

APRIL 2022

PLANETARY HEALTH REPORT CARD



2021-2022 SUMMARY REPORT AN INTERNATIONAL HEALTH STUDENT INITIATIVE

Prepared by:

Medical students and faculty from 74 medical schools
in the U.S., UK, Ireland, Canada, Germany, Malaysia, and Japan

With Support from:

Medical Students for a Sustainable Future
Global Consortium on Climate and Health Education
Irish Doctors for the Environment
Lehrklinik ("teaching clinic") of the University Hospital of Würzburg
University of California Center for Climate, Health and Equity

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ABOUT THE INITIATIVE

The Planetary Health Alliance defines planetary health as “a solutions-oriented, transdisciplinary field and social movement focused on analyzing and addressing the impacts of human disruptions to Earth’s natural systems on human health and all life on Earth.” This definition encompasses the multitude of ways that the environment can affect health, including climate change, pollution, biodiversity shifts, reconfiguration of biogeochemical cycles, land use changes, and resource scarcity, with health consequences including expanding ranges of vector-borne diseases, mental illness, and excessive mortality due to heat and air pollution. The World Health Organization states that climate change is “the greatest threat to global health in the 21st century” and now attributes almost a quarter of deaths and global disease burden to environmental degradation. Paradoxically, healthcare delivery has an adverse impact on the environment, and therefore health. If the global healthcare system were a country, it would be the fifth largest carbon emitter in the world.

As future health professionals, we must be prepared to address the impacts of human-caused environmental changes on our patients’ health, and to understand and mitigate the environmental impact of clinical care. It is imperative that we hold our institutions accountable for educating health students on planetary health and education for sustainable healthcare, generating research to better understand health impacts and solutions, supporting related student initiatives, embracing sustainable practices on our campuses and in our hospitals, and engaging with surrounding communities that are most affected by environmental threats. Because climate change and environmental threats disproportionately affect marginalized populations, these issues are inherently ones of equity and justice.

With the purpose of increasing planetary health awareness and accountability among medical schools, the Planetary Health Report Card (PHRC) was developed as an institutional advocacy tool in 2019 by a group of medical students at the University of California, San Francisco School of Medicine. The PHRC is a student-driven, metric-based tool that aims to evaluate health professional schools on discrete metrics in five main category areas: 1) Curriculum, 2) Interdisciplinary research in health and environment, 3) Community outreach and advocacy, 4) Support for student-led initiatives, and 5) Campus sustainability. Since its founding just three years ago, the PHRC community has grown to encompass 7 countries and over 80 medical schools. As it has spread across the world, it has left many examples of institutional change in its wake. Though initially developed by medical students to evaluate medical schools, the report card is now being adapted for and piloted in nursing and pharmacy training programs, building interprofessional collaboration.

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 sharing of planetary health resources that can catalyze curricular innovation
- Establish a global, interprofessional community of like-minded students and faculty
- Track progress in implementing planetary health curricula and resources
- Advance the planetary health movement in pursuit of a healthier and more equitable world

INITIATIVE GROWTH & FUTURE DIRECTIONS

The 2021-2022 Planetary Health Report Card is the third iteration of the initiative, now with more participating schools, two additional countries, and a large international leadership team. Enthusiasm from students and faculties has catalyzed rapid development in the breadth and depth of the initiative as outlined below.

INTERPROFESSIONAL COLLABORATION

- Interprofessional collaboration is critical for advancing planetary health. We are excited to announce the launch of nursing and pharmacy arms of the Planetary Health Report Card, with pilots in those disciplines underway. For more information, please visit the new [nursing](#) and [pharmacy](#) pages on our website. The pharmacy summary report, also released on World Earth Day, is available [here](#).
- As the PHRC is rolled out in other health professions, we aspire to establish interprofessional teams that can work together to fill out the shared aspects of the report cards at their institutions, collaboratively leveraging the results for change.

MEDICAL SCHOOL EXPANSION

- Compared to the 2021 Planetary Health Report Card, our number of participating schools has grown to 74, including the addition of medical schools in Germany and Japan.
- Translations of the report card into German, Japanese, and French (for French-speaking Canadian schools) have now been completed.
- A pilot in eight Indian medical schools is underway, with ambitions to publish results on World Environment Day (June 5, 2022).
- Groundwork for further international expansion, including in South Africa, New Zealand, and Australia has been laid.

FACULTY ADVISORY BOARD

- We recently established a faculty advisory board, with one faculty representative from most participating countries. We are grateful for their ongoing advice and mentorship.
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LITERATURE REVIEW

- This year we published a [metric literature review](#), which collates the evidence behind each of the metrics in the Planetary Health Report Card. It serves as a collection of references for further learning and a resource for those advocating for increased planetary health engagement at their institutions.
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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 academic year, we had an increased focus on students translating their findings on the PHRC to institutional advocacy, including hosting a fall conference in October 2021 where student teams at several medical schools presented on how they were leveraging PHRC results for change.
- Furthermore, many school teams and members of the leadership team have written publications and presented at national and international conferences on the PHRC, further increasing the initiative's international reach and impact.
- As teams identify curricular gaps, we hope to offer convenient and accessible solutions. We are excited to be partnering with the Climate Resources for Health Education Initiative, a project spearheaded by the Global Consortium for Climate and Health Education that is creating an open-access repository of climate and health curriculum materials. With the launch of the repository, we can map their curricular materials to our metrics, lowering the activation energy to implement curricula that address the gaps identified by the report card.

RESEARCH

- In collecting annual qualitative and quantitative report card data, we have created a large data repository of global medical school planetary health engagement. We hope to study the trends and impact of the PHRC more rigorously in future years, including through focus group discussions and longitudinal analyses. School report cards will continue to be available open-access on our website.

SECTIONS OF THE REPORT CARD

Planetary Health Curriculum



Today's medical students will be on the frontlines of tackling the impacts of environmental degradation on human health. It is critical that medical education reflects those health threats. Topics like the changing geography of vector-borne diseases, the health consequences of air pollution, environmental health inequities, disaster response principles, and healthcare sustainability 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 environmental health, the health effects of climate change, and climate solutions.

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 ecological destruction. 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 and collaboratively advocate for change. Students should be given opportunities to engage in 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, convene in student groups, 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 transformation can begin with our educational campuses; medical schools must sustainably source energy, food, and supplies; ensure institutional investments are free of fossil fuels and offer incentives for greening lab spaces and events.

METRICS



PLANETARY HEALTH CURRICULUM

Today's medical students will be on the frontlines of tackling the impacts of environmental degradation on human health. It is critical that medical education reflects those health threats. Topics like the changing geography of vector-borne diseases, the health consequences of air pollution, environmental health inequities, disaster response principles, and healthcare sustainability must be part of every medical school's core curriculum.

General

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

Health Effects of Climate Change

- 1.2** Does your medical school curriculum address the relationship between extreme heat, health risks, and climate change?
- 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 respiratory health effects of climate change and air pollution?
- 1.6** Does your medical school curriculum address the cardiovascular health effects of climate change, including increased heat?
- 1.7** Does your medical school curriculum address the mental health and neuropsychological effects of environmental degradation 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 relationships between health, individual patient food and water security, ecosystem health, and climate change?
- 1.9 Does your medical school curriculum address the outsized impact of climate change on marginalized populations such as those with low SES, women, communities of color, Indigenous communities, children, homeless populations, and older adults?
- 1.10 Does your medical school curriculum address the unequal regional health impacts of climate change globally?

Environmental Health & the Effects of Anthropogenic Toxins on Human Health

- 1.11 Does your medical school curriculum address the reproductive health effects of industry-related environmental toxins (e.g. air pollution, pesticides)?
- 1.12 Does your medical school curriculum address important human-caused environmental threats that are relevant to the university's surrounding community?
- 1.13 To what extent does your medical school emphasize the importance of Indigenous knowledge and value systems as essential components of planetary health solutions?
- 1.14 Does your medical school curriculum address the outsized impact of anthropogenic environmental toxins on marginalized populations such as those with low SES, women, communities of color, children, homeless populations, Indigenous populations, and older adults?

Sustainability

- 1.15 Does your medical school curriculum address the environmental and health co-benefits of a plant-based diet?
- 1.16 Does your medical school curriculum address the carbon footprint of healthcare systems?

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

METRICS

1.17 Does your medical school curriculum cover these components of sustainable clinical practice in the core curriculum?

- Waste production within the healthcare system and strategies for reducing waste in clinical activities, such as in the operating room.
- The impact of inhalers on the healthcare carbon footprint and the environmental benefit of dry powdered inhalers over metered dose inhalers.
- The impact of anaesthetic gases on the healthcare carbon footprint and ways to reduce anaesthesia environmental impacts, such as total intravenous anaesthesia or choosing less environmentally anaesthetic gas options with reduced greenhouse gas emissions.
- The environmental impact of pharmaceuticals and over-prescribing as a cause of climate health harm. Alternatively teaching on de-prescribing where possible and its environmental and health co-benefits would fulfill this metric.
- The health and environmental co-benefits of non-pharmaceutical management of conditions where appropriate such as exercise or yoga classes for type 2 diabetes; social group activities such as gardening for mental health conditions; active transport such as bicycle schemes for obesity. This is commonly known as social prescribing in the UK.
- The health and environmental co-benefits of avoiding over-medicalisation, over-investigation and/or over-treatment.

Clinical Applications

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

1.19 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

- 1.20** Is your medical school currently in the process of implementing or improving Education for Sustainable Healthcare (ESH)/planetary health education?
- 1.21** How well are the aforementioned planetary health/Education for Sustainable Healthcare topics integrated longitudinally into the core curriculum?
- 1.22** Does your medical school employ a member of faculty to specifically oversee and take responsibility for the incorporation of planetary health and sustainable healthcare as a theme throughout the course?

*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 fund research studying environmental health, the health effects of climate change, and climate solutions.

- 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 that centralizes ongoing and past research 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 Is your medical school a member of a national or international planetary health or ESH organization?

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 ecological destruction. 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 and collaboratively advocate for change. Students should be given opportunities to engage in 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 institution or main affiliated hospital trust engage in professional education activities targeting individuals post graduation with the aim of ensuring their knowledge and skills in planetary health and sustainable healthcare remain up to date during their professional career?
- 3.5** Does your medical school or its primary affiliated hospital have accessible educational materials for patients about environmental health exposures?
- 3.6** Does your medical school or its primary affiliated hospital 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, convene in student groups, and receive funding for planetary health projects.

- 4.1 Does your institution offer support for medical students interested in enacting a sustainability initiative/QI project?
- 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 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 curriculum reform and/or 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).

