetary health research across different faculties, including the medical school, which has recruited several notable researchers in the field. The institute and medical school work closely with other international institutes for large-scale research projects. Resources are also easily accessible to students and staff with a dedicated website and social media platforms.
- The medical school should continue its efforts to establish a process for more community members to advise or make decisions about the research agenda. The institute could take a more proactive role in promoting planetary health by joining the Planetary Health Alliance and the Global Consortium on Climate and Health Education.

Community Outreach and Advocacy

D

- The medical school encourages students to get involved through societies such as 'Students for Global Health' and the institute updates students regularly on climate change issues, however they do not have direct partnerships with community organizations and there are few to no resources to increase awareness of planetary health issues in the general community.
- The medical school should work to organize courses focused on planetary health issues and work with affiliated hospitals to make resources, such as brochures, easily available to patients to educate and increase awareness of environmental impact on health.

Support for Student-led Initiatives

B+

- The institution website has a section dedicated to sustainability, which includes information on student-led sustainable societies and current initiatives. Both the medical school and institution encourage students to get involved with these initiatives, however there is a lack of funding for starting new initiatives.
- The medical school is very active in research so there are externally funded opportunities available.
- It is difficult to find medical school specific initiatives, so it could be beneficial for the medical school to have their own webpage related to planetary health and sustainable healthcare.



2020-2021 Summary Report
United Kingdom

Norwich Medical School (Continued)

Sustainability

B+

- The institution has a sustainability board composed of 3 members of the executive team. The institution and the medical school are working towards making the campus sustainable via a carbon neutrality goal, divesting from fossil fuels, and having sustainable guidelines for supply procurement and food and beverages.
- Sustainable building practices are utilized for new buildings on the medical school campus, but most old buildings have not been retrofitted. More buildings also need to use renewable energy.

Expanded score explanations can be found at phreportcard.org.



Oxford University Medical School

Overall

C-

Planetary Health Curriculum

C-

- A very positive start has been made in introducing Planetary Health (PH) and Education for Sustainable Healthcare (ESH) into the curriculum. Our disappointing score reflects the fact that major progress has been made in the last 8 months, including 2 faculty wide workshops to introduce ESH into the curriculum. Based on commitments made by staff members this section's score will increase by at least 11 points next year.
- A lot of this progress has been student led with a few key very supportive faculty members (notably Dr Richard Harrington and Dr Ruchi Baxi). For this momentum to be maintained long term, it is imperative that a paid post is created, dedicated to ensuring PH and ESH teaching and assessment is achieved, as well as their wider remit of engagement within the medical school and community.

Interdisciplinary Research in Health and the Environment

B-

- The university has a wide range of sustainability focused research such as the Oxford Martin School and the Oxford Environmental Change Institute, and both the Nuffield Department of Primary Care and Nuffield Department of Population Health are engaged with PH research and public engagement. Furthermore, students are able to engage with this research for special study modules, however it must be with their own initiative.
- The medical school lacks direct engagement with the majority of these departments and has no formal relationship with them in terms of student programmes. There are only a few people within the medical sciences division that have primary research related to PH.
- We recommend the medical school engage more formally with the expertise already available within the university to set up more formal partnerships for research as well as teaching.

Community Outreach and Advocacy

F

- This is the university and medical school's weakest area. There is lack of community engagement from the institution, medical school and hospital trusts.
- We propose the medical school to engage with community climate focused groups in Oxford, and initiate discussions with local trusts to make available materials regarding climate change and PH for patients. We suggest events are communicated to the student body as a means to encourage engagement and advocacy.

Support for Student-Led Initiatives

C+

- The medical school currently supports quality improvement projects, the Green Impact Scheme and the wider institution has many co-curricular sustainability opportunities. We advise that there is more support given for student-led PH initiatives; creating grant opportunities, providing stipends for short research projects to further encourage students and faculty wide research to engage in PH.

Sustainability

C+

- There is a lot of progress within Oxford University in improving the university's sustainability. At the institution level there are lots of sustainability protocols, divestment from fossil fuel commitment and they are currently running a member consultation aiming for biodiversity net gain and net zero carbon by 2035, to improve on their current target of a 50% reduction by 2030.
- We recommend the development of sustainability policy at the medical school level to achieve higher marks.



2020-2021 Summary Report
United Kingdom

Peninsula Medical School at University of Plymouth

Overall

B-

Planetary Health Curriculum

B

- The Peninsula Medical School BMBS curriculum offers opportunities for student engagement with planetary health (PH) and education for sustainable healthcare (ESH) via interactive workshops, small group discussions, lectures, and the elective curriculum (consisting of special study units (SSUs) and the 5th year clinical elective).
- The Centre for Sustainable Futures runs training workshops for staff interested in PH and sustainability as an incentive programme.
- However, considering the higher emphasis on ESH and PH during pre-clinical years, better longitudinal integration is necessary. Also, more learning outcomes clearly detailing ESH and PH topics would better standardise instruction.

Interdisciplinary Research in Health and the Environment

B

- The Sustainable Earth Institute's research festival and conferences promote PH/sustainability. The Global Health Collaborative (GHC) and many medical faculty members are also working on PH projects (ex: the KUPUMUA project).
- Opportunities to engage with interdisciplinary research need to be better publicised and easier to access. We recommend the medical school compile a list of ESH and PH research opportunities onto a document that is accessible from the digital learning environment.

Community Outreach and Advocacy

C

- The Social Engagement pathway, the BMBS Student Newsletter, and Plymouth Student Bulletins are examples of community outreach and advocacy. The GHC also offers a continuing professional development course for clinicians (REM716).

Support for Student-led Initiatives

C+

- The University employs an Environment and Sustainability Officer through the Students' Union. Student representatives are also a part of the GHC. Staff support for student initiatives is also prevalent throughout campus.
- Students for Global Health and the Plymouth University Wilderness and Expedition Medicine Society are two student PH initiatives currently active on campus. We urge medical faculty to provide more funding for similar such student-led initiatives.

Sustainability

B-

- The University of Plymouth most recently scored 79% in food sustainability due to strategies like recycling systems and sending food waste to local anaerobic digestion.
- However, <20% of energy needs are being met by renewable energy generation. We support purchasing the Renewable Energy Guarantees Origin by 2025 and recommend the medical school publishes their own carbon/sustainability goals. Considering the University's decentralised policies, we also urge medical faculty to apply standardised sustainability criteria to future supply procurement.



Queen Mary University of London

Overall

C+

Planetary Health Curriculum

B

- Throughout Barts Medical School, the curriculum does well in integrating certain aspects into the core and optional curriculum. Curriculum makes an excellent effort to try to include and be aware of the local communities. The Global Health module in Year 4 is where Barts Medical Students are exposed to the majority of the topics relating to climate change and planetary. This is the only area in the curriculum where module content changes and adapts yearly. Prior to Year 4, students are not as exposed to climate change and planetary health, especially during PBL sessions and examinations. It was difficult to assess the extent to which Barts Medical students are exposed to climate change and planetary health in the clinical setting as there is great discrepancy between the trusts associated with the medical school.

Interdisciplinary Research in Health and the Environment

C

- A number of faculty members are currently conducting research on planetary health and healthcare sustainability. It is important to also note that this research not only looks at its impacts nationally, but globally too. However, while there are a lot of initiatives for promoting planetary health, these initiatives do not make the connection between planetary health and its impact in a clinical setting (particularly for local communities). There is research being conducted within the community by the associated trusts (i.e., Barts NHS Trust), but it is separate to the medical school. Barts should consider joining the Planetary health Alliance or the Global Consortium on Climate and Health Education.

Community Outreach and Advocacy

C

- Barts Medical School does an excellent job with working with local communities (especially schools in Luton) that aim to promote planetary and environmental health. QMUL staff and student bulletin often features items relating to sustainability with a new piece every week. Implementing the sustainability bulletin in a clinical setting has not been successfully executed. Furthermore, there seems to be a lack of communication between the medical school and QMUL with projects involving the community.

Support for Student-led Initiatives

C+

- There is great support from the medical school for student-led initiatives. Notably, Sustain at BL is a society solely dedicated to ensuring Barts Medical School can prioritise sustainability and planetary health in their culture and beyond. Student-office positions for sustainability officers are available, and every year a number of students apply for this position. Unfortunately, collaboration for student led initiatives between Barts Medical School and QMUL is unsatisfactory. Student-led societies in both institutes operate separately.

Sustainability

B-

- Overall, Barts Medical School has started to make impressive plans and initiatives to try and establish a more sustainable outcome. From the Environmental Management System to the Laboratory Efficiency Assessment Framework, there is a constant drive to ensure that this goal is achieved. QMUL student union has also made some efforts in diversifying the university's portfolio investments into fossil-fuel companies. Currently, there are no sustainable guidelines for medical school events, and a green tariff was only introduced in October 2020. We expect this time next year for the sustainability score to be at a higher grade.



Queen's University Belfast

Overall

B-

Planetary Health Curriculum

B

- Planetary Health and Education for Sustainable Healthcare topics are evident in the core medical curriculum and various elective courses at QUB. These topics are becoming more longitudinally integrated through the introduction of the new C25 curriculum; with one of its core themes being 'Global and Population Health'.
- Staff have affirmed their commitment to these issues and are supportive of making Planetary Health connections and implications more explicit in the curriculum, with more dedicated time and content given to this.

Interdisciplinary Research in Health and the Environment

C

- Planetary health research is not a primary research focus within the medical school at QUB, and the university lacks an institute of interdisciplinary planetary health research. The success of the conference "Healthy People on a Healthy Planet", should encourage commitment to the involvement of such events.
- The medical school should encourage and improve collaboration with other areas of the university, such as the School of Natural and Built Environment and Centre of Sustainability, Equality and Climate Change, whilst continuing its SDG mapping to committee to tackle issues related to planetary health.

Community Outreach and Advocacy

D

- There are some existent partnerships between QUB, such as the Widening Participation Partnership, and a number of community-facing events have been held. Communications regarding planetary health are sent to students through a number of means (e.g. communications from the QUBSU Climate Action Group).
- The medical school should continue to establish its own partnerships with community and engage in community outreach and advocacy efforts associated with planetary health, for example, by holding community-facing events about planetary health and sustainable healthcare.

Support for Student-Led Initiatives

B+

- QUB currently supports a number of student-led initiatives, including a number of planetary health projects, and providing grants to students. There are also two student representatives advocating for sustainability best practices. The medical society Students for Global Health advocate for planetary health and sustainability.
- The medical school should aim to fund research into planetary health, for example, through the established Summer Studentship scheme. It would also be ideal to develop a webpage to provide medical students with information on planetary health and sustainable healthcare, perhaps through the Med Portal.

Sustainability

C+

- QUB has developed a number of sustainability practices on campus, such as: establishing an Office of Sustainability, implementing sustainable building practices, providing a range of environmentally friendly transportation options, applying sustainability criteria to catering, and providing recycling programs.
- However, there are still a number of important steps that QUB should take to improve sustainability, including: setting and achieving a goal of carbon neutrality, divesting from fossil fuels, increasing renewable energy sources, etc. It is vital that QUB is transparent about these, as information is lacking and difficult to find.



St. George's Medical School

Overall

D

Planetary Health Curriculum

F+

- The St George's curriculum covers PH topics very briefly, with almost no connections made throughout the course. The medical school should consider collaborating with the Institute for Biomedical Education, which runs the Global Health course. Ideally, more learning objectives relating to PH should be incorporated into the curriculum.

Interdisciplinary Research in Health and the Environment

D

- St George's Hospital Medical School lacks a specific institute for interdisciplinary planetary health research, although there are faculty members in the Population Health Research Institute and the Infection and Immunity Institute with a primary or secondary research focus on planetary health.
- The Centre for Global Health in the Infection and Immunity Institute holds great potential for PH research and as a platform to centralize resources in health and the environment.
- Planetary health research at SGUL is generally focused on outdoor air and noise pollution in London and Europe, including a collaborative institute, the 'MRC Centre for Environment and Health'.
- Community involvement in interdisciplinary PH research at SGUL occurs on an individual basis, from researcher to researcher, who call for members of funding bodies to include community-based needs in their funding criteria

Community Outreach and Advocacy

D

- The institute is conducting research on the effects of certain environmental factors on the local community. There is also very little informational material provided by St George's University Hospitals. Overall, there is little community outreach and advocacy.
- However, the institute's Environmental Working Group and the Students' Union Environment and Ethics Officers are working on developing and implementing new strategies to increase awareness of environmental advocacy. It is suggested that the institute, medical school, and affiliated hospital create a website for the St George's community regarding environmental issues and planetary health.

Support for Student-led Initiatives

D-

- As an institution, St George's has student representatives under the environmental and ethics offers of the student union that advocate for sustainable practices within the university.
- There are unfunded research opportunities that provide an avenue for development and completion. A suggested improvement is to provide explicitly paid fellowship positions for medical students to engage in research related to planetary health and or sustainable healthcare practices.

Sustainability

B

- Overall, St George's campus is sustainable. Administration is actively involved in efforts to further increase sustainability, including further recommendation, policies and plans. To further increase sustainability, the administration could make the recommendations and guidelines for sustainable practices mandatory rather than optional. Additionally, a transition to mostly renewable energy and usage of exclusively recyclable materials could be beneficial, although the transition would understandably take time.



2020-2021 Summary Report United Kingdom

Swansea University

Overall

C-

Planetary Health Curriculum

C-

Swansea University is graduate-entry and is therefore an accelerated course. Because of the accelerated time frame, there is inadequate time to cover Planetary Health (PH) within the curriculum. While there aren't weeks dedicated to covering PH specifically, PH is covered briefly in lectures covering COPD, Asthma, and public health. There is also a Global Health week in year 2 which covers topics related to planetary health. Alongside this, there is coursework that is carried out in all 4 years and the topics of this coursework is entirely student selected. In these areas, students can choose to focus on planetary health topics, and these are fully supported by the faculty. The school is in the process of updating the curriculum and adapting it to align with the school's new mission statement: to "Produce Excellent, Caring and Inclusive clinicians for a global society". This will involve more lectures directed towards PH. These changes can already be seen in the new fortnight of teaching in 4th year called Future Medics which focuses on PH related topics such as food security and water shortages.

Interdisciplinary Research in Health and the Environment

F+

Swansea University offers extensive research opportunities, but few projects are focused solely on planetary health. There is no dedicated team within the research department looking at planetary health and no incentives to study it. If students are interested in research, they need to either conduct it within their own time or choose a time slot dedicated to research in first or second year through a program called LORS.

Community Outreach and Advocacy

F+

Within Swansea University, there is very little outreach or advocacy. This is partly due to lack of interest, but it is something the faculty are focused on expanding. Swansea is currently in the process of trying to bring in a lay person from the local community to help improve this area.

Support for Student-led Initiatives

C-

Swansea Medical School provides substantial support for student-led initiatives and societies. Within planetary health, there are 2 Societies working on this: the Gambia Link and Students for Global Health. The faculty support Gambia Link by facilitating an opportunity for students from Gambia to experience working in the NHS. This is fully fundraised by the students and staff. There could be more support in terms of grants or a fellowship program allowing more students to participate in Global Health.

Sustainability

A+

Campus sustainability within Swansea University as a whole and specifically within the school of medicine is excellent. The University is constantly striving to do better by bringing out new guidelines regularly. The University has been entirely divested from fossil fuels since 2019 and all medical school buildings use renewable energy. The hospitals associated with the medical school are also striving for increased sustainability with an emphasis on car sharing, cycle schemes and renewable energy such as the new solar farm being built at Morriston Hospital.



2020-2021 Summary Report
United Kingdom

University College London

Overall

B-

Planetary Health Curriculum

B

While the majority of core teaching in the MBBS curriculum doesn't have a focus on climate change and sustainability, UCLMS are striving to integrate and embed more teaching longitudinally. There is currently an overarching Intended Learning Outcome (ILO) for every year of MBBS stating "Appreciate the impact of climate change and sustainability in healthcare". The new Citizenship Toolkit module in Year 1 provides core teaching on sustainability. This, in addition to the elective student selected component (SSC) course 'Sustainability & Climate Change in Healthcare', covers the majority of the issues on the Planetary Health Report Card. However in future, sustainability topics could be explored and discussed in more depth in relevant existing lectures, in addition to standalone lectures addressing sustainability in healthcare, to ensure the issues are integrated throughout the curriculum.

Interdisciplinary Research in Health and the Environment

C+

UCL is committed to supporting and funding planetary health and sustainability research, as evidenced by its [Grand Challenge of Global Health](#) which has funded projects like the [UCL-Lancet Commission on Managing the Health Effects of Climate Change](#), the high number of UCL researchers carrying out this type of research, and the many conferences/symposiums it holds that raise awareness on the issue of planetary health and sustainability. Nevertheless, there are still areas for growth. For example, the Faculty of Medical Sciences could provide space for a primary research focus in planetary health, and encourage the inclusion of communities disproportionately impacted by climate change and environmental injustice in the research agenda.

Community Outreach and Advocacy

F+

While UCL has held various talks and conferences and has partnerships with community-based organisations at institutional level, the medical school itself is not part of those partnerships. Appreciating that the COVID-19 pandemic has introduced many challenges and obstacles to community outreach this past year, UCLMS lost points for the lack of communication about planetary health and sustainable healthcare to students and the wider community through courses or events. An area which scored poorly but for which there is much scope for improvement is the delivery of educational material on the impacts of climate change on health to students and patients at the affiliated hospitals.

Support for Student-led Initiatives

B

UCL supports and encourages student-led initiatives through funding, offering and/or advertising opportunities related to sustainability and planetary health. However, the Faculty of Medical Sciences specifically could further facilitate student engagement and foster interest by collating current and past activities and research pertaining to sustainability and planetary health, connecting students to relevant researchers, as well as offering paid research opportunities specifically for planetary health/sustainable healthcare projects.



2020-2021 Summary Report
United Kingdom

University College London (Continued)

Sustainability

A+

In its strongest scoring category, UCL has demonstrated remarkable commitment to sustainability on campus. Already entirely divested from fossil fuels, UCL is committed to investing in renewable energy and 100% of medical school buildings are already powered by renewable energy. By 2024, UCL has the ambitious goal of achieving net zero carbon buildings and having a campus free of single-use plastic, with additional biodiverse space the size of 1.5 football pitches. When considering areas for improvement, the PHRC team thought that composting could be better advertised to students on campus and in halls of residence. Similarly, whilst good guidance exists on increasing sustainability of events, compulsory sustainability criteria for all events could have a greater effect.

Expanded score explanations can be found at phreportcard.org.



2020-2021 Summary Report
United Kingdom

University of Aberdeen

Overall

B-

Planetary Health Curriculum

C+

- Planetary Health topics are covered in the core curriculum at Aberdeen but they are a brief overview rather than in-depth analysis. A more in-depth analysis of topics is available through student chosen SSC projects.
- The curriculum is in the process of being enhanced with the themes of planetary health and sustainable medicine and work is being undertaken to improve teaching and learning on this topic.

Interdisciplinary Research in Health and the Environment

C

- Aberdeen lacks a specific institute for interdisciplinary PH research but has appointed an Interim Director for the Health, Nutrition & Wellbeing theme for interdisciplinary research. It is hoped this will enable further work in this theme. A group of interested clinicians with a primary research interest in planetary health are enhancing the teaching opportunities available to students interested in planetary health and sustainability medicine and facilitating projects and departmental education.
- The university itself does have a sustainability steering group- a relationship between this group and potential research opportunities could be expanded to include the medical school.

Community Outreach and Advocacy

B

- Aberdeen has a very active Global Health Society which is student run and they facilitate events on all things global health which are well attended by the student body but they are not specifically environmentally related. There is no student run body which addresses sustainability currently but this could be explored. There are however, opportunities for students who have undertaken planetary health and sustainability SSC projects to present them to peers and start a conversation about these research undertakings.
- Aberdeen has a number of successful public lecture series which are aimed at educational material for the local population such as café med, café sci and research institutes such as the Rowett Institute host their own lecture series where environmental medicine has been previously discussed and there is a platform for further engagement of the local community in planetary health.

Support for Student-Led Initiatives

C+

- Overall, the medical school is supportive of student-led PH initiatives, offering their time, funding, and enthusiasm for student work.
- The administration could further support student-led initiatives by facilitating connections between research mentors and students and creating grant opportunities for students to undertake PH work as summer placements or elective projects.

Sustainability

B

- Aberdeen University has a committed steering group dedicated to campus sustainability and they are working towards 2040 net zero emissions.
- The medical school itself is powered by low carbon network and supported by back up from the national grid.
- The medical school (Suttie Centre) was built to achieve BREEAM excellence and won an award in the bespoke category.



2020-2021 Summary Report United Kingdom

University of Birmingham

Overall

C

Planetary Health Curriculum

D-

- The Medical School has many lecturers with a personal interest in planetary health, as shown in the list compilation, however the curriculum is currently lacking in planetary health content.
- Further efforts need to be made to include planetary health in both lecture content where applicable and also in learning objectives. One way noted that planetary health could be easily integrated is in the Medicine in Society modules in years one and two.
- It has been noted that the curriculum at Birmingham is currently being redesigned so we would like to emphasise the ever growing importance of planetary health education at medical school.

Interdisciplinary Research in Health and the Environment

B

- The University of Birmingham along with the Medical School have great ties with the Institute of Applied Health Research and this is reflected in this score for the section.
- To further improve students' development, advertisement of research positions, particularly to pre-clinical years would be useful. In addition it would be beneficial if students and the wider community could have more influence in the direction of research projects.

Community Outreach and Advocacy

F+

- There have been many recent improvements in community outreach with the opening of the Green Heart and the associated environmental health events.
- The Medical School lacks partnership with organisations promoting planetary health directly. Perhaps if a position was made available on CAWC as student sustainability chair, the Medical School would be able to have a more positive community impact. As shown by the number of planetary health 'MedSoc' societies there is definitely enough student demand.
- The low score reflects the need for increased communication from the Medical School to both students and wider communities with the aim of education on such topics.

Support for Student-led Initiatives

C+

- Overall, the administration is supportive of student-led initiatives and there are many opportunities to secure funding for these initiatives. The faculty are very willing to donate their time and knowledge in aid of such initiatives.
- To further the support given, it would be useful to have a representative on a medical school committee such as CAWC to ensure that could advocate for sustainability best practices.

Sustainability

B+

- The University and the Medical School have made big steps to ensure a more sustainable campus, with notable accomplishments including achieving a 20% reduction in carbon footprint 5 years before the original goal.
- The main recommendation from this section is the need for fossil fuel divestment in addition to a set time goal and plan for moving towards carbon neutrality on campus.



2020-2021 Summary Report
United Kingdom

University of Cambridge

Overall

C-

Planetary Health Curriculum

C

Strengths: The core curriculum covers healthcare sustainability particularly well, gives a good overview of the links between climate change and health, and encourages students to think about how they can take action in their personal and professional lives. Faculty members are very engaged and are working to strengthen the curriculum.

Recommendations:

- Generate learning outcomes that address planetary health, with focus on its relation to health justice
- Aim to address these outcomes through a practical and integrated approach across the course.
- Continue defining specific plans and provide support for development of teaching sessions and resources

Interdisciplinary Research in Health and the Environment

D+

Strengths: Cambridge Zero, focuses on topics related to planetary health, although it is not its primary concern.

Recommendations:

- Join the Planetary Health Alliance and/or Global Consortium on Climate and Health Education
- Set-up dedicated researchers, groups or departments whose primary focus is planetary health research
- Work within the institution to generate research interest and communication on the topic of planetary health
- Aim to work collaboratively with local communities to generate research questions

Community Outreach and Advocacy

F

Strengths: Cambridge Zero researchers have collaborated with community organisations through CUSPE

Recommendations:

- Begin a process of engaging with local communities on issues of planetary health, such as by working with local hospitals to produce information for patients or running awareness events
- Regularly communicate with students and staff within the School on issues of planetary health

Support for Student-Led Initiatives

C

Strengths: The University and Medical School is supportive of student-led planetary health initiatives, for example, the institution's Living Labs projects offer students the opportunity to carry out sustainability focussed internships.

Recommendations:

- Develop further opportunities for students to carry out research and QI projects related to planetary health and sustainability
- Appoint a student liaison representing sustainability interests to work with the medical school faculty



2020-2021 Summary Report
United Kingdom

University of Cambridge (Continued)

Sustainability

C

Strengths: The institution-wide Office of Sustainability has multiple full-time staff and there are multiple representatives at the School of Medicine. New buildings utilize sustainable building practices.

Recommendations:

- Work within the University to advocate for increased sourcing of renewable energy and retro-fitting of older buildings under the remit of the School
- Improve access and uptake of environmentally friendly transport options to placements for clinical students
- Improve existing and create new guidance for students and staff on sustainable events, recycling, food etc.

Expanded score explanations can be found at phreportcard.org.



University of Dundee

Overall

C

Planetary Health Curriculum

C+

- Dundee Medical School has planetary health embedded into the curriculum. There are excellent Student Selected Components, and significant improvements are planned for the next few years.
- The medical school should strive to incorporate the theme of planetary health throughout the curriculum as opposed to single lectures containing all the information. In addition, the unequal impact of climate change should be taught within the curriculum.

Interdisciplinary Research in Health and the Environment

B

- The University of Dundee has multiple dedicated researchers exploring issues surrounding planetary health. Social Sciences faculty have significant involvement, and the medical school should seek to be more involved in the interdisciplinary research, particularly with regards to healthcare.
- Grand Rounds has proved a fantastic way to raise awareness of planetary health in our community, and the dedicated page on the medical school internal site helps to keep students and staff up to date. However, the University is not a member of the Planetary Health Alliance or Global Consortium, so this should be a priority in the future.

Community Outreach and Advocacy

F+

- The University has organised multiple events that raise awareness and promote planetary health within our community. Grand Rounds within the medical school has, on multiple occasions, explored topics relating to planetary health, all of which are available for anyone to view on youtube.
- As far as we have found, there are no existing relationships with community organisations, so this is an area the medical school should seek to improve on. Similarly, there is a lack of information available to patients around the relationship between climate change and health. More documentation could be created and distributed as part of a Student Selected Component.

Support for Student-led Initiatives

C

- There are many opportunities at the medical school for students to get involved in research, and the faculty is supportive of this. However, there are no specific planetary health projects for students and no advertised funding. The medical school could look to integrate these opportunities into the existing DCAT programme.
- Additionally, the medical school could aim to advertise potential mentors on their Planetary Health website.

Sustainability

C-

- The University as a whole has multiple sustainable initiatives and goals; however, the medical school could try to be more involved in these schemes. We recognise it is difficult for the faculty to control the structural aspects of the medical school as it is part of the hospital, and a lot of these factors regarding usage of old buildings and power supply are out of their control.
- It would also be beneficial if the medical school implemented initiatives to encourage or reward environmentally friendly commuting options.



University of Edinburgh

Overall

C+

Planetary Health Curriculum

C

The University as a whole has multiple sustainable initiatives and goals; however, the medical school could try to be more involved in these schemes. We recognise it is difficult for the faculty to control the structural aspects of the medical school as it is part of the hospital, and a lot of these factors regarding usage of old buildings and power supply are out of their control. It would also be beneficial if the medical school implemented initiatives to encourage or reward environmentally friendly commuting options.

Interdisciplinary Research in Health and the Environment

B

The Global Health Academy (GHA) is a robust research department engaging in planetary health and healthcare sustainability research, further enriched by the development of the Planetary Health Lab in 2020. It is a member of the Planetary Health Alliance, and has hosted previous meetings, but might want to consider joining the Global Consortium on Climate and Health Education. Its cross-disciplinary nature allows for partnership with other departments and could make it a good source of support for staff with a primary research focus on planetary health. Institutional communication about planetary health could be improved, either by better signposting information currently available, or amalgamating these separate sources of information (e.g. GHA and Department for Social Responsibility and Sustainability websites) into one central, detailed, and user-friendly source, with the option to receive regular communications on the topic.

Community Outreach and Advocacy

C

The medical school promote and incentivise medical students participating with local community organisations within the year 1 curriculum to enhance their understanding of the social, economic and environmental impacts of health. The medical school have offered community-facing events on planetary health but often aimed at an academic, rather than a public, audience, and future events could address this. In hospitals, the public health education literature on environmental health exposures and the health impacts of climate change is limited and could be easily rectified.

Support for Student-Led Initiatives

B-

The University has many opportunities (grants, awards, projects, volunteering, societies, courses) for medical students interested in sustainability to get involved, though these are not specific to healthcare. Given the recent push in the medical school to connect students to mentors in specific areas of medicine, including sustainability as one such area could be an easy improvement to make, along with creating a sustainability officer role within the Medical School Council.