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 transformation can begin with our educational campuses; medical schools must sustainably source energy, food, and supplies; ensure institutional investments are free of fossil fuels and offer incentives for greening lab spaces and events.

- 5.1** Does your medical school and/or institution have an Office of Sustainability?
- 5.2** How ambitious is your medical school/institution's plan to reduce its own carbon footprint?
- 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 sustainability rating system or 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 (e.g. local sourcing, reduced meat, decreased plastic packaging)?
- 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?

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



2021-2022 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	A-	A-	A	B+	A-	A+
University College London	B+	B+	B	C	A-	A+
Brighton and Sussex Medical School	B	B+	A+	C	A-	B-
University of Exeter	B	B	A	C+	B	A-
Queen's University Belfast	B	B+	B+	B-	A-	C+
Peninsula Medical School	B	B+	B+	C-	B-	B-
Barts and The London Medical School	B	B	B	B-	B	C+
University of Edinburgh	B	C	B+	C	B	B
Newcastle University (United Kingdom)	B-	B	D+	D+	B	A-
University of Sheffield	C+	C+	B-	C	B-	C+
University of Liverpool	C	B	C	C	C-	C+
Hull York Medical School	C	D-	A	C-	B	C+
University of Glasgow	C	C-	B	D+	C	B-
University of Aberdeen	C	C	C-	C-	C	B

80-100% = A, 60-79% = B, 40-59% = C, 20-39% = D, 0-19% = F
 Scores within top or bottom 5% awarded + or -, respectively
 = Overall score improved from 2020-2021 to 2021-2022



2021-2022 Summary Report
United Kingdom (Continued)

Planetary Health Report Card

Overall








Curriculum

Research

Community Outreach & Advocacy


Support for Student-led Initiatives

Campus Sustainability

Oxford University Medical School 	C	C+	C+	F	B-	C
University of Leeds	C	C+	D-	C	C-	C+
Swansea University 	C	B-	F+	D	D+	A
University of Bristol	C	C	C	F+	B-	C+
University of Birmingham Medical School	C-	D-	B-	F	C	B
University of Cambridge 	C-	C+	D-	F	C-	B-
University of Leicester 	C-	D-	C	F	B	B-
Newcastle University Medicine Malaysia 	D+	B	C+	F	D	D
Norwich Medical School	D+	D-	C	F	C	B
St. George's, University of London 	D+	C-	D	D-	D	C-
University of Buckingham	D	D+	F	D-	D	F+
Cardiff Medical School 	D	D-	C	F	D	D

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2021-2022 Summary Report
United States

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	A-	A+	A	A+	B+
UC Berkeley-UCSF Joint Medical Program	A-	B	A	A	B	A-
University of California San Francisco	B+	B-	A+	B	A-	B
University of Arkansas for Medical Sciences	B-	B	B-	B-	B	D
University of Hawai'i	C+	C	B	C+	B	C+
University of Washington	C+	D	A	B	B	B
Georgetown University	C+	C	B-	C	B	B-
Boston University	C+	D	B+	D+	A	B+
Columbia University	C+	C	A	D-	B	C+
University of Colorado	C+	C+	A	D+	B-	C-
University of Michigan	C+	C-	C+	D+	A-	B
University of North Carolina at Chapel Hill	C+	C-	A-	C-	B	C
University of Virginia	C	D	B+	D+	B	B-
The Ohio State University College of Medicine	C	F	A	C+	A	C+

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2021-2022 Summary Report
United States (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 Minnesota	C	C	C-	C-	B	C+
Creighton University	C	C-	C+	C-	B	D
Oregon Health and Science University	C	B-	D+	D+	C	C
University of Arizona - Phoenix	C	D	C	C	C	B-
Brown University	C	C+	C-	F	C	C+
University of Massachusetts	C	D	C-	C+	C	C
University of Connecticut	C-	B-	D+	D-	C	C-
Loyola University Chicago	C-	D+	C-	D+	D	B
Vanderbilt University	C-	D	D	C	C	C
Geisel School of Medicine at Dartmouth	C-	D+	C	D-	B	D+
University of Utah	C-	D	C	D-	B	D+
Indiana University	D+	C-	D+	D-	C	C
Albert Einstein College of Medicine	D+	C	D-	D	C	D
University of Cincinnati	D+	F+	B	F	B-	D+

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2021-2022 Summary Report
United States (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
Tufts University	D+	D-	B-	F	B-	D+
Rush Medical College	D	D	D+	D-	B-	D+
Washington State University	D	F+	D+	D-	B	D
Virginia Commonwealth University 	D	D	D	D-	C	D+
University of Maryland School of Medicine	D	D+	F+	F-	D	C-

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2021-2022 Summary Report
Ireland

Planetary Health Report Card

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

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



2021-2022 Summary Report
Canada

Planetary Health Report Card

McGill University	C	C	C+	C-	C	C+
University of Ottawa	C	C	C	F	B	C+
Dalhousie University	D+	C-	C-	F-	C	C+
University of Toronto	D	C+	D	D-	D	F+

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2021-2022 Summary Report
Germany

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 Würzburg	C	B	C	D	C	D+
RWTH Aachen University	D	C+	D+	F	C-	D
University of Münster	D	C	F+	F	C	C
University of Giessen	D	D	C	F-	D	D+
University of Mainz	D-	D	D-	F	F+	F+



2021-2022 Summary Report
Japan

Planetary Health Report Card

Nagasaki University	C-	C	B-	F	C-	D+
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PHRC-INSPIRED INSTITUTIONAL CHANGE

Students and faculty have successfully used the Planetary Health Report Card to improve planetary health engagement and promote institutional changes at their medical schools. Here are some examples from this year's feedback form.

CREIGHTON UNIVERSITY

"Creighton created a Planetary Health and Sustainability Task Force (PHSTF) for the medical school. Students organized themselves as a Student Branch of the PHSTF. Sustainability goals were included in the new medical school strategic plan."

LOYOLA UNIVERSITY CHICAGO

"With the help of last year's PHRC results, which demonstrated a significant need for institutional change, we developed and organized a new for-credit elective that medical students of all class years could register for, called "Climate Change and Human Health." This elective focuses on the various ways that climate change impacts human health and how medical students may advocate for change. The elective was a huge success and we will be expanding it to be offered both semesters going forward!"

NATIONAL UNIVERSITY OF IRELAND GALWAY

"NUI Galway School of Medicine is currently reviewing the medical curriculum with the aim of creating a new and improved medical curriculum by 2024. As a consequence of the PHRC last year, and the enthusiasm of the students involved, the student group at NUI Galway responsible for filling out the report card has been invited to have a representative on the Curriculum Review Steering Group."

PHRC-INSPIRED INSTITUTIONAL CHANGE

Students and faculty have successfully used the Planetary Health Report Card to improve planetary health engagement and promote institutional changes at their medical schools. Here are some examples from this year's feedback form.

THE OHIO STATE UNIVERSITY

"This scorecard has really helped get things moving internally, and is a great gap analysis of what needs done next. I must say – getting the "C+ grade" on campus sustainability has lit a fire for me, too."

UNIVERSITY COLLEGE LONDON

"The report card has inspired and indirectly led to many different projects and project ideas currently occurring. For example, there is a policy currently trying to be implemented to reduce the travel emissions by staff members, specifically by cutting down on flights. UCL is also trying to work with its associated hospitals to improve their sustainability, and the sustainability of its clinical skills sessions, despite these not contributing to the metrics of the report card. This is because the faculty response has been to try and change or improve in any areas we can, rather than just to get a better score."

UNIVERSITY OF VIRGINIA

"There is a brand-new elective entitled Climate Change and Health offered to graduating fourth-years (SMD22). The organization of this elective was student-driven and faculty supported and the intention is to continue offering it in future years. The two-week intensive course features field expert speakers, self-guided learning, and a capstone project as well as participation in Advocacy Day with Virginia state legislators."

RECOMMENDATIONS

Based on the information compiled in these school-specific planetary health report cards, we present the following 15 recommendations:

1. Utilize existing resources and collaborate

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 new resources. Additionally, collaborate with other individuals, groups and institutions to facilitate efficient and quality advancements in planetary health and sustainable healthcare.

For additional resources, please see our [website](#).

Examples

Useful resources include:

- [Planetary Health Alliance education database](#)
- [The Global Consortium on Climate and Health Education \(GCCHE\) website](#). The GCCHE's Climate Resources for Health Education Initiative is developing open access climate-health slides and problem based learning cases.
- Centre for Sustainable Healthcare [Sustainable QI project resources](#)
- [MS4SF Curriculum Guide](#)

In conjunction with Irish Doctors for the Environment, the Royal College of Surgeons Ireland University of Medicine has formed a "Climate Health in Medical Education" network representing the 7 Irish medical universities in an effort to develop planetary health curricula for medical students.

2. Establish learning objectives

Formalize curricular content on planetary health (PH) and education for sustainable healthcare (ESH) 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.
- At Peninsula Medical School, explicit ESH learning objectives are included across years 1 to 4. See their individual report for full details. Newcastle University has specific sustainable healthcare learning outcomes assessed during preclinical years.

RECOMMENDATIONS

3. Integrate curricular content longitudinally.

Planetary health (PH) and Education for Sustainable Healthcare (ESH) is relevant to every organ system. 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 include the topics into their existing content.

Examples

- At *Queen's University Belfast*, "Global and Population Health" is one of four main themes for longitudinal integration, and "Social Accountability and Sustainable Healthcare" is one of seven emphasized sub-themes.
- 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.
- At *Nagasaki University, Japan*, "Introduction to Planetary Health" is a compulsory subject in the first semester of the first year, and so students only learn specialized medical knowledge after this foundation.

Also, please see examples in Recommendation 2.

4. Offer electives and student selected components

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

Examples

- "Wilderness Medicine, Climate Change and Health", "Ecology and Health: Climate and Food Justice", and "Climate Change and Health" are electives offered by the universities McGill, Vanderbilt and Colorado, respectively.
- *Peninsula Medical School* offers two Student Selected Units: "Green Practice. Creating a more sustainable world in General Practice", focusing on applying the UK national "Greener Practice" model to a rural GP, and "Doctors as Educators: Sustainability in Healthcare".
- The *University of Glasgow* introduced a new elective this year: "Mapping the Sustainable Development Goals", primarily focusing on ESH/PH.
- Multiple PH-related electives are offered at the *University of Giessen*: "Tropical Medicine and International Health" and, student-run, "Climate consultation - the intersection of climate change and health" and "Eat that! - Nutrition in medicine".

RECOMMENDATIONS

5. Teach clinical communication skills

[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 a clinical curriculum on taking an environmental history and communicating information on planetary health to patients.

Examples

- At *Barts and The London School of Medicine*, a new PH session was piloted this year on engaging with patients on sustainable lifestyle choices with health co-benefits, including reduction in meat consumption and driving less. The session will be a permanent curricular addition.
- At *Ohio State University College of Medicine*, a climate-health-focused small group discussion and patient interaction will be piloted in summer 2022.
- *Vanderbilt University's* elective course, “*Ecology and Health: Climate, Food and Justice*” has one session on *Communicating Climate Change*.

6. Situate teachings in a global context

The ecological crisis is a global issue. 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, the curriculum should acknowledge how Indigenous communities, who have long lived in harmony with the planet, have knowledge and value systems that are an essential part of the solution, yet are tragically disproportionately affected by climate change.

Examples

- *The University of Hawaii JABSOM* uniquely has a [department](#) dedicated to indigenous health. Furthermore, the core curriculum highlights the intertwined nature of Native Hawaiian health philosophy and environmental health. The lecture “*Indigenous Healing and Resistance in an era of Climate Change Crisis*” highlights the inequities inherent in climate impacts, discussing the Pacific Island nations as an example.
- *Queen Mary University London's* *Global and Planetary Health week* highlights the ecological crisis in the global context, including forced migration, and also emphasizes that already disadvantaged populations and their health are most adversely affected.
- At *Brown University*, the topic is integrated into lectures (e.g. how climate change contributed to the Syrian Civil war), and small group assignments (e.g. deleterious impact of climate change on small island nations).

RECOMMENDATIONS

7. Center equity

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

- The University of Virginia [Equity and Environment Fund](#) is available to students for community-based initiatives or projects that sit at the intersection of equity, justice, and sustainability.
- Albert Einstein College of Medicine's curriculum has a lecture titled "Climate Change and Health Equity", which emphasizes how climate change acts as a risk multiplier by worsening existing inequalities.
- Keele Medical School emphasizes health inequalities through lectures and workshops, including effects of air pollution and droughts on refugees and low-income populations.
- At McGill University, a "Maternal and Child Health of the Indigenous Population in Canada" lecture highlights the amplified exposure to toxic contaminants in Indigenous communities since their lifestyle heavily relies on local products and wildlife.

8. Emphasize sustainable healthcare in teaching and in practice

Students must understand that healthcare provision significantly contributes to environmental degradation and therefore patient morbidity. They must learn ways to mitigate this impact, including carrying out Sustainability Quality Improvement (SusQI) projects. To maximize educational effectiveness, associated hospitals should promote sustainable practices and educate staff and patients.

Examples

- Brighton and Sussex Medical School delivers multiple lectures on sustainable healthcare and improvement possibilities: "Principles of Sustainable Healthcare"; "Sustainable Surgery and PPE" (including the impact of anaesthetic gasses); and "Sustainable Prescribing" (including sustainable inhaler prescribing).
- A lecture at the University of Würzburg on clinical environmental medicine in the 5th semester covers similar topics.
- At Newcastle University, all final year students will complete a SusQI project in their second General Practice assistantship, a collaboration with the Centre for Sustainable Healthcare.
- University College London Hospital, the primary hospital affiliated with UCL, has [declared a climate emergency](#) with a plan to reach net zero within 10 years.

RECOMMENDATIONS

9. Provide mentorship, including a dedicated faculty post

Facilitate accessible mentorship of students with an interest in planetary health. To maximize planetary health and education for sustainable healthcare integration, establish a dedicated medical school faculty post.

Examples

- At Brighton and Sussex Medical School, where Dr. Anna Jones is the Project Lead for Sustainable Healthcare Education, the Sustainable Healthcare Group has a comprehensive [website](#) which includes faculty members, their contact information, and research projects.
- The Institute for the Environment at University of North Carolina hosts a central website which [lists](#) faculty who have research, mentoring, or teaching roles in environmental health.
- New appointments in 2021: The University of Ottawa Faculty of Medicine's Vice Dean of Global Health created a Planetary Health Director position, appointed to Dr. Husein Moloo. At Oxford University, Dr. SanYuMay Tun has started in a new Lead of Education for Sustainable Healthcare post.

10. Support students to facilitate their leadership

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](#) offers an Environmental Scholars Program - a funded, three-year, longitudinal community engagement and research fellowship for medical and nursing students including a summer internship at a community clinic or health organization.
- Many schools have student sustainability project grants, such as [McGill's Sustainability Projects Fund](#) (1 million dollars annually), Tufts University [Green Fund](#), Keele University's [Sustainable Fund](#), and Queen's University Belfast's [Green Fund](#).
- At the National University of Ireland Galway, students can apply for the Student Sustainability Leadership Award, an 8-week scholarship programme awarded annually aiming to develop leaders in sustainability.
- Faculty mentors actively support sustainability and One Health student groups at the Albert Einstein College of Medicine and the University of Arizona.

RECOMMENDATIONS

11. Prioritize community engagement

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

Examples

- *At the University of North Carolina School of Medicine, the Center for Environmental Health and Susceptibility (including faculty from the School of Medicine) newly supports a Stakeholder's Advisory Board that provides insight into community priorities on environmental health issues.*
- *The "Climate Change and Health Equity" is a service learning project as part of the University of Colorado School of Medicine's new curriculum. It aims for students to actively partake in a service learning experience that addresses the mutually-agreed upon needs of a community partner.*
- *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.*
- *One of Washington State University's main affiliated hospitals, Providence, offers many [articles](#) to patients on health and the environment, including on [mental health](#) and [allergies](#).*

12. Launch an 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

- *Exeter Medical School has [The European Centre for Environment and Human Health \(ECEHH\)](#).*
- *The [Centre for Sustainability, Equality And Climate Action](#) is the newest of four cross-faculty research centres at Queen's University Belfast.*
- *The University of California system recently launched the [Center for Climate, Health, and Equity](#).*
- *The University of North California [Institute for the Environment](#) works to centralize campus publications, research efforts, and student and faculty efforts.*
- *National University of Ireland Galway has the [Centre for One Health](#).*
- *Nagasaki University is opening a new "Interfaculty Initiative in Planetary Health" in graduate school.*

RECOMMENDATIONS

13. Advance 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

- [The Center for Environmental Research, Education, and Outreach](#) at Washington State University is a progressive network of over 350 faculty, staff, students, and industry leaders working collaboratively on environmental issues.
- The University of California Center for Climate, Health, and Equity has a [seed grant programme](#) to support student and faculty research projects that advance understanding of the human health impacts of climate change and climate solutions that advance health equity.
- Brighton and Sussex Medical School annually hosts the [Sustainable Healthcare Academic Research and Enterprise \(SHARE\)](#) conference facilitating collaboration among healthcare professionals, students and service users on sustainable healthcare topics.
- Keele University has a [website](#) dedicated to sustainability and planetary health research.

14. Commit to carbon neutrality goals and fossil fuel divestment

Divest institutional funding from fossil fuels, set ambitious carbon neutrality goals, and outline a thoughtful and achievable plan to meet those goals.

Examples

- Already entirely [divested from fossil fuels](#), University College London is committed to investing in renewable energy and 100% of medical school buildings are powered by renewable energy. By 2024, UCL aims to achieve net [zero carbon buildings](#) and having a campus free of single-use plastic. The [National University of Ireland Galway](#) has also already divested from fossil fuels.
- The University of Arizona is committed to climate neutrality by 2040. It has a [University Strategic Plan](#) for zero net anthropogenic greenhouse gas emissions (beyond CO₂).
- The University of Hull, medical school inclusive, aims to be carbon neutral by 2027. It's [Carbon Neutral Plan](#) outlines progress to date (already 31% carbon emission reduction) and next steps.

RECOMMENDATIONS

15. Implement day-to-day sustainable practices on campus

Create an environmentally sustainable learning and working environment by setting and following guidelines for supply procurement, lab spaces, events, and buildings.

Examples

- [University College Dublin](#) produces about 2,000 tonnes of Mixed Municipal Wastes per annum but its waste management service providers ensure less than 10% of this ends up in landfills. Recycling and composting are readily available.
- The [Sustainable Food Policy](#) at Keele covers all outlets, including food served within the medical school. It includes increased plant-based options, use of local produce, seasonal vegetables, and reduction of water and energy usage.
- The University of Washington [Green Laboratory Certification program](#) allows faculty to assess the sustainability of their lab practices and facilities, provides suggestions and tools for improvement, and awards levels of recognition.
- Newcastle University has a [Sustainable Procurement Strategy and Sustainable Construction Specification](#) to ensure progress in line with their 2030 net-zero carbon emissions target.

SCHOOL-SPECIFIC REPORT CARDS



2021-2022 Summary Report Canada

Dalhousie University

Overall

D+

Planetary Health Curriculum

C-

- **Recommendations:** In addition to the integration of Planetary Health recommendations already provided to the Dalhousie Faculty of Medicine through the curriculum refresh, we propose that the Faculty create a leadership role in Planetary Health within the next year, similar to the University of Ottawa's Faculty of Medicine's Director of Planetary Health, as a clear signal to faculty and learners that the climate emergency is not only important, but urgent. This position can advocate for and oversee longitudinal integration of Planetary Health into medical school and resident curricula, work with learners on community outreach and facilitate an interprofessional approach.

Interdisciplinary Research in Health and the Environment

C-

- **Recommendations:** Dalhousie faculty, staff and students within and outside of the medical school are involved in leading interdisciplinary research and teaching programs, National and Provincial Planetary Health groups, and are members of the [Global Consortium on Climate and Health Education](#) and [Planetary Health Alliance](#). To continue, we recommend that Dalhousie medical school take a clear stance on the promotion of interdisciplinary research related to Planetary Health to both current faculty and their students. In addition, the Research in Medicine (RIM) program should encourage students to consider the sustainability of all research projects.

Community Outreach and Advocacy

F-

- **Recommendations:** Continue to increase opportunities for outreach and advocacy related to medical school and healthcare sustainability to build on the foundation set by the Faculty of Medicine, Healthy Populations Institute, Dalhousie Planetary Health Community of Practice, and Dalhousie Green Team. We would recommend that Dalhousie medical school and affiliated hospitals establish a Continuing Professional Education program with a focus on Planetary Health to ensure members remain up to date with their knowledge throughout their career.

Support for Student-led Initiatives

C

- **Recommendations:** Dalhousie Medical School offers continued support for student initiatives related to sustainability and medicine. To improve the score in this section, we would recommend the Faculty of Medicine regularly promote their support of such initiatives to all members of the faculty and student body either through communications or mentions on the website, and visibly outline the process for achieving support for future interested students.