Sustainability

B

The medical school main campus has recently established a dedicated office of sustainability. There are initiatives to make lab spaces more sustainable, and a sustainable procurement policy is in place. There is infrastructure to support environmentally-friendly transportation but this could be further improved by incentivising public and active transport over private vehicles e.g. offering bursaries for active transport or grants towards purchasing bicycles. The University of Edinburgh has fully divested from fossil fuels and aims to be carbon neutral by 2040. At present little of the medical school energy comes from renewables and improvements are limited by building constraints. Sustainability at Little France could be improved by offering composting, lobbying the main cafeteria to adopt the university Good Food Policy, and creating a policy for sustainable events.



University of Exeter

Overall

B-

Planetary Health Curriculum

B-

- The administration at Exeter has actively worked to improve the planetary health (PH) content, introducing a new 3 week Special Study Unit (SSU) course on 'Global and Planetary Health' (GPH) as part of the 2020-21 core curriculum, with various elective project options for students within this.
- However, PH could be integrated more longitudinally in the curriculum. The medical school should identify PH as a priority theme, including clear learning objectives, alongside filling content gaps, especially the impact of climate change on marginalised populations and communicating with patients about climate change.

Interdisciplinary Research in Health and the Environment

A+

- The European Centre for Environment and Human Health (ECEHH) is part of the University of Exeter Medical School (UEMS). There are multiple members of faculty carrying out interdisciplinary PH research, details of which are outlined on their website, and UEMS have held conferences on PH in the past few years.
- ECEHH has excellent public engagement, its 'HEPE' group has a significant role in shaping research and has been utilised by other institutions, including the London School of Hygiene and Tropical Medicine.

Community Outreach and Advocacy

D

- The University of Exeter partners with community groups and offers community facing educational events in planetary and environmental health through the Global Systems Institute. However UEMS is not involved in the planning or delivery of these activities.
- The Public Engagement in Medical Education (PIME) group at Exeter is well established, and though they currently don't have a role in promoting sustainability, they are interested in doing so and strengthening medical school-community links going forward.
- There are limited resources from UEMS for the community to be informed about climate change and health.

Support for Student-Led Initiatives

C

- The University of Exeter has multiple resources online if students wish to get involved in PH initiatives.
- There is no direct financial support for student-led PH initiatives. A senior member of staff confirmed that if a particular initiative was supported by the medical school, funds could be redistributed to support it. There is also a student guild sustainability fund which student groups can apply to.
- Two societies exist at the University, 'Truro Global Health Society' and 'Students for Global Health Exeter', that run events for medical students touching on topics such as planetary health and environmental factors.
- There could be further support for student-led initiatives in PH via representation on the student staff liaison committee (SSLC).

Sustainability

A-

- The University of Exeter has declared a Climate Emergency and has published a working paper outlining their roadmap to net zero by 2050.
- Overall, the University is committed to improving sustainability. It is already 100% supplied by renewable energy, uses sustainable building practices and supply procurement, and has divested from fossil fuels.
- There is an established Sustainability Office, but no paid member of staff for medical school sustainability, only voluntary 'sustainability coordinators'.



2020-2021 Summary Report
United Kingdom

University of Glasgow

Overall

C-

Planetary Health Curriculum

D

- Planetary Health (PH) connections exist within the curriculum, but they are largely based on elective coursework, specifically through the “Global Health and Travel Medicine” Y2 SSC.
- PH connections in the curriculum could be made more explicit, with more dedicated time, especially in the core curriculum. The medical school should identify PH (including climate change) as priority Intended Learning Outcomes (ILOs) and include material in test questions, in addition to filling in content gaps. Suggestions for doing so are below in more detail, specifically in relation to adding content to the Vocational Skills curriculum, Keeping People Healthy block, and within the epidemiology section of PBLs.

Interdisciplinary Research in Health and the Environment

C+

- The Centre for Sustainable Solutions (CfSS) was introduced in April 2020 and provides a place for climate crisis related interdisciplinary research, and centralises research and connections within the Institution. The work they are doing is highly commended.
- The Medical School has a number of faculty interested in PH and could build links with the CfSS, as a greater involvement with the CfSS could be beneficial in terms of research, as well as developing resources to add to the medical curriculum.

Community Outreach and Advocacy

F+

- The Medical School has a large community outreach programme, but it is not focused on PH. The Medical School could build connections with environmental justice groups in Glasgow, and other advocacy projects (Docs not Cops) and work in partnership. The Medical School could also engage with community partnerships that the Institution maintains, such as with “Sustainable Glasgow” or “Climate Ready Clyde” and enable Planetary Health related conversations in these partnerships.

Support for Student-led Initiatives

B-

- Overall, the administration is supportive of student-led PH initiatives, offering their time and enthusiasm for student work. However, there is no specific funding for PH initiatives specifically. There is also no centralised database of faculty interested in PH, current/past research projects regarding PH, or grant opportunities. We suggest a Moodle page be developed centralising these resources, and a page on the Centre for Sustainable Solutions website.

Sustainability

C

- Due to pressure from advocacy groups on campus, the Institution is slowly becoming more sustainable. As procurement and guidelines tend to be run centrally, the Medical School has little autonomy in regards to supply procurement and buildings on campus. We suggest that the medical school partner with interested students to create sustainability guidelines for events hosted by the Medical School and transport options.



University of Manchester

Overall

C-

Planetary Health Curriculum

F+

- Overall, there is a lack of medically-relevant planetary health topics in the curriculum, justified by statements from the medical school that these topics are not GMC-requirements. The planetary health content identified in this report is therefore dependent on individual lecturer or student preference. The GMC have, however, recently updated their Outcomes for Graduates to include an understanding of sustainable healthcare.
- Going forward, the curriculum would benefit from the incorporation of planetary health and sustainability topics across the entire cohort. This would bring Manchester in line with current standards, creating doctors who have an awareness of how the health of the population is closely aligned with the health of the planet.

Interdisciplinary Research in Health and the Environment

C+

- The Manchester Environmental Research Institute (MERI) at the university has a comprehensive research agenda including many aspects of planetary health and is connected with researchers based in the School of Medical Sciences. The MBChB programme may benefit from collaboration with MERI, taking advantage of its wealth of projects that explore how human health is being affected by climate and environmental change.
- We recommend that the medical school and/or university show support of planetary health initiative by joining either Planetary Health Alliance or the Global Consortium on Climate and Health Education.

Community Outreach and Advocacy

D

- Although the wider university is involved with multiple community-based projects concerning health and environment, there was no evidence that the MBChB programme is involved in these.
- The primary focus of the programme is, of course, to educate future doctors in medicine, it would be encouraging to see some involvement in outward-facing projects related to climate and health, particularly as this is a topic that is benefiting from increasing awareness in the community and across the world.

Support for Student-Led Initiatives

D+

- Student-led initiatives exist, but are minimal and could be further developed. The programme may benefit from the introduction of a dedicated student liaison/committee to advocate for planetary health on the MBChB programme.
- Closer collaboration between the MBChB programme and other departments throughout the university (e.g. MERI) may facilitate connections between research mentors and students, as well as enhancing the university and medical school's forward-thinking and climate-conscious reputation.

Sustainability

A+

- The University of Manchester Environmental Sustainability Team is well-organized and has far-reaching influence in all aspects of campus life, including carbon neutrality, renewables utilization, transportation, recycling, campus events, procurement, and divestment.
- The medical school adheres closely to the guidelines set by the Sustainability team, resulting in strong campus sustainability. Refitting the older medical school building and reaching carbon neutrality would further improve this.



University of Nottingham

Overall

C

Planetary Health Curriculum

C

- There is some planetary health content throughout the preclinical curriculum, with the Public Health team delivering the majority of the content in their core lectures. Planetary health also finds its way into the respiratory lecture content, through looking at the global impact of COPD.
- **Recommendations:** The Medical School needs to work at integrating planetary health and sustainable healthcare topics longitudinally into the curriculum, possibly by introducing the content into seminars. This would give students the opportunity to reflect on what they have learnt, so they can put it into practice as healthcare professionals.

Interdisciplinary Research in Health and the Environment

C

- Over the past few years, the University of Nottingham has greatly expanded its interdisciplinary research into planetary health and sustainability through its Beacons of Excellence, which aim to meet the United Nations 17 Sustainable Development goals. However, the Medical School needs to do more to engage with this research, especially when it comes to sustainable healthcare.
- **Recommendations:** The Medical School should seek to engage more with planetary health research focusing on sustainable healthcare. A key step would be to join the Planetary Health Alliance and/or the Global Consortium.

Community Outreach and Advocacy

F+

- This is the University's weakest area. Whilst there have been some events looking into factors affecting planetary health, these have been few and far between.
- **Recommendations:** The Medical School needs to engage with community organisations to increase awareness of planetary health and sustainable healthcare. Furthermore, there needs to be more information available to patients on the impact of climate change and environmental exposure on their health. This could be addressed through an optional module where students have to research and produce leaflets on various factors such as exposure to air pollution, for example.

Support for Student-led Initiatives

B-

- There are funded research opportunities available for students interested in climate change and sustainability, but these are all centralised and not Medicine-specific.
- **Recommendations:** The Medical School should introduce some specific planetary health or sustainable healthcare research projects with specific mentors that have a keen interest in these areas. Furthermore, the School would benefit from having a named sustainability student liaison that could work with University teams to advocate for Medicine-specific interests.

Sustainability

B+

- This is clearly the University of Nottingham's strongest area, with the University declaring a Climate Emergency in March 2020 and committing to becoming carbon-neutral by 2028, in line with Nottingham's goals to become the UK's first carbon-neutral city.
- **Recommendations:** The University should look into having a full-time sustainability lead within the Medical School, as well as working to reduce its reliance on non-renewable fuel sources.



University of Sheffield

Overall

C

Planetary Health Curriculum

C+

- University of Sheffield does include planetary health in the curriculum, but it lacks integration longitudinally. In first and second year, various aspects of planetary health are discussed in lectures. There is also some discussion of planetary health in seminar work (ILAs).
- **Recommendations:** There is a lack of teaching about introducing conversations about planetary health into conversations with patients. This could be introduced in clinical skills, or early years GP. There could be more SSCs relevant to planetary health.

Interdisciplinary Research in Health and the Environment

C

- The University of Sheffield has dedicated departments for interdisciplinary research, SCHARR and the Institute for Sustainable Food. The institution hosted a series of webinars on topics related to planetary health and sustainability in 2021. However the series is not directly aimed at medical students.
- **Recommendations:** Sheffield Medical School could organise a conference directly related to Planetary Health. They could also join the Planetary Health Alliance and the Global Consortium on Climate and Health Education, and set up a website with planetary health news.

Community Outreach and Advocacy

C-

- University of Sheffield Medical school has little community outreach relating to planetary health. In the Phase 3a SSC there is an opportunity to partner with 'Greener Practice'. In the 2b Social Accountability SSC, there is no option to partner with a planetary health group. Relating to the 2019 climate strikes, the Medical School was supportive. Sheffield Teaching Hospitals does have some accessible educational materials for patients.
- **Recommendations:** more community partnerships relating to planetary health in SSCs.

Support for Student-led Initiatives

C-

- The University of Sheffield and the Medical School support student groups dedicated to planetary health. There are two medical societies (Student for Global Health & Healthy Planet Sheffield) dedicated to this topic who receive funding from the Student Union and work closely with faculty members. In addition the University offers opportunities for students to participate in co-curricular planetary health programs either through the Sustainability Skills & Education series of webinars or via volunteering programs in Sheffield.
- **Recommendations:** Support for student-led initiatives mostly comes from the wider University rather than the Medical School. We recommend the medical school offers increased support to students interested in sustainable initiatives for example via creating a website that advertises mentors or opportunities for students relating to PH or ESH and prioritises grants for related research.

Sustainability

C

- Sheffield Medical school has made good progress to become a more sustainable campus in conjunction with the wider University, including fossil fuel divestment and using fully renewable energy on site, to setting achievable goals for carbon neutrality in the future.
- **Recommendations:** There is still much to improve with the campus sustainability. Goals and plans are already in place at the Medical School, especially in transportation and building, but we also recommend focusing on making lab spaces more sustainable and improve/introduce sustainable guidelines for events and procurement.



2020-2021 Summary Report
United Kingdom

Warwick Medical School

Overall

D

Planetary Health Curriculum

D

- The Planetary Health on the curriculum at Warwick is focused on in a single lecture within the last year of the course, with some ability for student driven electives on planetary health coming in second and third year projects. There is definite room for improvement in the curriculum. The impacts of climate change on health need to be addressed sooner and in more breadth throughout the four year programme. There are already talks of getting this kind of content on the curriculum post PHRC meeting and how easy this would be for Warwick to do for the upcoming academic year.

Interdisciplinary Research in Health and the Environment

D+

- Whilst The University of Warwick is focused on improving their environmental impact, the university lacks an institute for interdisciplinary planetary health research that considers the impacts of environmental changes on health, both in the local communities and wider global populations. The Planetary Health Alliance would be a good place for WMS to start.

Community Outreach and Advocacy

F+

- Community outreach and advocacy for planetary health is currently quite poor at Warwick and the partner hospitals don't appear to offer any accessible materials on the topic. When asking students, in general there is limited knowledge of environmental impacts on health and how to approach that when talking to patients.
- WMS has a weekly newsletter which could promote planetary health initiatives within the community; this accepts staff and student submissions and could be implemented immediately.

Support for Student-led Initiatives

D

- The central institution is supportive of student-led planetary health initiatives and is eager to implement student ideas. However there could be promotion of sustainable healthcare student run projects within SSC1/2 with lead mentor(s) that are interested in this area.
- It would be possible for the medical school to introduce a student sustainability advocate as part of med soc or as a liaison with the central university in order to implement sustainable healthcare initiatives.

Sustainability

C

- This is Warwick's strongest area, driven primarily through initiatives initiated by the central institution. The University declared a Climate Emergency and has the goal of becoming carbon-neutral by 2030. To improve further there are some goals such as more sustainable food options and travel buddy initiatives which could easily be implemented. The campus could achieve a lot by having a salaried member of staff on the sustainability central team as, at the moment, a lot of the green champion work at the medical school is all voluntary.