Sustainability

C+

- **Recommendations:** Dalhousie University, including the medical campuses, has made strides to increase the sustainability of the institution and has set carbon neutrality goals. We would like to see the Faculty of Medicine make a public commitment to the future sustainability goals of the school and recommend that they provide further opportunities for labs in the medical faculty to connect with Dalhousie's Office of Sustainability's Green Labs program, to increase the number of medical school and affiliated hospital labs pursuing sustainable operations.



2021-2022 Summary Report Canada

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.
- **Recommendations:** PH connections in the curriculum should be made more explicit, with more dedicated time allocated consistently throughout. 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

C+

- McGill University hosts an annual Sustainability Research Symposium (SRS), as well as other conferences, events, and workshops relating to PH.
- **Recommendations:** McGill lacks a dedicated institute for interdisciplinary PH research that emphasizes the impacts of anthropogenic environmental changes on health. 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.
- **Recommendations:** 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.
- **Recommendations:** 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

C+

- 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.
- **Recommendations:** The Faculty of Medicine and Health Sciences should work towards extending sustainable practices through composting, sustainable food and beverage options, and waste management.



2021-2022 Summary Report Canada

University of Ottawa

Overall

C

Planetary Health Curriculum

C

- Planetary Health has been discussed in the process of curriculum renewal occurring in 2022.
- **Recommendations:** The curriculum lacks longitudinal integration, with only a singular one-hour lecture that is devoted to the topic in Year 2. The Faculty of Medicine is making efforts to provide a well-rounded Planetary Health curriculum. We acknowledge the efforts made by the Faculty of Medicine and we are encouraging continuation and follow-through of the progress made. Furthermore, there is improvement to be done in sustainable clinical practice teaching.

Interdisciplinary Research in Health and the Environment

C

- Large strides have been made since the appointment of Dr. Husein Moloo as the Director of Planetary Health. Dr. Moloo has made planetary health the focus of his research, led collaboration with the Global Consortium on Climate and Health Education, and helped establish the first research symposium on planetary health.
- **Recommendations:** Significant work remains to be done in Planetary Health research, such as establishing a dedicated department, and creating a partnership with community members affected by climate change.

Community Outreach and Advocacy

F

- The Faculty of Medicine does not engage with community organizations, or provide community-directed events, to promote planetary health at this time.
- **Recommendations:** Considering the multiple organizations in Ottawa which focus their efforts towards Planetary Health and sustainability, such as MDMOMS4HealthyRecovery, we believe strong partnerships could be created, especially considering their involvement in the Climate Change and Health lecture.

Support for Student-led Initiatives

B

- Interested medical students can pursue planetary health initiatives through existing programs with non-specific focuses, such as the Leadership elective and Community Service Learning. The Planetary Health interested group has received both funding and faculty support.
- **Recommendation:** Considering the multiple initiatives, it would be crucial to have an accessible website that contains and summarizes information about different ways that students can get involved.

Sustainability

C+

- The Office of Campus Sustainability is well-established, with multiple effective programs for the entire university. PPE recycling and sustainable event guidelines have been initiated in 2021. There is also a strong focus on energy efficiency and sustainable construction on campus, which saved 5 million kWh of energy in 2016 by retrofitting the medicine building.
- **Recommendations:** Most sustainability events or initiatives are occurring at the main campus which is separate from the medical school. Medical students can participate but there is no active promotion. There is work to be done on actively involving the medical students within the institution's sustainability efforts.



2021-2022 Summary Report Canada

University of Toronto

Overall

D

Planetary Health Curriculum

C+

- The Faculty of Medicine has made progress on the planetary health curriculum. However, most of the content is limited to two lectures during week 11 and a handful of self-learning modules in preclerkship teaching.
- **Recommendations:** We recommend the Faculty work toward fully integrating discussions on planetary health and environmental/climate justice into the curriculum and hire a theme lead who can bring together the environmental and structural determinants of health. We also recommend the faculty firmly integrate a climate justice approach when discussing anti-oppression and vice versa, during discussions on environmental health.

Interdisciplinary Research in Health and the Environment

D

- The Faculty of Medicine has some faculty members and initiatives on planetary health research. However, more commitment is needed to develop in these areas and foster partnerships with other offices, departments, and faculties that are engaged in similar lines of work.
- **Recommendations:** We recommend the faculty support researchers (e.g. increased funding) who are doing planetary health work and develop stronger partnerships with Dalla Lana School of Public Health's Division of Occupational & Environmental Health.

Community Outreach and Advocacy

D-

- The University of Toronto Faculty of Medicine has little to no community outreach and advocacy regarding planetary health.
- **Recommendations:** Community partnerships must be developed, particularly ones that are rooted within marginalized communities.

Support for Student-led Initiatives

D

- The University of Toronto has no support for student groups dedicated to planetary health. There is one registered medical society (GreenMeds) dedicated to increasing awareness on the importance of sustainability in medicine. However, it is not supported by faculty.
- **Recommendations:** The faculty should fund sustainability projects, which can be advertised on a central website, and at least offer an opportunity to engage in this research in the core curriculum.

Sustainability

F+

- Campus sustainability is largely shaped by initiatives at the university-wide level. Stronger external and internal partnerships are lacking in order for the Faculty of Medicine to establish concrete approaches in cultivating campus sustainability.
- **Recommendations:** We recommend that a designated staff member within the Faculty of Medicine be connected to the Office of Sustainability as a point person.



2021-2022 Summary Report
Germany

Rheinisch-Westfälische Technische Hochschule Aachen (RWTH Aachen University)

Overall

D

Planetary Health Curriculum

C+

- The topic of "planetary health" has been included in the curriculum, but there is a lack of integration into the longitudinal curriculum. In the third and fourth years of study, various aspects of planetary health are covered in only two courses. In addition, there are some electives on planetary health topics, but most are organized by students.
- **Recommendation:** Planetary health and the climate crisis as a risk factor must be integrated longitudinally into the curriculum and be an integral part of all courses in which a thematic link can be established. In addition, there is a lack of courses that link planetary health with patient communication.

Interdisciplinary Research in Health and the Environment

D+

- At the medical faculty of RWTH Aachen University, there are individual researchers and two Institutes dedicated to planetary health topics.
- **Recommendation:** The relevance of the topic requires the establishment of a research group with a main focus of "Planetary Health", as well as the establishment of a faculty position. Research activities in planetary health should be initiated in diverse medical fields and the medical perspective should be more strongly included in research projects of other disciplines.

Community Outreach and Advocacy

F

- The medical faculty of RWTH Aachen University has so far had no part in public relations work on the topic of Planetary Health. There is no community involvement.
- **Recommendation:** We recommend regular announcements on planetary health to the students (e.g. as part of a newsletter) and the provision of patient information. Similarly, the establishment of planetary health community partnerships in electives is important.

Support for Student-led Initiatives

C-

- Student groups who are involved in the area of "Planetary Health" receive basic support. However, health policy or scientific activities are solely based on the students' own initiative.
- **Recommendation:** We recommend that the medical school provides greater support to students who are interested in sustainable initiatives, e.g. by establishing mentorships or scholarships.

Sustainability

D

- The medical faculty of RWTH Aachen University has so far paid very little attention to the issue of a sustainable campus. The university is making efforts to take steps toward a more sustainable campus. However, consistent implementation is still lacking here in many places.
- **Recommendation:** We recommend that the medical school assigns a person to the topic of sustainability and to actively integrate sustainability into all processes. In addition, RWTH Aachen University should more clearly commit to carbon neutrality and formulate and implement related measures.



Justus-Liebig-Universität Gießen (University of Giessen)

Overall

D

Planetary Health Curriculum

D

- The University of Giessen has not yet included the topic of "Planetary Health" in its curriculum. Aspects of planetary health are included in lectures, but only sporadically. Teaching on planetary health exists only in extracurricular events such as electives.
- **Recommendation:** Respect planetary health as an integral component of medical education and integrate information on the impacts of the climate crisis on human health into curriculum.

Interdisciplinary Research in Health and the Environment

C

- While there are no research projects in the area of Planetary Health at our medical faculty, the "Panel on Planetary Thinking" is anchored at the JLU, among others, the "Panel on Planetary Thinking" approaches the topic in an interdisciplinary way. Other departments (e.g. geography) take up the topic in parts of their research.
- **Recommendation:** JLU's medical school could join the Planetary Health Alliance and the Global Consortium on Climate and Health Education, establish a website with planetary health news, and create a lecture series directly related to Planetary Health. Research projects would also be desirable.

Community Outreach and Advocacy

F-

- The Faculty of Medicine at Giessen does not conduct any public relations work on the topic of "Planetary Health". There are a few working groups and student liaisons who work on the topic and bring it to the public, but these are not affiliated with the faculty. An elective course and a capstone curriculum do work on these issues, but they are not available to the public. The teaching hospitals do not have informational materials on the topic.
- **Recommendation:** More community partnerships related to planetary health and access to information on the topic should be implemented.

Support for Student-led Initiatives

D

- The University of Giessen and the Faculty of Medicine recognize student groups involved in Planetary Health (e.g. Health for Future Giessen) and provide university platforms. However, there is no financial support.
- **Recommendation:** We recommend that the medical school provides more support to students interested in sustainable initiatives, for example, by creating a website that provides mentors and opportunities for students related to PH or ESH and lists grants for related research.

Sustainability

D+

- According to the Office of Sustainability, since 2021 the university has been in the process of developing a sustainability strategy lasting until the end of 2022. Structurally, a number of measures for more sustainability on campus have been implemented. The medical faculty seems to have a greater need to catch up than other areas of the JLU.
- **Recommendation:** In addition to the measures that have been put into effect, it is critical that sustainability criteria do not get lost in diplomacy. The development and implementation of a sustainability strategy are important and should be carried out promptly. Particularly in the areas of food and infrastructure, there is a lot of work to do.



2021-2022 Summary Report
Germany

Johannes Gutenberg-Universität Mainz (University of Mainz)

Overall

D-

Planetary Health Curriculum

D

- The University of Mainz has only sporadically included the topic of "Planetary Health" in lectures in a few departments and in an elective on "Planetary Health", which did not originate from the lecturers. Therefore, it is discussed only in the clinical part of the medical studies. Only partial aspects of the topic are covered and not placed in the context of the concept of "Planetary Health".
- **Recommendation:** There is a lack of courses that address the concept of "planetary health" in detail and comprehensively. This could be done as a stand-alone subject or integrated into specialties such as infectious diseases, pulmonology, cardiology, and other subjects. Electives offer a good start to this.

Interdisciplinary Research in Health and the Environment

D-

- The University of Mainz has its own departments, embedded in the Institute of Cardiology, which deal with environmental factors such as air and noise pollution and their connection to health. However, there is no research that explicitly addresses the health impacts of climate change in the context of the concept of "planetary health".
- **Recommendation:** Research in this area could be significantly expanded. Research on the environmental impacts on health can serve as a basis for this for other topics, such as heat or infectious diseases.