2020-2021 Summary Report United States

Boston University

Overall

C+

Planetary Health Curriculum

D

The Boston University School of Medicine (BUSM) Planetary Health Curriculum contains sessions on the impacts of pollution and environmental health on patients in the setting of asthma and other cardiopulmonary illnesses. The current planetary health curriculum is not integrated into other health system modules. The School of Public Health, however, has a robust offering of environmental health and sustainability courses. In a survey of 8 medical students and 2 public health students, the public health students rated their education as more robust in each of the curriculum metrics collected by the PHRC. In addition to further integration and the addressing of areas not yet covered such as the disproportionate impact on marginalized communities and the psychological effects of climate change, it is hoped that the medical school can better collaborate with the school of public health to enhance the core curriculum and offer relevant electives.

Interdisciplinary Research in Health and the Environment

B+

Boston University School of Public Health, who works in tandem with BUSM, makes a significant effort to promote interdisciplinary research for planetary health. They have a dedicated program for population health research focusing on climate and health, with 4-5 ongoing projects and frequent symposia and lectures regarding topics in planetary health. Specific areas of improvement include the process of community input into the research agenda and communication with the larger university's Office of Sustainability to centralize resources related to health and environment in a medical-school specific context. Additionally, the medical school should consider joining the Planetary Health Alliance and/or the Global Consortium on Climate and Health Education.

Community Outreach and Advocacy

D+

Boston University has some connection with sustainability organizations in the community, but has not promoted community based environmental partnerships that students can get involved in. Because of its vast network of community partners and partnering healthcare locations, it is thought that bringing in local groups working on planetary health initiatives would be well received by students and promote improved knowledge of said initiatives throughout the BUSM network.

Support for Student-led Initiatives

A-

The medical school is supportive of student-led initiatives and are enthusiastic and engaged in helping develop improved content around planetary health. Student groups seeking funding for their activities and individuals wanting to fund research have appropriate avenues to do so.

Sustainability

B-

Sustainability is a main area of focus for Boston University, which has a robust Climate Action Plan with goals to be carbon neutral for our operations by 2040. There is a strong sustainability team within the University who work to coordinate different aspects of sustainability. The Medical School has also taken on significant steps to improve the energy efficiency of their buildings and labs. In the future, divestment from fossil fuels will be a major step towards achieving a higher sustainability score.



2020-2021 Summary Report United States

Brown University

Overall

B-

Planetary Health Curriculum

C+

- Planetary Health (PH) connections in the curriculum should be made more explicit, with more dedicated time to connecting PH with specific human ailments and organ systems. Alpert Medical School (AMS) should identify PH (including climate change) as a priority theme and include it in learning objectives and test questions.
- While there is some PH related content, the majority of this is placed during the first semester of M1. PH content should be more longitudinal and incorporated throughout both the preclinical and clinical curriculum.

Interdisciplinary Research in Health and the Environment

B

- AMS's newly established membership in the Planetary Health Alliance and the Global Consortium on Climate and Health Education is encouraging and signals the medical school's commitment to action.
- There are several PH-focused researchers affiliated with AMS, many of whom are doing commendable work in PH, such as the Brown University Superfund Research Program. However, there remains a lack of formal support from the medical school for interdisciplinary PH research. In addition to recruiting more diverse PH and healthcare sustainability-focused faculty, AMS should strengthen existing programs like the superfund or create new PH initiatives in order to enhance student involvement in community-facing research in this area.

Community Outreach and Advocacy

C

- In fall 2020, AMS hosted a lecture series on disparities in health that was free for the public and included several talks related to the health impacts of climate change and other environmental factors. AMS also markedly improved its planetary health-related CME course offerings this year. There is one partnership between AMS students and a community environmental justice group for which MS2s can receive service learning credit.
- AMS should play a larger role in facilitating medical student involvement in community environmental justice groups by advertising opportunities and including at least one environmental justice group in the August service learning orientation for MS1s. AMS should also encourage our teaching hospitals to provide accessible patient-centered materials on planetary health topics.

Support for Student-Led Initiatives

B

- Overall, the medical administration is fairly supportive of student-led planetary health initiatives and has been receptive to feedback on areas where the medical school could improve its commitment to planetary health.
- The administration could further support student-led initiatives by creating a webpage clearly listing PH-focused faculty for students in search of research mentors, establishing sustainability or PH-specific grant opportunities, and developing a student fellowship program or scholarly concentration designated for PH.



2020-2021 Summary Report
United States

Brown University (Continued)

Sustainability

B-

- Brown University has made great strides in its commitment to sustainability including its embrace of LEED certified construction, goal of carbon neutrality by 2040, and robust composting program.
- In the specific context of the medical school, there are numerous opportunities for improvement, including improved medical student education on sustainable commuting, established sustainability criteria for school events and materials, and measures to increase the direct supply of renewable energy to the AMS building. In embracing these efforts at the operation-level, the school could build a strong foundation for curricular, research, and outreach PH initiatives.

Expanded score explanations can be found at phreportcard.org.



2020-2021 Summary Report United States

Columbia University

Overall

C

Planetary Health Curriculum

D

- Integration of planetary health topics into the medical school core curriculum is limited. The main sources of information are through several lectures in the Introduction to Global and Population Health elective course open to first-year medical students, through one module in “Environmental Health” in the Internal Medicine section of the Public Health Commute (a series of modules meant to be completed during the Major Clinical Year) and finally through brief, passing mentions in lecture slides.
- VP&S should make it a priority to more thoroughly integrate planetary health topics into its core curriculum. One potential avenue for this change is through the Public Health Commute lecture slides; another is the Foundations of Clinical Medicine course. VP&S should prioritize and incentivize including more planetary health material in the medical education curriculum.

Interdisciplinary Research in Health and the Environment

A-

- Columbia University has several strong interdisciplinary research efforts, including the Earth Institute. The Mailman School of Public Health is particularly strong in the area of environmental health research and is a tremendous resource. The medical school should work to become better integrated into the network of interdisciplinary resources, and should make these resources more readily available to medical students. The medical school should create a resource that centralizes these opportunities and outlines the ways in which medical students could get involved.

Community Outreach and Advocacy

D-

- While there are many initiatives throughout Columbia University, there is currently no infrastructure for medical students to get involved in most outreach and advocacy efforts. The medical school should work to strengthen connections across the university and make these initiatives more readily accessible and better publicized for medical students. The medical school should seek to develop stronger collaborations with community organizations and involve students in these efforts.

Support for Student-led Initiatives

B-

- While the administration is supportive of and enthusiastic about student efforts, VP&S could further support student-led initiatives by creating dedicated funding opportunities and/or fellowships for research and student-led sustainability initiatives, as well as facilitating connections between students and research mentors.

Sustainability

B-

- Columbia University has taken concrete steps towards improving sustainability, with particular strengths including transportation, renewable energy, commitment to building new buildings up to LEED standards, and committing to carbon neutrality. The University and the medical school can make a stronger and more concrete emphasis on sustainability practices and/or implement sustainability requirements for supply procurement, event planning, and food and beverages. The medical school can make composting available on its campus. The University and the medical school can create stronger infrastructure for encouraging and supporting sustainable laboratory practices.



Creighton University

Overall

C-

Planetary Health Curriculum

C

- Creighton SOM offers a Student Interest Selective and two Gold Track lectures that emphasize the importance of Planetary Health and the massive impacts that climate change and environmental exposures have on human health.
- Creighton SOM can improve curriculum by ensuring that these topics are integrated into Blue and Green Track lectures as well as clerkship years. This will ensure longitudinal learning and the development of physicians aware of pathophysiology as well as social processes that are implicated in Planetary Health.

Interdisciplinary Research in Health and the Environment

D

- Creighton SOM lacks research in the field of Planetary Health and healthcare sustainability. The SOM can expand into Planetary Health research through interdisciplinary collaboration with the environmental and public health researchers across the university, particularly through the Kingfisher Institute.
- The SOM can improve by identifying faculty research mentors for students interested in Planetary Health research and encouraging quality improvement projects related to healthcare sustainability.
- Creighton SOM is supportive of the Global Health Conference Midwest, a key platform for Planetary Health education and research advancement.

Community Outreach and Advocacy

D+

- There are numerous local organizations the University partners with in order to promote Planetary and Environmental health. However, the SOM is not engaged directly in these relationships.
- The SOM is in the process of setting goals that ensure engagement with the community when determining advocacy and community partnership priorities.
- Creighton Clinical Affiliates do not offer materials regarding the health impacts of climate change (such as education on maintaining health during severe heat waves) to patients in an accessible and meaningful way.

Support for Student-led Initiatives

B

- Structures within the medical school appear to provide ample opportunities for student creativity and funding for academic projects and student groups alike. The awareness and ease of use of these programs as well as the visibility of faculty mentors are limiting factors to more active student involvement in sustainability initiatives.
- Greater institutional attention to Planetary Health as well as publication of such efforts in accessible online formats are recommended to make the culture and activities of the school align with its mission and goals.

Sustainability

D

- As an institution, there is slow but steady movement toward sustainability goals -- notably, a dedicated Office of Sustainability, plans for full divestment, a task force updating plans for carbon neutrality, and a new composting program. However, there is a need for more rigorous sustainable building practices, particularly in the building of the new medical school, and an ambitious transition to renewable energy.
- The SOM lacks basic sustainability practices seen in other parts of the university, such as composting and reliable recycling. The SOM can improve by reconciling these differences, developing sustainable guidelines for food and beverages, supply procurement, events, and lab spaces, and taking a leading role in university-wide efforts for sustainability.



2020-2021 Summary Report United States

Emory University

Overall

A-

Planetary Health Curriculum

B+

- Emory University School of Medicine approved in October 2019 a disseminated curriculum for the pre-clinical M1 and M2 years. Climate change and health content is integrated across modules within lectures and small group sessions. The curriculum is now in the implementation phase for the class of 2025, under the direction of Dr. Rebecca Philipsborn.
- Next Steps: Students and faculty will collaborate over the coming year to continue implementation of the curriculum. Further areas to be addressed include the standardized patient curriculum (learning to take an environmental exposure history, discussing climate change with patients), and extending formal CHE teaching to the M3 clerkship year.

Interdisciplinary Research in Health and the Environment

A-

- Emory's School of Medicine works closely with the Rollins School of Public Health to ensure dissemination of quality interdisciplinary planetary health research between clinicians and scientists. Students have access to a number of opportunities to fund their research regarding climate health and sustainability through fellowships offered via a variety of avenues. Moreover, Emory provides opportunities to communicate the University's planetary and environmental health research discoveries through frequent conferences and symposiums.
- Next Steps: In the future, Emory should push to provide agency to community members regarding research agenda decision-making. Currently, there is no obvious, formal avenue for communities disproportionately impacted by climate change to provide input to researchers pertaining to future research endeavors.

Community Outreach and Advocacy

B

- Emory currently offered a number of opportunities for students to engage with the immediate Atlanta community and readily disseminate these opportunities to students in frequent campus communications.
- Next Steps: Students and Faculty will work together to improve the distribution of educational material for patients pertaining to environmental health exposures and climate change and health impacts.

Support for Student-Led Initiatives

A

- Emory is generally very supportive of student-led initiatives. Our student-led climate health interest group was recently funded and we have faculty mentors who are passionate and willing to assist with our sustainability/planetary health endeavors.
- Next Steps: Some of the limitations in this section can be attributed to the COVID-19 pandemic. Students were unable to host classes teaching students how to create personal compost bins outside of their homes. However, effort should be invested in developing more programs involving events led by members of local environmental justice community members as well as cultural arts events related to planetary health.



2020-2021 Summary Report
United States

Emory University (Continued)

Sustainability

A-

- Emory has developed a well-supported sustainability culture built on the back of the Office of Sustainability. The School of Medicine benefits significantly from policies and initiatives that are already established campus-wide — the SOM liaison supplements these pre-existing policies.
- Although Emory currently only supplies approximately 10% of its buildings with renewable energy, significant advances have been made recently to improve their renewable energy, including 15,000 newly installed solar panels across the Atlanta campus. Emory should continue to work towards its greenhouse gas emission goals that require a 45 percent reduction by 2030 and net zero emissions by 2050.

Expanded score explanations can be found at phreportcard.org.



Geisel School of Medicine at Dartmouth

Overall

D

Planetary Health Curriculum

D-

- Planetary health (PH) is inadequately included in the core curriculum and almost entirely absent from enrichment electives.
- PH connections should be made explicit in the curriculum with the introduction of dedicated time. The medical school should identify PH (including climate change) as a priority theme and include that material in learning objectives, test questions, and lecture content
- Strengths: PH and health equity are described in two new M1 lectures on environmental racism and discrimination, developed as part of the Race and Health Equity Longitudinal Curriculum in 2020-2021.

Interdisciplinary Research in Health and the Environment

D+

- Dartmouth lacks an institute for planetary health research, yet has some research underway in this area. Research related to PH (i.e. waste audits, impacts of air pollution, climate change modeling) is led by independent researchers, and is not centralized or easily accessible.
- The medical school should commit to recruitment of researchers interested in PH and identify researchers at the institution who are already doing work in this area. Forming a centralized website for projects related to PH and healthcare sustainability would help to increase transparency in this area.

Community Outreach and Advocacy

F

- Geisel lacks awareness about environmental advocacy programming amongst faculty and staff. Healthcare sustainability is not transparent within the medical school or at our affiliated hospitals.
- Patients have access to educational materials related to topics in environmental health such as air pollution or chemical exposures, but this access is physician dependent and varies by department.
- The newly formed MS4SF chapter at Geisel is working to expand connections within sustainability across the campus. We aim to bring together faculty and staff doing work related to PH via forming a website and newsletter in the future.

Support for Student-Led Initiatives

A-

- Dartmouth College has a number of established resources available to undergraduates and medical students, including funding for projects and sustainability initiatives. Most medical students are unaware of these opportunities, however, and Geisel does not have active relationships with departments hosting these grants.
- The medical school administration could further support student initiatives by ensuring medical students are aware of existing opportunities, cultivating relationships with the departments and resources already available on campus, and developing a student fellowship or research program dedicated to PH.

Sustainability

D

- Dartmouth College has a well integrated Sustainability Office that is involved in green construction, sustainable food and supply procurement, initiatives related to divestment, and community engagement around sustainability. However, they operate separately from the medical school. While buildings at the medical school fall under campus buildings for green construction and renovation, internal operations like procurement and waste are managed by the medical school as a separate entity.
- Geisel could benefit from enhanced communication with the Sustainability Office to increase green practices including sustainable purchasing, food and beverage options, transportation initiatives, and waste management.