Community Outreach and Advocacy

F

- At the time, there is no partnership or cooperation regarding Planetary Health in community outreach.
- **Recommendation:** There are abundant potential opportunities that can be addressed.

Support for Student-led Initiatives

F+

- There is no support for student-led initiatives related to Planetary Health. There is a Health for Future local group that addresses issues regarding Planetary Health, but there is no institutional support.
- **Recommendation:** The University of Mainz should take steps to increase support for student-led initiatives.

Sustainability

F+

- The University Hospital of Mainz has taken first steps in implementing sustainable buildings, infrastructure, nutrition and other topics. It is still to be awaited what arises from these pledges.



Westfälische Wilhelms-Universität Münster (University of Münster)

Overall

D

Planetary Health Curriculum

C

- At the medical faculty of Münster, partial aspects of "planetary health" are covered within the core curriculum. However, many topics of planetary health (e.g. heat) are not included. The integration of topics longitudinally into curriculum is not sufficient, since the teaching here often depends on individual dedicated teaching assistants. The elective "Diagnosis of the Climate Crisis" plays a crucial role, because it covers many topics that are not otherwise taught.
- **Recommendations:** There is a lack of mandatory courses that address important planetary health issues to provide knowledge and skills to translate planetary health teaching into practice. For example, including climate change as a disease risk factor in conversations with patients could be done in the context of clinical skills or in the subject of general practice.

Interdisciplinary Research in Health and the Environment

F+

- At the Institute of Hygiene at the Medical Faculty of Münster, a working group is conducting research on hospital and environmental hygiene. In addition, there are efforts by various institutes to conduct more research in this area in the future.
- **Recommendations:** The medical faculty could expand research in the area of planetary health in collaboration with other institutes and join the Planetary Health Alliance and the Global Consortium on Climate and Health Education. A website with planetary health news could list existing research papers.

Community Outreach and Advocacy

F

- The medical school does not have its own collaborations with community organizations in the topic area of planetary health.
- **Recommendations:** The medical school could develop community partnerships related to planetary health. In addition, informational materials for patients at affiliated hospitals could be provided in the form of brochures or disseminated in an online format. Faculty could support the education of staff and students through informing about the topic area of planetary health.

Support for Student-led Initiatives

C

- There is a university initiative (Health for Future Münster), which is involved in curricular teaching and offers an elective on the subject of planetary health. It does not receive separate formal support from the faculty, although commitment is informally promoted here.
- **Recommendations:** We recommend that the medical school offers more support to students interested in sustainable initiatives, e.g., by creating a website that provides details of mentors or opportunities for students related to PH or ESH and listing grants for related research.

Sustainability

C

- Münster University is already implementing measures for increased sustainability on campus. The medical faculty benefits from this commitment, even without comprehensive efforts of its own.
- **Recommendations:** The medical faculty lags behind the university's efforts. For example, waste separation, as practiced in the university buildings, could also be implemented at the medical faculty. The topic of sustainability could be promoted by having a staff member for supporting and coordinating ideas and projects in this area and managing a website on the topic.



Julius-Maximilians-Universität Würzburg (University of Würzburg)

Overall

C

Planetary Health Curriculum

B

- The university is currently working with great effort to longitudinally implement the topic of planetary health into the curriculum. A logo has even been designed to make the content visible. In addition, there is the elective "Planetary Health" which can be taken in preclinical and clinical courses.
- **Recommendation:** To date, plans to teach courses that incorporate Planetary Health into conversations with patients have not yet been put into action. This could be done as part of the clinical skills at the Teaching Clinic or introduced in the general practice subject.

Interdisciplinary Research in Health and the Environment

C

- Currently, the medical school's research in the field of planetary health focuses primarily on how to best integrate this topic into the medical school curriculum. At the same time, the university and the University Hospital are key players in a newly initiated interdisciplinary Center for Applied Climate Research, which will conduct research on "Climate and Health," among other topics.
- **Recommendation:** Numerous informational events on planetary health topics are offered. For students, it would be convenient to have events, conferences, and future research projects on this topic bundled together on one website. The university and/or medical school could consider becoming a member of an international organization on Planetary Health.

Community Outreach and Advocacy

D

- The medical school does little outreach on planetary health. For students and health care workers, there are informational opportunities, such as the Planetary Health seminar series. For patients, on the other hand, there are no informational materials on the interactions between the environment and health.
- **Recommendation:** Information materials for patients could be provided online or in print.

Support for Student-led Initiatives

C

- The university and the medical faculty support student groups. In this regard, there are offerings such as the PAN student group or a close collaboration with the Health for Future group. In addition, the Teaching Clinic provides a lot of information. However, the aforementioned support only includes non-material support.
- **Recommendation:** We recommend that the medical school provides more support to students interested in sustainable initiatives, e.g., initiation of financial resources, such as grants and research programs. Furthermore, high-profile events and a student contact person and representative would be desirable.

Sustainability

D+

- The medical school has no stated goals or plans for carbon neutrality, there are no dedicated contact person for these issues and no known plans to change this. The university already has a contact person for sustainability issues, but there is a lack of elaborated plans for transforming to a carbon neutral university.
- **Recommendation:** There is much to improve in sustainability on campus. At the medical school, goals and plans should be developed, especially in the areas of transportation and buildings, but we also recommend making lab spaces more sustainable and implementing sustainable policies for events and procurement.



National University of Ireland Galway

School of Medicine

Overall

C

Planetary Health Curriculum

D

- NUI Galway includes planetary health in the curriculum, but it lacks integration longitudinally. Aspects of planetary health are most prominent in the Global Health and Development module.
- **Recommendations:** There is a lack of learning outcomes which explicitly mention the effects of environment, climate change, global warming, and pollution on health, particularly after year 3. These topics could be introduced in the Health and Disease modules, the Global Health and Disease Modules, or in Case Based Learning sessions (CBLs) in clinical years.

Interdisciplinary Research in Health and the Environment

B

- NUI Galway has excellent research clusters related to planetary health, such as the Centre for One Health (COH). The school of medicine also has a summer research programme which allows students to choose from a list of projects available. However, few of the projects available are related to planetary health.
- **Recommendations:** The summer research programme should link up with the COH or related research clusters to provide research projects related to planetary health, climate change, and sustainability.

Community Outreach and Advocacy

D-

- NUI Galway school of medicine has little community outreach relating to planetary health. The Department of Anaesthesia at University Hospital Galway arranged a sustainability day. The school of medicine had no community facing events or patient-accessible material on planetary health.
- **Recommendations:** The school of medicine should partner with initiatives already present in University Hospital Galway and the university. The school could also arrange their own community-facing events on the health effects of climate change, and develop easily accessible patient information on the topic.

Support for Student-Led Initiatives

B-

- There is one active medical student group affiliated with the Irish Doctors for the Environment. Faculty and administration are supportive of the group by offering advice, time and inviting the students to be represented on the medical Curriculum Review Steering group. Student research in the area of planetary health is possible, but remains unfunded and largely based on student initiative.
- **Recommendations:** Although we greatly appreciate the support already received within the school of medicine, we recommend the school become active partners to the student-led initiatives, by providing a planetary health primary contact person with whom the students could liaise with.

Sustainability

B

- NUI Galway is making great progress to make the campus more sustainable, and the school of medicine is aligned with this development through the university-wide Sustainability Strategy. The university has stated goals of carbon neutrality by 2030 and to have all labs certified as 'green' by 2025.
- **Recommendations:** The medical school is part of the university Sustainability Strategy, but there is no accessible strategy for how the school of medicine is working to meet these goals. We recommend making a Sustainability Strategy specifically for the school of medicine, and improve guidelines for events and procurement within the school of medicine.



2021-2022 Summary Report Ireland

Royal College of Surgeons in Ireland

Overall

B

Planetary Health Curriculum

C

- At RCSI, Planetary health (PH) connections exist throughout the medical curriculum. 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
- **Recommendations:** 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.

Interdisciplinary Research in Health and the Environment

A

- RCSI has now formally joined the Global Consortium on Climate and Health Education.
- **Recommendations:** The medical school should commit to recruitment of additional PH researchers, and endeavor to establish at least one collective research group which is dedicated exclusively to better understanding the intersection of PH and human health research.

Community Outreach and Advocacy

D

- This is the area where RCSI performed the weakest. However, RCSI is actively working with other universities in Ireland to develop planetary health / sustainability curriculum content.
- **Recommendations:** Further community outreach and engagement of the surrounding community when making decisions about sustainability practices would significantly bolster the university's performance in this area.

Support for Student-Led Initiatives

A-

- Overall, RCSI performed very well in this area. The administration is supportive of student-led initiatives, including planetary health initiatives. The administration consistently offer their time, funding, and enthusiasm for student-led work.
- **Recommendations:** The administration could further support student-led initiatives by facilitating more planetary health-specific connections between research mentors and students, and by developing a student fellowship program designated for PH.

Sustainability

A-

- 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. The Beacon status was awarded to RCSI with the Centre for Sustainable Health care in 2022.
- **Recommendations:** The development of a formal Sustainability office with salaried staff who would assist in oversight of the implementation and progress of sustainability goals and practices would likely significantly strengthen the University's sustainability efforts.



Trinity College Dublin

Overall

C

Planetary Health Curriculum

C+

- Trinity College Dublin (TCD) has material on planetary health in the core curriculum, although there is only one lecture 'Environmental Health & Lifestyle Medicine' that specifically deals with it.
- **Recommendations:** Planetary health must be integrated into multiple modules of the core curriculum. Including lectures dedicated to key concepts of planetary health; rising temperatures, pollution or impacts on marginalised communities would be beneficial.

Interdisciplinary Research in Health and the Environment

C

- TCD has several departments that receive funding for, and promote planetary health research among staff and students, but these are outside the domain of the School of Medicine. Trinity joined the Global Consortium on Climate and Health Education this year.
- **Recommendations:** TCD could organise a conference directly related to planetary health. They could also join the Planetary Health Alliance, and set up a website specifically focused on planetary health news, events, and research contacts.

Community Outreach and Advocacy

F

- TCD and its affiliated hospitals have no significant community outreach with regards to planetary health. There are organisations that incorporate some focus on planetary health (such as Innovation for the Global Arctic), but the medical school has no direct role in these.
- **Recommendations:** TCD should produce educational material regarding planetary health and environmental risk factors that is accessible to the public as well as including regular coverage of planetary health teaching in university communications.

Support for Student-led Initiatives

C-

- While TCD has widespread student and faculty support for student green initiatives, the medical school itself remains firmly behind on supporting its students in their sustainable endeavours.
- **Recommendations:** Given the support is offered on a university level, we recommend that the medical school themselves offer more in the way of scholarships, research opportunities, and engagement with planetary health issues.

Sustainability

C+

- Trinity College Dublin regularly publishes sustainability reports, the latest being in 2020, where it targets, reflects and sets novel goals for sustainability in the coming year. However, with the evolving dialogue on climate change and what institutions can do to address the challenge, the school's targets lack ambition.
- **Recommendations:** Further improvements could be made as regards to campus sustainability. This could be done by updating long-term goals to be in accordance with evolving knowledge about the drastic efforts that have to be made in the short-term in order to avoid further climate change. Efforts to implement carbon neutrality would help with this.



University College Cork

Overall

C

Planetary Health Curriculum

C-

- University College Cork (UCC) School of Medicine (SoM) includes brief discussions on planetary health primarily in the core curriculum content on public health in the preclinical years. These discussions, while valuable, tend to be indirect and limited in scope in respect to climate change and planetary health. References to sustainability are similarly limited.
- **Recommendations:** Engage students with discussions, in each of the core body systems' teaching or in the CP modules, on how climate change and planetary health impacts health and disease. These discussions may include relevant history and examination findings, and sustainability in clinical practice as well as in health behaviours.

Interdisciplinary Research in Health and the Environment

C

- Interdisciplinary research is a highly respected and cultivated process at UCC. The Environmental Research Institute, the APC Microbiome Institute, and MaREI Institute for energy, climate, and marine research are some that exist pertaining to the areas of planetary health, sustainability, and public health.
- **Recommendations:** A simple but powerful advance in this metric would result from the SoM promoting and encouraging socioculturally conscious, planetary health related, and community-need based projects that are by their nature interdisciplinary and highly impactful in terms of human healthcare.

Community Outreach and Advocacy

D+

- UCC SoM has little community outreach relating to planetary health. The SoM offers 1 CPD course related to planetary health and some opportunities for research, however these are not well known and perhaps not well utilised. UCC as a whole does well with community outreach, offering many courses and events on sustainability.
- **Recommendations:** The SoM could look into officially incorporating existing university initiatives into the SoM website, buildings, and events to increase their community partnerships relating to planetary health.

Support for Student-led Initiatives

C

- Support for student-led initiatives mostly comes from the wider university rather than the SoM. The SoM has shown some support for UCC's student working group under Irish Doctors for the Environment (IDE). Newly this year, a faculty member in the School of Public Health has shown interest in augmenting planetary health topics taught to medical students.
- **Recommendations:** We recommend the SoM provide more resources and guidance to students who would like to pursue an interest in planetary health.

Sustainability

C+

- UCC as a whole does very well in its efforts to have a sustainable campus. Sustainable building practises, multiple recycling efforts, and green energy initiatives are some of the many reasons UCC was the first to earn its Green Flag from the Foundation for Environmental Education in 2010.
- **Recommendations:** The SoM could implement sustainability guidelines specifically targeted for the students and staff at the Brookfield and Western Gateway campuses in order to minimise waste and consumption. This could be achieved by promoting use of reusable cups or silverware, or improving composting/recycling. Environmentally friendly transportation options between hospitals and the medical campus should be encouraged. Alternatively, the SoM may consider offering hybrid learning options for those that are able in order to minimise unnecessary or long commutes.



2021-2022 Summary Report Ireland

University College Dublin

Overall

C-

Planetary Health Curriculum

D+

- Planetary health (PH) exists throughout the medical curriculum. However, the level of detail remains sparse, and inclusion of PH relies on individual lectures. We want to emphasize 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.
- **Recommendations:** 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

C

- 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.
- **Recommendations:** 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

D+

- 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.
- **Recommendations:** We 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

C-

- The faculty and administration are supportive of student-led PH initiatives. However, we would like to see a greater level of support for such initiatives e.g., facilitating connections between research mentors and students, and providing stipends for research projects.
- **Recommendations:** 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 is showing commitment to improving its 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.
- **Recommendations:** A crucial starting point would be to assign one or more staff members to this.



2021-2022 Summary Report

Japan

Nagasaki University

Overall

C-

Planetary Health Curriculum

C

- At Nagasaki University, there are many opportunities to learn about the relationship between the environment and diseases in many of the core curriculum courses, but these opportunities have not yet led students to understand that they are related to planetary health. In addition, there are still no opportunities to learn about the environmental impact of medical care.
- **Recommendations:** By providing students with opportunities to learn about planetary health across subjects and disciplines in classes such as "Medicine and Society," we believe that students will be able to connect their knowledge in different fields and gain a deeper insight into planetary health.

Interdisciplinary Research in Health and the Environment

B-

- In Nagasaki University, the Planetary Health Promotion Division has been promoting initiatives such as holding public lectures, and with the establishment of Nagasaki University Interfaculty Initiative in Planetary Health in October 2022, we can expect to see more researchers focusing on planetary health.
- **Recommendations:** It is necessary to enhance the website so that faculty members, students, and citizens can easily access the research results and learn more about planetary health.

Community Outreach and Advocacy

F

- Nagasaki University School of Medicine does not currently have any initiatives related to planetary health for the community. Although there are collaborations with local health centers and medical institutions, these are only for conventional medical and nursing education, not for planetary health education.
- **Recommendations:** We believe that better planetary health education will be possible by making use of the existing cooperation with medical institutions and connections with remote islands.

Support for Student-Led Initiatives

C-

- There are many environments at Nagasaki University that support the research of students interested in planetary health and the activities of student groups. However, these are rarely publicized to the entire student body or events are not held in which the entire student body can participate, resulting in this evaluation.
- **Recommendations:** We believe that by widely publicizing research and student activities related to planetary health to students through the website and academic affairs, all students will have a chance to know about them.

Sustainability

D+

- Environmental efforts are being made in accordance with the government's basic policies and environmental considerations for transportation. On the other hand, Nagasaki University's own initiatives, such as those related to food and recycling, were not well implemented.
- **Recommendations:** The participation of students is essential for such efforts, and new student-centered efforts would be very valuable, such as working together with the Co-op on the cafeteria menu, or holding an event where students give presentations on food loss.



2021-2022 Summary Report United Kingdom

Barts and The London Medical School

Overall

B

Planetary Health Curriculum

B

- Barts and the London Medical School integrates teaching on planetary health (PH) into the curriculum to a relatively high degree, both in optional modules and within its core objectives. In year 4 students explore healthcare sustainability in great detail. New this year, students are taught how to have discussions with patients regarding their impact on the environment and the impact of the environment on them.
- **Recommendations:** Whilst the curriculum has some significant strengths, students would still benefit from further exposure, particularly younger years who only encounter detail in optional modules. To address this, global health modules similar to that in the 4th year could be introduced longitudinally, for example by embedding a few PH related lectures into weeks where ethics and similar topics are taught during the degree.

Interdisciplinary Research in Health and the Environment

B

- Individuals connected to the Medical School do engage in research relating to climate change and its link with healthcare. Research conducted has acquired much recognition and also engages with the community at large. Much of this work, however, is undertaken separate to the medical school.
- **Recommendation:** The Medical School should consider joining the Planetary Health Alliance or the Global Consortium on Climate and Health Education.

Community Outreach and Advocacy

B-

- The Medical School partners with many external organisations to understand the effects of climate change on health. The university hosts events to increase awareness of conservation of species. Unfortunately, opportunities for students to work with the community directly are limited except for primary care projects..
- **Recommendations:** An increased collaboration effort with local community and sustainability groups.

Support for Student-led Initiatives

B

- Sustain at BL is the largest student led initiative at Barts Medical School. It receives brilliant support and can liaise with faculty members in order to promote events as desired. Student-office positions for sustainability officers are available, and every year a number of students apply for this position. There is a lack of encouragement to increase the amount of initiatives and students need to seek out opportunities themselves.
- **Recommendations:** Increased programs to empower students to engage in projects relating to sustainability.

Sustainability

C+

- Barts Medical School fulfils common goals to improve campus sustainability such as encouraging responsible energy use and usage of recycling facilities. In addition to this there are multiple procedures in place to improve their carbon footprint in the university setting such as the Lab Efficiency Assessment Framework. However, there is little done in terms of pushing towards concrete emission goals.
- **Recommendations:** Barts should establish a carbon neutrality goal with a clear, details plan to achieve this.



2021-2022 Summary Report United Kingdom

Brighton and Sussex Medical School (BSMS)

Overall

B

Planetary Health Curriculum

B+

- Planetary health and sustainable healthcare topics are apparent throughout the curriculum across years 1-4 in various formats, including dedicated lectures, brief mentions and elective content (SSCs). However, planetary health content lacks longitudinal curricular integration, with most the topics being delivered in years 1,2 and 4.
- **Recommendations:** We recommend that the curriculum be reviewed to embed longitudinal integration of planetary health and sustainable healthcare topics across all years.

Interdisciplinary Research in Health and the Environment

A+

- BSMS has a dedicated Sustainable Healthcare Group and the group's academic contacts and research activities are centralized in a comprehensive [webpage](#). BSMS also co-hosts the [Sustainable Healthcare Academic Research and Enterprise \(SHARE\) Conference](#) annually.
- **Recommendations:** The medical school should establish further links with environmental justice communities who can provide input in the medical school's research agenda.

Community Outreach and Advocacy

C

- BSMS currently has little community outreach relating to planetary health. We also identified a lack of relevant postgraduate courses offered by BSMS or the affiliated NHS Trust.
- **Recommendations:** We recommend that BSMS and its Trust establish training courses, such as those offered by the [Centre for Sustainable Healthcare](#). Community partnerships should also be formed, such as students teaching about climate change in local schools using BSMS's established [widening participation programme](#).

Support for Student-led Initiatives

A-

- Overall, there is some support for student-led initiatives at BSMS and the wider institution. An important recent improvement is the addition of student Sustainability Representatives.
- **Recommendations:** Support and funding for student-led initiatives mostly comes from the University of Sussex rather than the medical school directly. We recommend that BSMS offer increased support to students, for example by establishing dedicated funding for relevant student-led research.

Sustainability

B-

- The University of Sussex and the University of Brighton, BSMS's parent institutions, have both made good progress to improve their campus sustainability, including fossil fuel divestment, utilizing sustainable building practices and incorporating sustainability criteria into their supply procurement.
- **Recommendations:** Both universities need to take further steps to improve their campus sustainability. As a first step, we recommend that sustainability criteria be formed and made a requirement for all events.



2021-2022 Summary Report
United Kingdom

Cardiff Medical School

Overall

D

Planetary Health Curriculum

D-

- Sustainable healthcare and planetary health has been integrated more than previous years due to greater input from academic doctors and in the Cardiff and Vale health board. However, in the overall curriculum, there are many areas not covered, with limited opportunities for students to engage further if they are interested.
- **Recommendations:** Highlight the importance of planetary health within intended learning outcomes (LO's) in the first years of medical school, and highlight areas where they can engage further with potential opportunities to reach out to doctors with an interest in this area.