Georgetown University

Overall

C+

Planetary Health Curriculum

C

- Planetary health topics are briefly covered throughout the medical curriculum and the Deans have extended their support for integrating Education for Sustainable Healthcare (ESH) into the curriculum.
- Efforts should be made to focus on the intersection of environmental health with specific topics, such as food security, marginalized populations, and indigenous communities. For example, environmental threats relevant to Georgetown's surrounding community would be an excellent addition to future P3 intersession activities given the school's drive for social justice.
- Faculty should be given incentives to incorporate planetary health into current courses, such as by providing strategies to have conversations with patients about climate change and teaching medical students to take an environmental health history.

Interdisciplinary Research in Health and the Environment

C

- The Georgetown University School of Medicine (GUSOM) faculty have contributed to research through the Georgetown Environment Initiative, Global Health Initiative, and Climate Center. The school has also hosted conferences pertaining to planetary health this past year.
- There is currently no public or visible process for how communities impacted by environmental injustice can contribute to the research agenda at GUSOM.
- There should be a greater focus on integrating research that correlates health and the environment. GUSOM should also consider taking steps to join the Planetary Health Alliance or Global Consortium on Climate and Health Education.

Community Outreach and Advocacy

D+

- Georgetown University partners with community organizations and community education is offered through the Georgetown Environment Initiative and Georgetown Climate Center.
- GUSOM should play a more active role in establishing partnerships with community organizations and providing educational material on environmental health to patients, students, and staff members of the school and affiliated hospitals.

Support for Student-led Initiatives

B

- Georgetown offers paid research opportunities and has done well to provide co-curricular planetary health programs. There is currently no student representative for sustainability in the medical school.
- GUSOM should add a student representative to advocate for sustainability practices and localize research opportunities to a single, accessible web page. Further funding should be made available to support medical students interested in enacting sustainability initiatives.

Sustainability

B

- Georgetown University has made substantial improvements in the reduction of CO2 emissions, use of renewable energy and availability of environmentally friendly practices.
- The university has stated a carbon neutrality goal by 2030.
- GUSOM should appoint a staff member to head sustainability specifically within the medical school and hospital.



2020-2021 Summary Report United States

Harvard Medical School

Overall

B

Planetary Health Curriculum

C+

- HMS has made significant strides over the last few years in incorporating planetary health into the curricula of both Pathways and HST, with several sessions now dedicated to it in each program. PH was incorporated for the first time this year in Essentials I, the only course required for all medical students.
- HMS would benefit from a broader effort to incorporate planetary health teaching longitudinally throughout the curriculum rather than concentrating it in a few standalone lectures.

Interdisciplinary Research in Health and the Environment

B+

- HMS excels in planetary and environmental health research as a founder of the Planetary Health Alliance, home to leading researchers in these issues, and host to several interdisciplinary research institutes.
- Harvard's planetary health research could be more inclusive by providing a centralized website to make opportunities to participate in this research more accessible to medical students and giving community partners a forum to help focus research on local impacts of climate change and pollution.

Community Outreach and Advocacy

B-

- HMS and its affiliated hospitals provide extensive educational material for patients and the general public connecting the environment to human health, including events, courses, and online resources.
- Goal-directed outreach activities, however, are lacking at the medical school: while Harvard University hosts collaborations with community organizations to promote environmental health, HMS does not, nor does it provide CME courses for professionals on planetary health, despite a broad array of other offerings.

Support for Student-led Initiatives

A-

- Harvard University provides many opportunities for students to perform funded planetary health research, initiate sustainability projects around campus, and participate in campus planning.
- The Countway Library of Medicine, the Students for Environmental Awareness in Medicine, and orientation activities provide nature- and planetary health-related programming for students, but further engagement with the community through advocacy, the arts, and environmental justice initiatives could enrich these offerings.

Sustainability

B

- Harvard University has an active Office of Sustainability that has released guidelines for buildings, sustainable foods, supply procurement, and events. Broader publicity of these guidelines and, in some cases, making them mandatory would increase their efficacy.
- Harvard University has strong goals for eliminating its carbon footprint, but there is not yet a clear plan for or substantial progress towards meeting these goals at the medical school.



2020-2021 Summary Report United States

Indiana University

Overall

D+

Planetary Health Curriculum

C-

- IUSM dedicates a lot of time to social determinants of health in its core curriculum. Students gain an understanding that environmental exposures have a disproportionate impact on marginalized communities.
- Planetary Health connections in the curriculum should be made more explicit, with more dedicated time. The medical school should identify Planetary Health (including climate change) as a priority theme and include that material in learning objectives and test questions. The medical school should offer an elective on Planetary Health for students to gain a more in-depth understanding of the impact of climate change on human health.

Interdisciplinary Research in Health and the Environment

D

- IUSM lacks an institute for interdisciplinary Planetary Health research that emphasizes the impacts of anthropogenic environmental changes on health. IUSM may draw from existing centers and groups such as Richard M. Fairbanks School of Public Health, IU School of Public Health, Paul H. O'Neill School of Public and Environmental Affairs, Center for Urban Health, Sustainable Development Goals Working Group, Environmental Resilience Institute, and its partnership with Moi University.
- The medical school should commit to involvement in the recruitment of and engagement with Planetary Health researchers.

Community Outreach and Advocacy

F

- The institution has a centralized Office of Sustainability website that links the sustainability efforts at every IU campus. There is an opportunity to add a section for future Planetary Health initiatives on the website.
- IUSM 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.

Support for Student-led Initiatives

C

- IUSM administration is supportive of Planetary Health initiatives introduced and led by students.
- The administration could further support student-led initiatives by facilitating connections between research mentors and students, creating grant opportunities, and developing a student fellowship program designated for Planetary Health.
- It would be beneficial for IUSM to have a student liaison representing sustainability interests who serves on a decision-making council.

Sustainability

C

- IU has implemented robust strategies to encourage and provide environmentally-friendly transportation options for students and reduce the environmental impact of commuting.
- IUSM has many opportunities to improve its sustainability practices: divest from fossil fuels, implement composting, use renewable energy for campus buildings, and implement programs to make labs more environmentally sustainable.



2020-2021 Summary Report
United States

Loyola Stritch School of Medicine

Overall

D

Planetary Health Curriculum

D

- Planetary health (PH) connections exist but only briefly through a few slides throughout medical education
- PH connections in the curriculum should be made more explicit, with more dedicated time. The medical school should identify PH (including climate change) as a priority theme and include that material in learning objectives and test questions, in addition to filling in content gaps.

Interdisciplinary Research in Health and the Environment

D+

- Loyola SSOM lacks an institute for interdisciplinary PH research that emphasizes the impacts of anthropogenic environmental changes on health.
- There needs to be a more supported effort and marked opportunities for the research of planetary health and environmental/medical sustainability by the institution.

Community Outreach and Advocacy

D

- Loyola SSOM is involved with a few community-focused environmental justice programs that welcome medical student involvement. The student led Group for Environmental Medicine and Sustainability works to expand those opportunities and strengthen connections across the university.
- There is poor awareness of environmental advocacy programming amongst the students and faculty.

Support for Student-led Initiatives

D-

- Overall, the administration has a supportive attitude toward student-led PH initiatives, offering their time, funding, and enthusiasm for student work.
- The administration could further support student-led initiatives by facilitating connections between research mentors and students, creating grant opportunities, and developing a student fellowship program designated for PH.

Sustainability

C+

- Loyola SSOM lacks on campus recycling and composting programs, sustainability initiatives for lab spaces or sustainability guidelines for events. While Loyola University Chicago has an Office of Sustainability, there is no committee for the medical school or Health & Sciences Campus.
- Loyola SSOM offers public transportation from the parking garages to the hospital or medical school campus.



2020-2021 Summary Report United States

Perelman School of Medicine at University of Pennsylvania

Overall

B

Planetary Health Curriculum

C+

- Planetary health (PH) connections exist throughout medical education, and tuition covers up to three courses at Penn's other schools. The administration also elected to increase the PH content for the 2020-2021 curriculum.
- PH connections in the curriculum should be made more explicit with more dedicated time. The medical school should identify PH (including climate change) as a priority theme and include that material in learning objectives and test questions, in addition to filling in content gaps.

Interdisciplinary Research in Health and the Environment

A-

- Penn lacks an institute for interdisciplinary PH research that emphasizes the impacts of anthropogenic environmental changes on health. The medical school may draw from existing centers such as the Department of Occupational and Environmental Medicine, CEET, the Center for Public Health Initiatives, and the "One Health" program at the veterinary school.
- This year the university introduced the EII, which will target faculty recruitment in line with climate change, environmental justice, and sustainability. The medical school should commit to involvement in the EII and recruitment of PH researchers.

Community Outreach and Advocacy

B

- Penn runs several community-focused environmental justice programs that welcome medical student involvement. The student Healthcare Sustainability Group works to expand those opportunities and strengthen connections across the university.
- There is poor awareness of environmental advocacy programming among students and faculty. Perelman should develop a centralized website housing all PH community programs, courses, research, funding opportunities, and events. This information should be regularly publicized via a sustainability newsletter and highlighted in the primary campus magazine.

Support for Student-led Initiatives

B

- Overall, the administration is supportive of student-led PH initiatives, offering their time, funding, and enthusiasm for student work.
- The administration could further support student-led initiatives by facilitating connections between research mentors and students, creating grant opportunities, and developing a student fellowship program designated for PH.

Sustainability

B+

- The University has dedicated staff devoted to promoting sustainability and has adopted several measures to reach sustainability goals including: reducing fossil fuel emissions, increasing recycling, and reaching carbon neutrality.
- These university-wide initiatives could be tailored to the medical school through a liaison or staff member focused on medical school and hospital sustainability.



2020-2021 Summary Report United States

Stanford Medical School

Overall

B

Planetary Health Curriculum

B

- The elective EMED 134, and to a lesser degree electives from other Stanford departments, address many of the most salient topics in planetary health (PH). Some core curriculum now contains and applies PH content, and there is growing buy-in at most levels of instruction and from many core Medical School course faculty.
- Stanford core curriculum lacks consistent and appropriate emphasis on PH in a meaningful, longitudinal way. The two greatest areas of need for improvement are curriculum focused on: 1. The inequitable distribution of climate change and environmental hazards' burden locally and globally on marginalized, indigenous, and disadvantaged individuals. 2. Advocacy and skills training for effective clinical application of PH concepts, particularly to drive sustainability efforts, take exposure histories, and advocating for patients.

Interdisciplinary Research in Health and the Environment

B

- Scholars and students at Stanford have many diverse opportunities to engage in interdisciplinary PH research, notably through the Woods Institute for the Environment and Stanford Center for Innovation in Global Health (CIGH), and soon through the School of Climate and Sustainability. Medical student engagement in these opportunities is well-supported, and CIGH offers a PH post-doc fellowship, indicating institutional investment.
- Centralization and promotion of existing Stanford Office of Sustainability, Woods Institute, CIGH, School of Climate and Sustainability, and School of Medicine resources and opportunities in PH is necessary to increase student, community, and patient exposure to and engagement with PH.

Community Outreach and Advocacy

C

- Though there are independent opportunities for student engagement in community advocacy and outreach such as the Valley Fellowship or the 2020 NorCal Climate and Pandemic Resilience in Health Care Symposium, this metric offers the greatest opportunity for improvement.
- Creating patient-facing resources is an essential step in leveraging Stanford School of Medicine's prerogative to supply necessary PH information and guidance to patients. A centralized PH site and the addition of CME sessions in PH and health system sustainability would open doors to community outreach and advocacy.

Support for Student-led Initiatives

A

- Stanford has strong institutional support for student led planetary healthy initiatives by funding PH research, sustainability projects, and community outreach through mechanisms like MedScholars, Valley Fellowship, Mel Lane Grant, [seed funding](#), [E-IPER](#), and the [Human and Planetary Health Fellowship](#). Stanford Climate and Health is a well-supported group of students from across the University and hub for initiatives in PH.
- Centralizing and officially promoting these PH resources and opportunities is a key growth opportunity.



2020-2021 Summary Report
United States

Stanford Medical School (Continued)

Sustainability

A

- Sustainability is broadly supported and incentivized across campus and at the Medical School.
- We recommend a collaborative effort to apply concepts from Stanford University R&DE's [One Plate, One Planet](#) initiative to Stanford Health Care's food and beverage systems, and that the School of Medicine become certified in green event planning through the Office of Sustainability. Institutional divestment from fossil fuels, reinvestment in clean energy, and the creation of a concrete plan toward the goal of net zero emissions are also important next steps.

Expanded score explanations can be found at phreportcard.org.



UC Berkeley-UCSF Joint Medical Program

Overall

A-

Planetary Health Curriculum

C+

- There are many elective courses related to environmental health and climate available to JMP students, however, the inclusion of Planetary Health into the core curriculum is limited.
- At least four of the JMP problem-based learning cases integrate planetary health themes. However, there are still opportunities to expand the core curriculum's focus on Planetary Health, such as expanding climate justice content in cases and integrating environmental health assessments into the clinical skills courses.

Interdisciplinary Research in Health and the Environment

A-

- UC Berkeley has several departments and centers devoted to environmental science research. Most notable is the SPH Division of Environmental Health Sciences, in which most faculty members are conducting planetary health research. The primary research interests of a few faculty members of the JMP focus on planetary health, and oftentimes, at least one student in each cohort of JMP students conducts research on an environmental health topic for their Master's Thesis.
- While there are several projects focused on Community Based Participatory Research in climate justice, SPH could consider development of an institutionalized process through which community members share decision-making power in the climate + environmental research agenda of the university.

Community Outreach and Advocacy

A

- Although the JMP is not formally partnered with community organizations that promote planetary health, many faculty members and students are involved in meaningful partnerships. Developing formal partnerships with community organizations may help to facilitate research, advocacy, and mutual learning.
- The UC Berkeley School of Public Health and UCSF offers a variety of public-facing courses and events and CME courses, and affiliated hospitals provide resources for patients about environmental health exposures and climate change.

Support for Student-led Initiatives

A+

- Both UC Berkeley and UCSF offer many resources to support student-led initiatives, including funding/grants and mentorship. These resources, especially the Environmental Scholars Program, should be highlighted more, especially to first-year students looking for thesis projects.

Sustainability

A

- UC Berkeley is a part of the UC's Carbon Neutrality Initiative and has pledged to be carbon neutral by 2025. It has an action plan, makes annual sustainability reports, and has entirely divested from fossil fuels.
- To meet these goals, UC Berkeley needs to accelerate the shift towards renewable energy, retrofit old buildings, improve sustainable practices in procurement, and further promote and incentivize sustainable event practices.
- The JMP, specifically, can help by engaging students in campus-wide sustainability efforts and promoting sustainable event practices.
- Furthermore, supporting telecommuting, telehealth, and online conferences will also reduce carbon emissions.



University of Arkansas for Medical Sciences

Overall

C

Planetary Health Curriculum

B

- Planetary health (PH) issues are addressed in several preclinical courses at UAMS, and the administration is actively working to increase the PH content for future classes.
- Discussions on how climate change directly impacts human health, with an emphasis on how PH issues threaten the immediate environment and patient population in Arkansas, should be made more explicit. In order to integrate PH issues more seamlessly into the core curriculum and/or elective coursework, the medical school should identify PH as a priority theme and include that material in learning objectives and test questions, in addition to filling in content gaps.

Interdisciplinary Research in Health and the Environment

D

- PH research is conducted by individual faculty members and through the Environmental and Occupational Health department; however, UAMS lacks an institute for interdisciplinary PH research.
- UAMS should strongly consider recruiting researchers who investigate PH topics, as well as furthering collaborations with community members impacted by climate and environmental injustice to allow them decision-making power in the climate research agenda. Existing opportunities for faculty and students to engage in PH research should be better highlighted through the PH-specific website.

Community Outreach and Advocacy

B-

- UAMS is increasing PH community outreach and advocacy efforts that welcome medical student involvement. The student-led Climate Health Interest Group helps to expand those opportunities across UAMS.
- UAMS should increase coverage of PH issues in its monthly journal and provide more easily accessible educational resources for students and patients.

Support for Student-led Initiatives

C

- Medical students can engage in PH initiatives through participation in the Climate and Health Interest Group, wilderness/outdoors clubs, and community gardens. UAMS offers support of student-led PH initiatives through faculty collaboration, though funding is lacking.
- The administration could further support student-led initiatives by facilitating connections between research mentors and students via the PH website, creating grant opportunities, and developing a student fellowship program designated for PH.

Sustainability

F+

- UAMS has implemented efforts to support environmentally-friendly transportation options and recycling for students and faculty.
- UAMS should strongly consider strengthening efforts in sustainability through investing in renewable energy campus initiatives, and implementing sustainability guidelines for campus food and beverage selections, supply procurement, and campus events.



University of California Los Angeles

Overall

C+

Planetary Health Curriculum

C-

- **Strengths:** Within the preclinical curriculum, Blocks 2 and 6 meaningfully discuss intersections between climate change, environmental sustainability, and the health of patients and communities. There are also multiple sessions touching on how and why to take an environmental history during patient care.
- **Opportunities:** Broadly, there is limited place-based education highlighting the particular environmental precarity of Los Angeles and southern California as it relates to climate, pollutant, and heat exposures, and the health impacts that these incur on patients in our community - particular patients from Black, Latinx, and indigenous communities. There is a paucity of elective opportunities to explore these themes further.
- **Recommendations:** Longitudinal discussions that link the health impacts of climate change and environmental injustice to the block material would be useful in demonstrating that these themes have relevance across specialties, as would the inclusion of skills-based sessions around how to discuss climate change with patients. Additional climate electives or other opportunities for students with particular interest could be made available.

Interdisciplinary Research in Health and the Environment

B

- **Strengths:** DGSOM is part of the Global Consortium on Climate & Health Education, and within the broader institution, there are many other schools and departments deeply engaged in climate research.
- **Opportunities:** There are few faculty members within DGSOM who have a primary research or clinical interest in climate and health, and those that do are not collated in an accessible way. There is not a mechanism as it stands for frontline community groups to advocate for inclusion of climate issues on the research agenda.
- **Recommendations:** A clear institutional home for DGSOM faculty invested in activities around climate and health (as proposed in the Global Health Program's new structure, for example) that has mechanisms that engage community organizations invested in climate justice would improve interdisciplinary research.

Community Outreach and Advocacy

C

- **Strengths:** Academic-community partnerships seem to be growing around climate change.
- **Opportunities:** There are limited patient-and provider-centered educational resources about climate and health, and more deliberate student engagement about climate-focused community partnerships could be provided.
- **Recommendations:** More community-facing events, resources, and direct partnerships would better situate DGSOM to uplift community experiences and stand in solidarity against climate inequities in Los Angeles.

Support for Student-Led Initiatives

B

- **Strengths:** Multiple funding streams exist to support student research and initiatives around climate change.
- **Opportunities:** There is limited student representation concerning decisions about sustainability.
- **Recommendations:** Better organized, explicit material about support for student initiatives related to climate change and sustainability may help increase student engagement around these issues.



2020-2021 Summary Report
United States

University of California Los Angeles (Continued)

Sustainability

A-

- **Strengths:** There are a number of promising initiatives within UCLA Health and the broader UCLA campus.
- **Opportunities:** Procurement practices and medical school building energy practices could be improved.
- **Recommendations:** More messaging about the exciting successes within UCLA could be communicated to students, and DGSOM could continue to learn from UCLA Health's example around renewable energy usage.

Expanded score explanations can be found at phreportcard.org.



2020-2021 Summary Report United States

University of California San Francisco

Overall

B+

Planetary Health Curriculum

B

- Planetary health (PH) is woven throughout the Bridges Curriculum and there are established and concrete ways students can notify faculty of areas of improvement for the curriculum in real time. Elements of the core curriculum outline clearly how human health is intimately tied to PH.
- PH connections could be improved by providing students with strategies on how to counsel patients that are affected by climate change and other PH issues.

Interdisciplinary Research in Health and the Environment

A+

- UCSF has the EaRTH Center, Program for Reproductive Health and the Environment, the Office of Sustainability, and the Center for Climate, Health, and Equity which provide great interprofessional opportunities for environmental health engagement as well as research and funding opportunities.
- However, UCSF SOM continues to lack substantial research from faculty directly at the School of Medicine, and does not yet have a way to incorporate the feedback of community members disproportionately affected by climate change.

Community Outreach and Advocacy

B

- Although UCSF has the infrastructure to communicate how environmental health and climate change are intimately tied to human health and therefore scores highly in this category, the University often misses opportunities to use its platform to make the link between planetary health and human health explicit. For example, when Speaker Pelosi had a conversation with Chancellor Hawgood earlier this year, no questions were asked of Speaker Pelosi as to what the House of Representatives would do to improve the health of our planet and its citizens.

Support for Student-led Initiatives

A-

- Overall, the administration is supportive of student-led PH initiatives, offering their time, funding, and enthusiasm for student work. The Environmental Scholars Program and Carbon Neutrality Initiative fellowship are funded opportunities for students to engage in planetary health at UCSF.

Sustainability

B+

- UCSF has robust waste reduction, water conservation, toxics reduction, sustainable food, green procurement, energy efficiency, green procurement, green labs, and education/engagement efforts. The LivingGreen certification for offices, labs, clinic/units, homes and events further engage staff and students.
- The university has a commitment to achieve carbon neutrality by 2025. This will be addressed in building carbon -free buildings, purchase/lease of carbon-free shuttles and seeking 50% alternative fuel fleet, transitioning from nat gas to electric heating/cooling in existing buildings, influencing commuters to use alternative transportation or EVs, and reducing business travel. More sustainable sourcing of meat products are happening in UCSF cafeterias. UCSF is now sourcing 97% electricity from carbon-free sources has significantly reduced GHG emissions since 2010.



2020-2021 Summary Report United States

University of Hawai'i

Overall

C

Planetary Health Curriculum

C-

- Environmental health is a large component of Native Hawaiian health philosophy. Planetary health topics are addressed in community health electives and required lectures in the core curriculum. A 'one health' course that covers planetary health topics is offered at UH Mānoa, however, it is not possible for medical students to take this course.
- Planetary health is not directly addressed in the core problem-based learning curriculum at JABSOM, however, it would be possible to incorporate planetary health topics into cases in the future.

Interdisciplinary Research in Health and the Environment

C

- The UH institution offers potential research opportunities in planetary health through the Institute for Sustainability and Resilience and UH affiliated organizations like the East-West Center.
- However, there is no dedicated department for planetary health research at JABSOM, nor is funding available for students pursuing planetary health research currently.

Community Outreach and Advocacy

C-

- The UH institution puts on planetary health-related events, such as the Hā O Ke Kai Climate Conference and the Agriculture and Environmental Awareness Day, for the community; JABSOM did include planetary health topics in the Humanism, Empathy, Social Justice and Global Health Symposium.
- JABSOM also volunteers with a few environmental organizations, especially for community health electives in students' MS1 years.

Support for Student-led Initiatives

C

- Overall, the administration appears supportive of student-led planetary health initiatives, as evidenced by their willingness to meet with students and openness to making changes to curriculum.
- The administration could further support this initiative by facilitating connections between research mentors and students and eventually incorporating an elective with a primary focus on planetary health.

Sustainability

C

- JABSOM's main building on campus achieved LEED certification.
- The state of Hawaii set a goal of carbon neutrality by 2045. The UH institution has plans to incrementally reduce its carbon footprint to achieve neutrality by 2050, but it is unclear if JABSOM also has plans to achieve neutrality.
- UH divested from fossil fuels and established an Office of Energy Management to reinvest in alternative energies.
- JABSOM could improve its sustainability by implementing a compost program accessible to campus users.
- The UH institution could potentially look into hiring a full-time staff member to oversee the sustainability efforts of the schools.



2020-2021 Summary Report
United States

University of Massachusetts Medical School

Overall

C+

Planetary Health Curriculum

B-

- UMass has implemented climate change-related materials in its 2020-2021 core curriculum. The impacts of climate change and health were discussed in more than six core courses in the first and second year curricula and a student driven elective dedicated to climate change and health was offered in early 2021.
- UMass should work on increasing the depth of the materials covered and expanding to clinical education coursework. Additionally, UMass should create a permanent position on the curriculum committee that is dedicated to developing and monitoring planetary health curricula for students in all four years.

Interdisciplinary Research in Health and the Environment

D

- The University of Massachusetts 5-campus system offers a wealth of interdisciplinary collaborative research institutes, and working-groups focused on planetary health and healthcare sustainability.
- UMMS does not have a dedicated research group for planetary health and healthcare sustainability. UMMS leadership should encourage the development of an interdisciplinary planetary health and sustainability institute or encourage participation by faculty in University-wide research programs.

Community Outreach and Advocacy

B-

- UMMS has one student-led project linked to planetary health within the community, though the infrastructure for more programs exists within the population health clerkship. The medical school does not have community-facing events or lectures about planetary health.
- UMass Memorial and Baystate Health both have educational material devoted to environmental exposure to toxins on their patient-facing websites. However, only Baystate has a section addressing planetary health.
- UMass Memorial should create a page dedicated to planetary health on their website, in addition to developing patient-facing courses on the impacts of climate on health.

Support for Student-led Initiatives

B

- UMass offers grants and research opportunities that can be utilized for independent projects initiated by students, however there are none dedicated, specifically to planetary health. UMass should create a grant opportunity or fellowship that specifically supports students interested in planetary health equity.
- While UMass has a funded student-led group dedicated to planetary health initiatives, it lacks a robust website that can connect students with mentors and projects within planetary health and sustainable healthcare.
- There are occasional student-facing events regarding planetary health and sustainability, however there should be consistency in these offerings and increased faculty support to increase student interest in these topics.



2020-2021 Summary Report
United States

University of Massachusetts Medical School (Continued)

Sustainability

C+

- The Office of Sustainability at UMMS supports student-led initiatives around climate and health and recently completed a new 5-year sustainability plan.
- UMMS has a goal of 15% decrease in emissions by 2026 with a detailed plan for achieving this goal. UMMS is held to the University of Massachusetts Board of Trustees Sustainability Policy which sets a goal of achieving net neutrality by 2050. At this time, there is no specific plan in place for the medical school to fulfil this goal.
- UMass as a system has divested from all direct fossil fuel holdings, but should prioritize divesting from all indirect fossil fuel holdings in the coming year.

Expanded score explanations can be found at phreportcard.org.



2020-2021 Summary Report United States

University of Minnesota

Overall

C-

Planetary Health Curriculum

C-

- Planetary health (PH) connections exist mainly in one lecture, with a few scattered references throughout other lectures. While the main climate change lecture covered a variety of planetary health topics, it only exists as a PowerPoint for students to review and did not include a live or recorded lecture component.
- While PH connections in curriculum exist, they should be more frequent and more in-depth than they are currently and should appear in test questions to demonstrate their importance. Topics that are not in the curriculum at all (such as the predominant impact of climate change on marginalized communities), should be prioritized, as they are essential to understanding PH. In addition, students should receive training on how to have discussions with patients surrounding the topic of PH, including how it impacts the patient and how they can advocate for change.

Interdisciplinary Research in Health and the Environment

C-

- IonE encourages sustainability research at the U of M and continues to work on including PH in their work. The medical school should align itself more closely with this work and explicitly encourage students and faculty to engage in PH research. In addition, while there are multiple webpages that provide some PH resources, there should be a webpage that centralizes all current resources related to PH (e.g. research opportunities, upcoming events, etc.).
- Communities that are disproportionately impacted by climate change should be given a voice in the process of forming a research agenda within the medical school.

Community Outreach and Advocacy

F

- While IonE partners with community organizations to promote environmental health, the medical school itself should engage in community outreach regarding PH, offering events and partnering with organizations. Students should be involved in this process.
- Educational materials for patients regarding PH are in development - as these are completed, awareness should be spread so both physicians and students know they are available and when to use them.

Support for Student-Led Initiatives

B

- Health Students for a Healthy Climate, an interdisciplinary group that aims to advance sustainability initiatives, is supported by the administration. There have also been multiple PH programs and initiatives taking place within the institution in the past year.
- While there were sustainability grants offered last year, these grants or similar grants should be offered annually to encourage research in PH. In addition, students should be able to access information about PH activities and potential mentors via a webpage or other accessible resource.

Sustainability

C+

- The U of M has an Office of Sustainability that engages in various sustainability projects on campus, including within the medical school buildings. However, the medical school is not closely associated with this office and does not have input on many sustainability guidelines. The medical school should connect with the Office of Sustainability and integrate itself more deeply into sustainability initiatives, becoming an active member in making campus more sustainable.



2020-2021 Summary Report
United States

University of North Carolina School of Medicine

Overall

C

Planetary Health Curriculum

C-

- Strengths: Planetary health (PH) connections are mentioned briefly in the respiratory and renal blocks, the patient-centered care course, and in the microbiology coil. Faculty have been very enthusiastic about including these slides. Additionally, there are a few elective opportunities for students to explore PH issues.
- Areas for improvement: PH connections in the curriculum could be made more explicit, with more dedicated time. The medical school could identify PH as a priority theme and include that material in learning objectives for each block. For example, the impact of pollution and toxins would be an excellent addition to PH curriculum in the reproductive and endocrine blocks.