Interdisciplinary Research in Health and the Environment

C

- At Cardiff University more published research has been recently released on sustainable healthcare in comparison to past years, however there is not a dedicated research lead or academic in this area.
- **Recommendations:** With research projects integrated in the core Cardiff curriculum, a named lead for planetary health could provide and reach out to academics and doctors who would be happy to support medical students interested in this area.

Community Outreach and Advocacy

F

- Cardiff University scored 0 within this section, this area requires development in the future.
- **Recommendations:** Cardiff university could link with local organisations, providing opportunities to teach and support each other in prospective projects. Further, the Cardiff university medical school weekly newsletter could provide information to students on local projects and how they can get involved.

Support for Student-led Initiatives

D

- The University of Cardiff has a newly founded Cardiff University Sustainability in Healthcare Society this year. This is funded and supported by Cardiff University Students Union. As this society was formed a few months ago, no projects have been undertaken, however the prospective outlook is to form a fund available for students to be involved in research. Previously students have had to obtain direct departmental funding.
- **Recommendations:** Cardiff Medical School could provide funding opportunities for the newly formed society and connect students with research networks in Cardiff and Wales.

Sustainability

D

- Cardiff University have released a thorough document outlining their environmental status and outlook for future years. They have de-invested in all fossil fuel companies, and attained more renewable energy links. All buildings built or redone have a high sustainability aspect to construction- the use of recycled material, high energy saving material used and low emissions overall. Most importantly they declared in their Climate Emergency policy to become carbon net zero (Scopes 1 and 2) by 2030.
- **Recommendations:** Cardiff University could increase efforts to publicise their ambitious carbon targets through inclusion in their newsletter, and social media posts. This would aid in student and staff engagement.



2021-2022 Summary Report
United Kingdom

Edinburgh University Medical School

Overall

B

Planetary Health Curriculum

C

- There are clearly concerted efforts from the school to try and implement planetary health into the curriculum. However, its integration is rather sporadic.
- **Recommendations:** These topics need to be covered across all years. A more holistic approach where environmental aspects of health are considered within all areas of medicine is essential.

Interdisciplinary Research in Health and the Environment

B+

- Edinburgh Medical School and the wider university shows a clear interest in planetary health research with dedicated departments and staff. Efforts have been made to empower those most affected by climate change through research and networking.
- **Recommendations:** The web page dedicated to climate action could benefit from improved signposting to the research being carried out at the university and mentions of the staff involved.

Community Outreach and Advocacy

C

- Edinburgh medical school does promote student involvement with community organisations, particularly in the year 1 course and SSC electives with the aim to enhance understanding of social and environmental aspects of health.
- **Recommendations:** The medical school could create a more accessible list of community organisations so students are more aware of these when looking into elective projects. Climate change Turas courses could be added to the training of FYs and other medical staff.

Support for Student-Led Initiatives

B

- There is a small amount of support provided by the school to medical students who are interested in planetary health. This needs to be improved and more effort must be done on the school's part to help nurture any related interests expressed by students and staff alike.
- **Recommendations:** It would be beneficial for the school to make resources for students who want to study this topic further easier to access.

Sustainability

B

- The school has made some good efforts to move towards creating a sustainable campus and strongly encourages having sustainable measures for school events. The campus buildings - old and new - are also not operating 100% on renewable energy.
- **Recommendations:** It would be a great step towards campus sustainability if the school could move towards being fully operable on renewable energy. Sustainability guidelines for campus events should also be made compulsory or at least better enforced.



2021-2022 Summary Report United Kingdom

Hull York Medical School

Overall

C

Planetary Health Curriculum

D-

- Hull York Medical School (HYMS) addresses planetary health (PH) in stand-alone lectures on limited topics in Phase 1 and elective components. Education for sustainable healthcare (ESH) is lacking. The curriculum is currently under improvement with a focus on PH and ESH, and PH lectures for Phase 2 have been scheduled.
- **Recommendations:** Incorporate PH/ ESH teaching throughout the pre-clinical and clinical curriculum, especially considering ESH. Formalize a role overseeing integration of PH/ ESH into the curriculum.

Interdisciplinary Research in Health and the Environment

A

- HYMS recently hosted a conference for staff and students with multiple expert speakers following COP26 and is a member of the Global Consortium on Climate and Health Education. HYMS also has researchers with a primary focus on PH and has processes which allow those affected by environmental injustice to influence the research agenda.
- **Recommendations:** Join the Planetary Health Alliance for more access to planetary health resources.

Community Outreach and Advocacy

C-

- HYMS is involved in regional projects promoting green prescribing and regenerative food processes. Student communications sometimes include planetary health topics. HYMS has no relevant community facing courses or events, and there are no materials for patients around environmental health exposures or health impacts of climate change.
- **Recommendations:** Formalise PH/ ESH in student communications. Create patient accessible information around environmental health exposures or climate change and its health impacts.

Support for Student-led Initiatives

B

- There are research opportunities in PH at HYMS and a well-supported Students for Global Health society. However, there is no student representation involved in curriculum reform or sustainability, and the medical school lacks a centralised webpage for PH initiatives, successes and available projects.
- **Recommendations:** Create a specific webpage for HYMS PH topics and create a student representative role focused on PH/ ESH. Inclusion of a sustainability focus into required quality improvement projects.

Sustainability

C+

- The Universities of Hull and York have comprehensive plans for carbon neutrality by 2030. There is good recycling availability on campus and the institutions have good guidance on sustainable supply procurement. HYMS lacks a dedicated staff member for sustainability, and there are no guidelines for event sustainability.
- **Recommendations:** Appoint a designated staff member for sustainability at the medical school and develop guidelines or requirements for events promoting sustainability.



Keele University

Overall

A-

Planetary Health Curriculum

A-

- The Keele Curriculum has strong integration of the effects of pollution, extreme weather and the effect on the pattern of infectious disease, as well as health inequalities, with these sessions being delivered in a variety of ways. 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.
- To further improve, sessions covering neuropsychological and reproductive health effects of climate change and pollution could be included. There should also be more guidance on conversations with patients about the effect that climate change has on health.

Interdisciplinary Research in Health and the Environment

A

- The University as a whole has a strong research focus on sustainability and factors that affect planetary health. From sustainable energy to food security, the sustainability research at Keele is very varied. Also, the medical school has several members of staff undergoing sustainable research within prescribing in primary care.
- To improve, the research undertaken should have a process by which communities disproportionately impacted by climate change and environmental injustice give input or make decisions about the research agenda.

Community Outreach and Advocacy

B+

- The Medical School has meaningful links with several community organisations that form community placements for students. Keele is involved with many different community organisations aimed at promoting sustainability and planetary health to our local community. There are also Student Union events such as Green Festival focusing on the university community.
- To improve, patient facing educational materials supplied by the associated hospital trusts in regard to environmental exposure need to be developed.

Support for Student-led Initiatives

A-

- Funding is available for student projects throughout the university, which medical students are eligible to apply. Since the last report, the medical school has developed a sustainability focused webpage.
- In order to improve, a specific planetary health student group would further engage students.

Sustainability

A+

- At Keele, sustainability is very important and this is evident throughout the current projects and initiatives on our main university campus. It is hard to suggest improvements, with a clear carbon neutral goal and entirely renewable energy. Transport has been considered, with medical placements accessible by public transport.
- The only thing that could be improved is making student run events at the medical school abide by the sustainable guidelines and making this a requirement in order for their event to run.



2021-2022 Summary Report
United Kingdom

Newcastle University (United Kingdom)

Overall

B-

Planetary Health Curriculum

B

- Newcastle University has very good coverage and integration of planetary health (PH) concepts as well as sessions throughout medical school on improving sustainability in healthcare.
- **Recommendations:** Teaching on having conversations around PH is not yet taught. This could be introduced as a clinical skills session or ethics session with scenarios to discuss with patients.

Interdisciplinary Research in Health and the Environment

D+

- Newcastle University has considerable research links within sustainability e.g. the population health sciences institute and OnePlanet. However, these could be utilised more by the medical school for interdisciplinary research. The medical school is currently in the process of joining international PH organisations.
- **Recommendations:** Newcastle Medical School could organise a conference directly related to sustainable healthcare and PH as well as setting up a specific webpage or newsletter for PH news.

Community Outreach and Advocacy

D+

- There are many links to community outreach projects through the University and Students Union however these are mostly environmental projects, the medical school is not involved in these projects and few are related specifically to health. Newcastle Teaching Hospitals have a few patient resources relating to PH.
- **Recommendations:** Utilise the Universities existing partnerships with community outreach projects relating to PH and more direct community outreach options through student selected components.

Support for Student-led Initiatives

B

- Newcastle Medical School supports multiple active student groups, Students for Global Health and Sustainable Medics, which both receive funding from the Students Union and work closely with the medical school. Completing a sustainable QI project is also part of the curriculum.
- **Recommendations:** Support for student-led initiatives mostly comes from the wider University rather than the Medical School. The medical school could offer more support to students interested in carrying out sustainable projects and initiatives for example by collating a website for related opportunities and research.

Sustainability

A-

- Newcastle University is an extremely sustainable campus with it's newly developed Climate Action Plan the University aims to be carbon neutral by 2030.
- **Recommendations:** There are ambitious sustainability plans already in place at the University. We recommend focusing on improving lab sustainability and introducing sustainable guidelines for events hosted across the University.



Newcastle University Medicine Malaysia

Overall

D+

Planetary Health Curriculum

B

- NUMed has a well-integrated coverage on environmental health and awareness curriculum.
- **Recommendation:** More teaching how climate change has impacted the local healthcare system and the effects the environment on causing disease in the different body systems. Student presentations, case based discussion, and self directed e-learning modules can help achieve this, especially. This is especially useful for Year 4 students in their CDM rotation, which revisits different body systems weekly.

Interdisciplinary Research in Health and the Environment

C+

- NUMed demonstrates interest in planetary health (PH) research and healthcare sustainability through a dedicated team of researchers. However, the lack of awareness regarding the team's efforts should be addressed by promoting better student, staff, and community involvement in PH and sustainability research.
- **Recommendations:** Some initiatives we recommend include offering climate change as one of the research studies as part of mandatory Student Selective Component (SSC). We can also approach and include Non Government Organizations (NGO) to conduct and take part in the research regarding environmental issues.