Interdisciplinary Research in Health and the Environment

B+

- Strengths: UNC SOM has the benefit of being a member of a strong research institution with excellent work in planetary health (PH) related issues such as air quality and asthma being done by SOM faculty.
- Areas for improvement: An excellent opportunity for improving awareness and resources would be to join the Planetary Health Alliance and/or the Global Consortium on Climate and Health Education. Additionally, the SOM could develop an explicit process by which communities disproportionately affected by climate change or environmental injustice in NC could have input or make decisions about PH research agendas.

Community Outreach and Advocacy

D

- Strengths: UNC Health, affiliated with the SOM, is a partner with Clean Air Carolina.
- Areas for improvement: As there is a lack of patient education materials on PH issues at the hospital and other UNC Health sites, the SOM could participate in crafting online materials, physical brochures, classes, etc. for NC. In addition, there is opportunity to create PH-related CME courses and to partner with Gillings or other areas of UNC to host public education events.

Support for Student-Led Initiatives

B-

- Strengths: Overall, the administration at UNC SOM is very supportive of student-led PH initiatives, offering their time and enthusiasm for student work and responsively starting to include more slides about PH issues into applicable material in PCC and the renal, cardio, respiratory blocks and the microbiology coil. Funding for the student-led PH advocacy group, CLEAN Med UNC, is pending.
- Areas for improvement: The administration could further support student-led initiatives by facilitating connections between research mentors and students, creating grant opportunities, and developing a student fellowship program designated for PH. The SOM has an excellent bank of researchers in PH and could make medical students more aware of their work with opportunities for student involvement.

Sustainability

D

- Strengths: The SOM has the benefit of the use of newer UNC buildings with updated sustainable designs, such as the use of rainwater salvage systems.
- Areas for improvement: The biggest step UNC could take towards improving medical school specific campus sustainability would be to develop sustainability guidelines for event planning (including choice of food, beverages, supply procurement, etc).



2020-2021 Summary Report United States

University of Rochester

Overall

C-

Planetary Health Curriculum

C-

- Planetary Health (PH) is primarily covered in a small number of new electives and briefly in a few core courses. A new elective was designed specifically to comprehensively cover PH for physicians in training.
- Improvements in PH education are primarily driven by three dedicated faculty members and are not systematically integrated into the core curriculum, which is not sustainable.
- The medical school should commit to integrating PH longitudinally into the core curriculum through official learning objectives. Students should formally learn how to integrate PH into direct patient care.

Interdisciplinary Research in Health and the Environment

D+

- There are individuals whose research is focused on healthcare sustainability or PH, but there is no overarching department they are housed under to direct overall research goals, funding, or directions.
- Though there is a process for community members to advise climate research, the medical school should create a process that allows them to directly vote on research to improve engagement.

Community Outreach and Advocacy

D+

- URSMD faculty are involved in community outreach and advocacy, however, this involvement is primarily limited to 2-3 clinicians who are connected to several broader medical centers and community groups in Rochester to promote PH engagement and education.
- Besides these 2-3 incredible faculty members, medical school administration, faculty, and staff are largely uninvolved in community outreach efforts related to PH. Without these faculty our rating would be lower.
- Medical students at URSMD, unless connected to the above 2-3 clinicians, have few opportunities to engage in community outreach and advocacy initiatives related to PH.

Support for Student-led Initiatives

B-

- URSMD funds and supports a student interest group focused on PH. However, there are no students representing sustainability interests on an institutional decision-making council.
- PH research projects are able to be funded through broader research support initiatives. However, there are not any funding opportunities that specifically promote PH research.
- Various events, projects, and programs organized by students, faculty, and community members have covered a range of PH topics. No medical-school specific webpage exists to display PH activities or mentors.

Sustainability

C-

- URSMD has made some progress towards more sustainable practices. However, many of these changes have been implemented sporadically, and more universal application of sustainable practices is needed.
- Both the University of Rochester and URSMD have robust programs available to individual students and faculty such as carpooling, biking, and recycling. Several of the Medical Center dining locations incorporate sustainability criteria into their food and beverage selections as well.
- URSMD lacks an Office of Sustainability and has not made a formal commitment to carbon neutrality.



2020-2021 Summary Report United States

University of Utah

Overall

C

Planetary Health Curriculum

C-

- Planetary health education is interspersed throughout the curriculum but for the most part, opportunities for learning about the intersection between climate change and health are limited to opt-in elective courses.
- Since accepting Climate Change as a societal problem in 2019, the curriculum committee is well-poised to incorporate lectures throughout the didactics years and beyond that focus on these issues.

Interdisciplinary Research in Health and the Environment

C-

- Researchers from the School of Medicine and the institution at-large have contributed significantly to planetary health research, especially in the realm of air quality and its impacts on human health.
- Due to the size of this institution and volume of research done here, the school would benefit from a stand alone department that fosters collaboration on planetary health research. A good first step toward this goal would be creating a planetary health database through the School of Medicine's website.

Community Outreach and Advocacy

D+

- Through the Global Change and Sustainability Center at The University of Utah, there are many opportunities and resources for community outreach and advocacy. The School of Medicine should use this support to develop educational and volunteer experiences that benefit the public's knowledge of and resiliency toward the effects of climate change on health.
- There have been a number of excellent planetary health outreach and advocacy events led by faculty and students at the University to foster conversations at our institution and in the broader community. We hope these events and related projects will continue to inspire further events and projects in this realm.

Support for Student-led Initiatives

B-

- Overall, the administration at the School of Medicine is very supportive of student-led efforts surrounding planetary health. Due to the limited time students have in medical school, we hope to engage administration in longitudinal goals toward sustainability that will outlive our time at the institution.
- The administration could further support students in these efforts by offering grants for planetary health research, creating a sustainability advising board within administration that includes students, and inviting guest lecturers whose work focuses on the impacts of climate change and health to speak to students.

Sustainability

C

- While the university as a whole has taken great strides to make the campus more sustainable, the hospital system and medical school have been slower to implement similar changes.
- Supply procurement amendments, sustainable lab space initiatives and guidelines for reducing waste at school-sponsored events would be great places to start.



2020-2021 Summary Report
United States

University of Virginia

Overall

C

Planetary Health Curriculum

D-

Currently, there is a single, optional lecture focused on the impact of climate change on health, sparse learning objectives on the topic, few if any test questions, and no existing fourth-year electives. Our greatest strengths lie in student and faculty enthusiasm. Our preliminary suggestions include: tweaking existing clinical vignettes throughout the preclinical courses to add an environmental theme; expanding upon the existing sessions in FCM and SIM to more explicitly address disparities in environmental health impacts; developing a for-credit fourth-year elective. Ultimately, we hope for a dedicated PH thread, resulting in more explicit coverage, learning objectives, and testing on the topic.

Interdisciplinary Research in Health and the Environment

B-

There are PH research opportunities within the SOM and the broader university; however, locating these opportunities prove very challenging. The Office of Sustainability (OS) and the Environmental Resilience Institute (ERI) present varied opportunities for students across the university to participate in PH research. However, we found that the SOM faculty researching PH were not widely advertised nor updated on their faculty profiles. Additionally, there are no faculty members who focus primarily on PH. We are hopeful that the increased visibility from the School of Nursing's recent first "Protecting Human Health in Changing Climate" conference will lead to increased research opportunities.

Community Outreach and Advocacy

D+

Currently, UVA SOM contributes to the generation of green communal spaces through a formal relationship with the Charlottesville City Schoolyard Garden as a part of the SIM program. However, no organization at UVA currently offers any community-focused courses or events about climate change. UVA students also do not currently receive regular communication from the SOM or the OS. There are numerous opportunities to develop new community-facing educational events and provide sustainable healthcare updates to students on a regular basis. UVA Hospital could follow Inova Hospital in Fairfax to publish educational materials about PH.

Support for Student-Led Initiatives

B

The student body at UVA is energized toward climate action, and overall the institution offers readily available support. There are sustainability-directed grants and research opportunities created by the University, though the medical school lacks specific funding or outreach for these initiatives. A medical student currently sits on the University's Student Council Cabinet Committee for Sustainability, which has allowed our cohort to connect with the opportunities and projects going on within the larger academic institution. Moving forward, we would like to see medical students become leaders in this space, while maintaining the collaborative energy that has allowed us to be successful so far.



2020-2021 Summary Report
United States

University of Virginia (Continued)

Sustainability

B

There is a project coordinator within the OS in charge of the health system, and UVA has made efforts to make existing and new buildings sustainable. Students have access to eco-friendly transportation, and the institution rewards environmentally friendly labs. The school has a plan to be carbon neutral by 2030, there is a well-established recycling program and the health system is implementing a plan for increased food and supply procurement sustainability. UVA falls short in that only 21% of its electricity comes from renewable resources, and there are no sustainability guidelines in place for SOM events. Additionally, the institution remains invested in fossil fuels, although there is a student-led divestment effort. We recommend the SOM develop sustainability guidelines for events as well as increase renewable energy at the school and divest from fossil fuels.

Expanded score explanations can be found at phreportcard.org.



University of Washington

Overall

B-

Planetary Health Curriculum

D

- Planetary health content in the School of Medicine curriculum is severely lacking. Much of the content is offered only in electives and not as part of the core curriculum. Many important topics are completely overlooked, such as disproportionate health impacts of climate change on marginalized populations and the environmental impact of the health care system.

Interdisciplinary Research in Health and the Environment

A-

- Interdisciplinary research is UWSOM's strongest area in promoting planetary health. Research groups of note are the Center for Health and the Global Environment and the Climate Impacts Group. It would be helpful for the medical school to have a web page dedicated to research efforts so that students can learn and potentially become involved. UW as a whole has a robust sustainability website, and the School of Medicine could benefit from a similar project.
- There should also be a more formal system for giving members of communities that are disproportionately affected by climate change, such as Native people, a voice in the direction and execution of climate health research efforts.

Community Outreach and Advocacy

B

- One way that UW has made progress in community outreach is through their partnerships with Washington Physicians for Social Responsibility and the Washington Health Care Climate Alliance. UW Medicine is doing well in providing educational materials for patients about environmental risk factors and the health effects of climate change.
- UW could increase the efficacy and impact of this work by better communicating these projects and other planetary health information with students.
- They should also offer a CME course on planetary health, as current physicians need training on how to address the effects of climate change on their patient's health.

Support for Student-led Initiatives

B-

- Much of the available support for medical students interested in pursuing planetary health research, engaging in advocacy and activities related to climate change, and developing related projects comes from the institution and not the School of Medicine. Since UW is a large and well-resourced institution, there are opportunities available to medical students in these areas, but medical students need to find them on their own.
- UWSOM should provide more internal planetary health-related opportunities for students. They should also promote institution-wide programs and have a central site where students can access information about relevant research and extracurriculars.

Sustainability

B

- UW is taking appropriate steps to increase campus sustainability. There is a realistic plan to achieve carbon neutrality by 2050.
- Campus facilities are constructed sustainably, but the school could improve their use of renewable energy in their power sourcing. They should also commit to divesting from fossil fuels, as divestment has a significant effect on global carbon emissions.



Virginia Commonwealth University

Overall

D

Planetary Health Curriculum

F

- The pre-clinical curriculum at VCU includes sporadic references to climate change where it affects such discrete topics as vector-borne diseases, asthma, and social justice. The clinical curriculum offers neither elective nor required learning about planetary health.
- Curricular administration needs to take action by identifying the impacts of planetary health and mandating that that material be included in learning objectives and lecture material. The clinical curriculum should offer an elective.

Interdisciplinary Research in Health and the Environment

D

- VCU's Center for Environmental Studies includes several researchers and labs that study various aspects of climate change, but none are associated with the medical school or study human health as it relates to the environment.

Community Outreach and Advocacy

D

- VCU's Office of Sustainability partners with local organizations to plant community gardens and alleviate urban heat islands and associated heat-related illness, especially in Richmond's minority communities. The medical school is not involved in these efforts.
- Until the School of Medicine can build community partnerships based in environmental health, it should aim to build off of the efforts by the Office of Sustainability by providing information about local events, opportunities for volunteering and education, and support for taking part in these efforts (financial or otherwise). A hub of information, be it a website, newsletter, or forum, could provide opportunities specific to medical students and faculty.

Support for Student-led Initiatives

C

- Most student-led initiatives have come from VCU's main campus, but faculty have been supportive of a new MS4SF chapter at the medical school. Further support would involve the approval of a student-designed environmental elective.

Sustainability

D+

- VCU School of Medicine encourages students to take part in public transit, offers recycling, and constructs new buildings in concordance with LEED standards. However, as there is no specific position overseeing sustainability at the medical school or the hospital, much remains to be done in making the health system more sustainable. VCU overall has committed to zero greenhouse gas emissions by 2050, but this plan does not include the medical school.
- A good start would be creating the position of Sustainability Officer, either for the medical school or, ideally, the entire health system. This person could work towards meaningful change involving renewable energy medical waste. The school can also take steps to improve student and faculty education regarding sustainable actions, especially around food and beverage containers.

CHANGES FROM THE PILOT 2019-2020 PLANETARY HEALTH REPORT CARD

- **Sustainability:** Recognizing that the healthcare industry is a [massive emitter of greenhouse gases](#) and educational institutions contribute substantially to environmental degradation, we added a sustainability section with the help of expert informants from Health Care Without Harm, Practice Greenhealth and the MS4SF Climate Smart Healthcare Committee.
- **Environmental Justice:** We increased the emphasis on themes of environmental justice, with new metrics like, “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?” and “Does your medical school curriculum address the unique climate and environmental health challenges that have impacted and are impacting Indigenous communities?”
- **Examples and guidelines:** In order to clarify grading and increase potential for institutional change, we added detailed examples of how other medical schools have fulfilled individual metrics, as well as metric-specific grading guidelines.
- **Precision:** In order to increase precision of the report card, we added more point tiers and heavier weights to some metrics with increased impact.
- **Expansion:** We expanded our scope from 13 medical schools to 62 medical schools!

LIMITATIONS & FUTURE DIRECTIONS

The 2020-2021 Planetary Health Report Card is an expansion of last year's pilot initiative, with significantly more schools involved, a larger, international leadership team, and refined metrics. Despite our extensive efforts to hone this initiative's metrics, process, and impact, we recognize that there are some limitations, as outlined below. In discussing limitations, we also outline plans for future growth.

OVERALL GENERALIZABILITY

While we did our best to keep our metrics specific and clear with guidelines for evaluation and accompanying examples, the report card does have some degree of subjectivity given that metrics are interpreted by students and staff at different medical schools. For example, teams at different schools may have differences in their interpretation of what constitutes content being covered “briefly” vs “in depth” in the curriculum. Although all report cards were read and edited by members of the leadership team to try and maximize consistency, this subjective element cannot be avoided completely at this stage. We hope as the years go on and there are increasing examples of report cards to guide grading that inter-rater concordance will increase.

INTERNATIONAL GENERALIZABILITY

Despite our efforts to anticipate limitations in the international generalizability of some of our metrics and pilot testing, we recognize that the metrics were originally developed with the U.S. medical education system in mind and as a result, there may be some unintentional cultural bias. This bias may be partially responsible for the lower average score of UK medical schools compared to US medical schools. After discussion with the UK and Irish teams, for the UK Ireland report cards, we decided to omit one metric regarding Continuing Medical Education and eliminate a bonus point for fellowships.

Although we strive to maintain consistency in the metrics year to year to allow direct comparison, given the plans to expand further globally, we will further refine our metrics in order to:

- Make sure all questions are relevant internationally.
- Collate feedback from this year's participants and refine metrics accordingly.

INSTITUTIONAL ADVOCACY

The goal of the report card is to be not only a template for compiling information on institutional planetary health engagement, but also a tool for institutional advocacy. This year, we had an increased focus on students translating their findings on the PHRC to institutional advocacy, including creating and disseminating an institutional advocacy guide and hosting an institutional advocacy workshop. In future years, we hope to compile a resource bank of sample proposals that students can use to approach their administrations in order to improve metric performance and adapt existing approaches rather than starting from scratch.

EXPANDED REACH

This initiative has grown substantially since its inception, with plans to grow further in the coming years. In order to expand this effort while ensuring sustainable leadership,

- We are forming alliances with similarly-minded organizations and envisioning future collaborations globally to increase our reach and impact.
 - We hope to launch versions of the report card adapted to other health professional education programs in order to facilitate interprofessional collaboration
-

METRICS

This year's metrics were developed based on feedback from last year's pilot and by consulting many students and faculty members. There were minimal queries on the metrics from students completing the Report Card compared to last year. We provided examples on requirements to meet metrics based on last year's responses to try to minimize subjectivity when answering questions. However, despite trying to anticipate the disparities that might arise in different nations, we recognise that the metrics were originally designed with a USA medical education system in mind and we noted there were relatively more queries from UK and Irish schools this year. Please see the "International Generalizability" section above to see how international disparities in the metrics were addressed.

AUTHORS & LEADERSHIP

CO-DIRECTORS

Karly Hampshire

*Founder and Co-Director
University of California San Francisco
School of Medicine, 4th Year*

Hannah Chase

*Co-Director and Regional Lead for United Kingdom
University of Oxford Medical School,
3rd Year (Graduate entry)*

LEADERSHIP TEAM MEMBERS

Megan Duckworth

*Communications Chair
Alpert School of Medicine
Brown University, 3rd Year*

Trizzha Feliciano

*Partnerships and Recruitment Chair
University College London Medical School,
3rd Year*

Nuzhat Islam

*Design Chair, Website Editor, and Co-Founder
University of California San Francisco
School of Medicine, 4th Year*

Taylor Diedrich

*Implementation Chair and Website Editor
Indiana University
School of Medicine, 1st Year*

Kristin Larsen

*Regional Lead: Southeastern U.S.
University of Arkansas
School of Medicine, 2nd Year*

Jack Inglis

*Regional Lead: Midwestern U.S.
University of Minnesota Medical School,
4th Year*

Megan Meyer

*Regional Lead: Western U.S.
University of Washington
School of Medicine, 2nd Year*

Emily Gentile

*Regional Lead: Northeastern U.S.
University of Massachusetts Medical School,
4th Year*

Ola Løkken Nordrum

*Regional Lead: Ireland
Junior Doctor*

GRAPHIC DESIGN & EDITOR

Nuzhat Islam

*Design Chair, Website Editor, and Co-Founder
University of California San Francisco
School of Medicine, 4th Year*

MEDICAL SCHOOL REPORT CARD TEAMS

CANADA

McGill University Faculty of Medicine and Health Sciences

*Ericka Iny
Tania Morin
Anda Gaita*

*Shiyang (Alice) Shen
Mack Blydt-Hansen*

IRELAND

National University of Ireland, Galway

*Esmeralda Cecilie Pérez
Ola Løkken Nordrum*

Royal College of Surgeons in Ireland

Kathryn Haley

Trinity College Dublin

*Iffat Khalid
Sana Zulfiqar
Isabel Waters*

University College Cork

*Ruth Yan
Vijay Gupta
Christopher Arkless*

University College Dublin

*David Killilea
Ola Nordrum*

UNITED KINGDOM

Brighton and Sussex Medical School

*James Lee
Janani Murugesu
Blair Chen
Pratibha Srikanthan
Jeremiah Samkutty
Nailah Akhtar
Maria Barbot
Francisca Marsh*

*Kathy Bog
James Slaven
James Chu
Olivia Thompson
Holly Morley
Jordache Ellis
Shaily Mehta*

Bristol Medical School

*Abbie Festa
Jordan Lin
Jack McAlinden
Emma Bache*

Cardiff Medical School

*Emma Parry-Jones
Gemma Morgan
Nabihah Malik
Pallavi Aggarwal*

MEDICAL SCHOOL REPORT CARD TEAMS

UNITED KINGDOM (CONT.)

Hull York Medical School

<i>Tanzima Uddin</i>	<i>Sujata Shrestha</i>
<i>Bonita Sinartio</i>	<i>Annie Russell</i>
<i>Jia Mang Lee</i>	<i>Emily Ho</i>
<i>Madeleine Jacobs</i>	<i>Charlotte MacAulay</i>
<i>Sujata Shrestha</i>	<i>Harmeen Kaur Jagpal</i>

Imperial College

Giulia Iacona
Xinyu Ye

Keele University

Lauren Franklin
Angelus Cyrus
Sheriff Okesanjo

King's College London

<i>Victoria Lau</i>	<i>Qurratu Aini Binti</i>
<i>Anastasia Martin</i>	<i>Hashim</i>
<i>Maya Whittaker</i>	<i>Narun Tantichirasakul</i>

Lancaster University

<i>Fatema Aftab</i>	<i>Anna Curragh</i>
<i>Eesa Ahmed</i>	<i>Will Hunter</i>
<i>Deborah Beange</i>	<i>Jessica Lewis</i>

Leeds Medical School

Francesca Douglas
Florence Kinder

Leicester Medical School

<i>Alliya Ghanchi</i>	<i>Juliette Goodwin</i>
<i>Anmol Landa</i>	<i>Vibha Shah</i>
<i>Naomi Richardson</i>	<i>Muhammed Lorgat</i>
<i>Christie Hall</i>	<i>Ewan Tait</i>

Newcastle University United Kingdom

<i>Alice Galbraith-Olive</i>	<i>Omar Mohamed</i>
<i>Aamna Warsi</i>	<i>Lydia Dawes</i>
<i>Hannah Shepherd</i>	

Newcastle University Medicine Malaysia

<i>Anisah Zuki</i>	<i>Pang Jie Yun (Shirley)</i>
<i>Pei Sabrina Cheong</i>	<i>Mohammed Nabeel Azeez</i>
<i>Sundus Mansoor</i>	
<i>Abdulrahman</i>	

Norwich Medical School

<i>Philippa Tan</i>	<i>Shakithya Thavakumar</i>
<i>Simrun Rashid</i>	<i>Sanya Srivastava</i>
<i>Roxane Lam</i>	

Oxford University Medical School

<i>Hannah Chase</i>	<i>Helen Clay</i>
<i>Chloe Freeman</i>	<i>Gayatri Tadikamalla</i>
<i>Safia Khan</i>	<i>Alice Scharmeli</i>
<i>Julia Johnstone</i>	<i>Sarah Peters</i>

Peninsula Medical School at University of Plymouth

<i>Madhumita Kolluri</i>	<i>Muskaan Sharma</i>
<i>Niamh McCormack</i>	<i>Nirmal Jayakrishnan</i>
<i>Mhairi Reed-Embleton</i>	<i>Saskia Kinghorn</i>

Queen Mary University of London

<i>Hamza Anwar</i>	<i>Vishal Chahwala</i>
<i>Hannah Mohammad</i>	<i>Siraj Yasser Abualnaja</i>
<i>Molly Salter</i>	

MEDICAL SCHOOL REPORT CARD TEAMS

UNITED KINGDOM (CONT.)

Queen's University Belfast

Victoria England *Rhiannon Wells*
Amanda Madera *Riley Westwood*
Hannah McPhee

St. George's Medical School

Ananya Sood *Marta Delfino*
Anjalee Chattersingh *Nicolas Longobardi*
Mahima Turakhia *Madhu Muruganandham*

Swansea University

Charlotte Nicholls
Tanvi Thomas
Rae Halliday

University College London

Trizzha Feliciano *Luisa Alamo-Gomez*
Catherine Napper *Isis Calado*
Selina Aziz

University of Aberdeen

Nicole Sime

University of Birmingham

Isabel Gilks *Madeleine Hubner*
Ella Marson *Mark Baker*
Stephanie Larcombe

University of Cambridge

Jasmin Abbott
Harry Gabb
Natasha Kowshik

University of Dundee

Grace Reilly
Hannah Farquhar

University of Edinburgh

Joey Brooke *Julia Lee*
Bee Hull *Fiina Narhi*
Sorcha Heelan *Connor Littler*

University of Exeter

Katie Cooper *Daisy-May Campen*
Will Downs *Cat Farrelly*
Herbie Bennett *Megan Roby*
Naomi Blower *Eleanor Smyth*
Riccardo Bondi

University of Glasgow

Vidya Nanthakumar
Darcy Maule
Elise McFarland
Ann-Elin Myhre

University of Manchester

Marie-Therese Angus *Masumah Jannah*
Rachel Calow *Arya Pontula*
Danielle Hayllor

University of Nottingham

Caitlin Hopkins
Brooke Gerrie

University of Sheffield

Sophie Allan
Isobel Avery-Phipps
Manisha Bumma
Daniel Veness

Warwick Medical School

Sophie Marsh

MEDICAL SCHOOL REPORT CARD TEAMS

UNITED STATES

Boston University

*Candace Smith
Natalia Torres*

Brown University

*Blaire Byg
James Thorndike
Jane Chen*

*Martin Li
Kanika Malani
Allison Navarette-Welton*

Columbia University

*Sonora Yun
Alexander Northrop
Elizaveta Lavrova*

*Abigail Onderwyzer Gold
Lauren Tucker*

Creighton University

*Ellie Dorchuck
Darby Keirns
Christian Krause*

*Cecelia Plaehn
Ellen Townley*

Emory University

*Travis Wilson
Ben Rabin
Gilda Rastegar*

Geisel SOM at Dartmouth

*Kali Smolen
Maya DeGroot
Tala Radejko*

Georgetown University

*Vasalya Panchumarthi
Lindsey Tully
Shian Omar
Verna Curfman*

*Samantha Rizzo
Krishna Sharma
Aashka Suvarnakar*

Harvard Medical School

*Abigail Zuckerman
David Mazumder*

*Julia Page
Maddy Kline*

Indiana University

*Taylor Diedrich
Stella Protopapas
Cynthia Wu
Brie Mahnke*

*Aida Haddad
Ruth Osborne
Ruben Geeraert*

Loyola Stritch School of Medicine

*Jannie Bolotnikov
Catherine Pearce
Isabella Park*

Perelman SOM at University of Pennsylvania

*Sriram Palepu
Royce Dong*

*Jeromy Gotschall
Genevieve Silva*

Stanford Medical School

Benjamin Maines

UC Berkeley-UCSF Joint Medical Program

*Tommaso Bulfone
Xiaoxuan (Christina) Chen
Meredith Klashman*

University of Arkansas for Medical Sciences

*Zainab Atiq
Kristin Larsen
Alanna Davis*

*Kaley Ferguson
Nikhil Nair
Olivia Tzeng*

MEDICAL SCHOOL REPORT CARD TEAMS

UNITED STATES (CONT.)

University of California Los Angeles

Madeleine Heller
Matthew Hing
Callie Cuff
Juhee Agrawal

Tessa Gillespie
Emily Nguyen
Ajith Subhash

University of California San Francisco

Mikias Negussie
Neha Pondicherry
Shreya Menon

University of Hawai'i

Kelli Kokame
Amity Tran

University of Massachusetts Medical School

Emily Gentile
Rachael Lyons
Nichita Kulkarni

Joseph Douglass
Michael Urbanowski
Ben Potee

University of Minnesota

Jack Inglis
Aaron Rosenblum
Prasanna Vankina

University of North Carolina SOM

Audrey Faber
Christine Reed
Zachary Fisher

Hope Gehle
Amanda Velez
Matt Howlett

University of Rochester

Camille Ezran
Emily Rosenthal
Shannon Cleary
Valentina Sedlacek
Nicholas Contento

Kyle Martin
Tori Valachovic
Sarah Crowe
Kristen Sportiello

University of Utah

Baley Kynaston
Roman Kovtun
Kade Loveridge

Chris Nielson
Anna Brandes

University of Virginia

Daniel Agis
Lena Bichell
Kylie Fultineer
Abby Halm
Margaret Hofstedt
Venkat Kothandaraman

Emma Phillips
Leah Reichle
Maggie Selesky
Brigette Torrise
Tiffany Wang

University of Washington

Megan Meyer
Sonja France
Sumner Lawson
Jordan Nichols

Miriam Levy
Marley Realing
Nikoli Brown

Virginia Commonwealth University

Lillian Singer
Genevieve Gilson
Danny Walden
Robert Scott

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Arianne Teherani, PhD

Sheri Weiser, MD, MPH, MA

Tom Newman, MD, MPH

Bob Gould, MD

Amy Collins, MD

SanYuMay Tun, MBBS, MSc, FHEA

Annemarie Charlesworth, MA

Patrice Sutton, MPH

Teddie Potter, PhD, RN, FAAN

Erika Veidis, MBA

Nick Iverson, MD

Shanda Demorest, DNP, RN-BC, PHN

Brittany Shea, MA

CONTACT

Email: phreportcard@gmail.com

Website: phreportcard.org

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