Community Outreach and Advocacy

F

- Providing educational materials on the environmental impacts of health have been made accessible in medical school affiliated hospitals. However, there is still a lack of community outreach programmes for medical students, little postgraduate support, and sparse communication about PH between staff and students.
- **Recommendations:** Improve communications between staff and students regarding PH and sustainable healthcare via virtual talks and timely emails highlighting current environment issues. Administrative team should organize and encourage more student involvement in community-based environmental programs.

Support for Student-led Initiatives

D

- The NUMed administration has been supportive of student-led health-related initiatives, although COVID-19 restrictions have limited execution of these plans. Nonetheless, both the administration and medical students have expressed interest in future collaboration and plan to implement more initiatives.
- **Recommendations:** Organising more events, movements, and establishing a student-led club that centres around planetary health/sustainability in medicine could help. The administration could: offer incentives for PH events; facilitate collaborations between students, staff and researchers; and introduce grants to medical students to enact sustainability QI project initiatives.

Sustainability

D

- NUMed has made good progress in improving campus sustainability, especially in the area of transportation, limiting waste production and energy usage, and more. In addition to these efforts, there are more institutional policies that have to be made to make a bigger impact to tackle climate change.
- **Recommendations:** Introducing goals and pledges can help keep the NUMed community motivated and accountable, with a clearer direction in mind. We also recommend focusing on creating and enforcing sustainability guidelines and criterias in the area of hosting events, food and beverage sale in cafeterias, and supply procurement to improve campus sustainability.



2021-2022 Summary Report
United Kingdom

Norwich Medical School

Overall

D+

Planetary Health Curriculum

D-

- Overall, the medical school's curriculum doesn't have a focus on planetary health and education for sustainability in healthcare. The majority of opportunities to explore these subjects arise from the 2 student selected component themes which are elective and available only in years 1 and 3. The core curriculum includes few clear objectives aiming to educate in matters surrounding climate injustice, planetary health and the links to human health. The majority of those objectives are covered during year 1 of study with very few being covered in the later years.
- **Recommendations:** Integrate more learning objectives throughout the curriculum within the relevant modules when studying different specialties (eg. Link of climate anxiety in module 4C or the link of air pollution with low birth weights in module 4A). An online lecture series on the unequal impact that climate change has on marginalized groups and the health inequalities that arise would prove very beneficial if it was to be made available on Blackboard to all year groups. Including some consultations skills training to equip students with different strategies on how to approach the topic of climate change with patients and explain the impact on human health. Introducing a virtual sustainability page on Blackboard with resources including upcoming events or nationwide/university groups that students can get involved in would be a very efficient way to reach students. A reading list for students that wish to educate themselves further on certain topics around planetary and global health.

Interdisciplinary Research in Health and the Environment

C

- Overall there are various opportunities for involvement in interdisciplinary research within the UEA as an institution. However the Norwich Medical School doesn't appear to have any clear involvement in the research being done.
- **Recommendations:** We recommend encouragement for the medical school as an institution to take a more active role in interdisciplinary research and also to encourage staff and faculty to get involved within specific projects that interest them.

Community Outreach and Advocacy

F

- The medical school should aim to build direct partnerships in the future with local primary schools; medical students can teach younger students about the importance of climate change and how it may affect future generations.
- **Recommendations:** A placement module could be dedicated in each year where community based initiatives can liaise with medical students to understand how community based organizations can impact on health and for students to demonstrate awareness of the social, economic and environmental determinants of health. For instance CHAIN (climate health action in Norfolk). More efforts may need to be invested into communicating and updating students about planetary health. Introducing "Continuing professional development" course on planetary health. In the future it is paramount that the Medical School works directly with under – resourced populations who are disproportionately affected by climate change problems largely created by wealthy communities and should not solely rely on student-led initiatives such as SFGH who have worked hard to get directly involved in the local community.



2021-2022 Summary Report
United Kingdom

Norwich Medical School (Continued)

Support for Student-led Initiatives

C

- The University of East Anglia supports student groups dedicated to planetary health. However, there is a lack of engagement from the medical school. No grants or financial support is available to societies or students, moreover, any research opportunities in planetary health have to be sought out by students themselves, rather than being advocated by the medical school as an area of importance.
- **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 and societies interested in planetary health. For example, the medical school could elect a student sustainability officer to liaise with the school and societies. Financial support/ grants could be offered to encourage students to carry out research in sustainable healthcare. The medical school needs to engage with these issues and demonstrate this to students clearly.

Sustainability

B

- University of East Anglia has taken initiative to maintain and improve sustainability on campus. This includes the University divesting from fossil fuels since 2017 and ensuring that new buildings are sustainable and lower carbon footprints. New initiatives including the new NetZeroUEA carbon management plan have also been very promising in improving sustainability on campus.
- **Recommendations:** The sustainability goals and initiatives are targeted for the whole institution but more needs to be done to designate a staff member at the hospital or medical school. Old buildings such as the medical school has not been developed or remodeled to utilize renewable energy. Currently there are no sustainability guidelines for medical school events, which should be looked further into to create new guidelines for the future.

Expanded score explanations can be found at phreportcard.org.



Oxford University Medical School

Overall

C

Planetary Health Curriculum

C+

- Following from last year's report card the curriculum has increased in score by nearly 20%. This reflects an incredible amount of work and commitment from staff and students to weave Planetary Health (PH) and Education for Sustainable Healthcare (ESH) into the curriculum.
- Key curricular updates involve the introduction of a new Special Study Theme 'Planetary Health and Sustainable Healthcare', significant changes to the 'Medical Sociology' course and introducing focused lectures into the Graduate Entry course modules. A key focus for curricular change next year is the standard entry pre-clinical course.
- Alongside the PHRC, 2 ESH faculty wide workshops have played a key role in increasing this score, with a third workshop scheduled in March 2022. Finally, given the newly appointed ESH lead at the medical school it is hoped that ESH will be further woven into the core curriculum, complementing the elective teaching.

Interdisciplinary Research in Health and the Environment

C+

- The wider university engages in a lot of climate and health research however this is still lacking within the medical school and medical sciences division.
- There is hope that the Final Honours Scheme (FHS) projects will offer more ESH focused projects for 3rd year undergraduate students.

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, and minimal change has been seen since last year's report card.
- We propose the medical school to engage with community climate focused groups in Oxford, and initiate discussions with local trusts to make available materials regarding climate change and PH for patients. We suggest relevant events are communicated to students as a means to encourage engagement and advocacy.

Support for Student-Led Initiatives

B-

- The medical school currently supports quality improvement projects and the Green Impact Scheme, and the wider institution has many co-curricular sustainability opportunities.
- Students are currently working with the Medical Sciences division to create an area on the website dedicated to planetary health, however this is still in its initial phase.

Sustainability

C

- In November 2021 the medical school officially declared that climate change is a health emergency. However, it has yet been made clear what concrete actions will be taken in light of the announcement.
- At the institution level a divestment from fossil fuel commitment has been made and they are currently running a member consultation aiming for biodiversity net gain and net zero carbon by 2035, to improve on their current target of a 50% reduction by 2030.
- We recommend the development of sustainability policy at the medical school level to achieve higher marks.



Peninsula Medical School at University of Plymouth

Overall

B

Planetary Health Curriculum

B+

- Peninsula Medical School covered most curriculum topics in the core or elective curriculum. Many topics were covered by the Year 1 Clinical Leadership and Extension Week workshop on planetary health (PH).
- **Recommendations:** PH teaching could be incorporated into more taught sessions, allowing more topics to be covered in depth. Learning objectives with planetary health aims can ensure these needs are met.

Interdisciplinary Research in Health and the Environment

B+

- The Sustainable Earth Institute's research festival and conferences promote PH and sustainability. The Global Health Collaborative and many medical faculty members work on PH projects such as the KUPUMUA project.
- **Recommendations:** Opportunities to engage with interdisciplinary research need better publicisation and easier access. We recommend that the medical school compiles a list of education for sustainable healthcare and PH research opportunities, accessible on the PH webpage on the digital learning environment (DLE).

Community Outreach and Advocacy

C-

- Peninsula Medical School routinely partners with community organisations. Due to COVID-19, there have been no community courses or events over the past year. There is regular coverage of PH topics in university communications. The main affiliated hospital trust does not provide postgraduate PH teaching, and there are no accessible educational materials for patients regarding health impacts of PH topics.
- **Recommendations:** To encourage student partnership with affiliated hospital trusts, to produce patient education resources, and to incorporate PH topics into postgraduate education. Community-facing PH courses and events could also be held.

Support for Student-led Initiatives

B-

- Peninsula Medical School offers support for student-led PH projects and has hosted co-curricular PH programs and initiatives. There is a dedicated PH page on the DLE with relevant initiatives and potential mentors, and a PH student group. There is a student liaison representing sustainability interests within the medical school.
- **Recommendations:** To offer faculty support for the PH student organisation. The medical school could also host a variety of co-curricular events including organic agriculture, sustainable food systems, environmental justice, cultural arts and local volunteer opportunities.

Sustainability

B-

- Within the University of Plymouth, Peninsula Medical School looks to sustainably manage its carbon footprint, procurement of goods, supply of food/beverage products and environmentally conscious waste disposal. It is still unclear to what extent these efforts are adopted by the medical school.
- **Recommendations:** There are currently no laboratory incentives or programmes facilitating environmentally friendly practice or carbon neutrality. Events held by the medical school are not subject to sustainability requirements. Introducing staff or student roles specific to medical school sustainability would help to introduce these changes. Existing monitoring systems can be used to maximise the use of renewable energy in existing campus buildings.



2021-2022 Summary Report United Kingdom

Queen's University Belfast

Overall

B

Planetary Health Curriculum

B+

- Queen's University Belfast places a large focus on planetary health and sustainability curriculum throughout the longitudinal integration of its new C25 curriculum.
- Recommendations:** We hope that, as planetary health is further integrated into the medical school's curriculum, the medical school will continue to evaluate and review this curriculum. We also look forward to the integration of sustainable development goals into all courses at Queen's, and to the integration of the PHRC findings into the other courses in the School of Medicine, Dentistry and Biomedical Sciences at QUB.

Interdisciplinary Research in Health and the Environment

B+

- Queen's University Belfast has a large number of researchers engaged in planetary health research and healthcare sustainability research, some through SECA. The university has also hosted many planetary health events in the past year.
- Recommendations:** The university should continue to support faculty members throughout the institution and at the School of Medicine who have a primary research focus in planetary health or healthcare sustainability, and should continue to maintain and develop the new Sustainability website.

Community Outreach and Advocacy

B-

- Queen's University Belfast partners with community organisations to promote planetary and environmental health, and has significantly improved in this area from last year's report.
- Recommendations:** Although improvement has been made, there is still work to be done in this area. In particular, further integration between the medical school and community organisations is required.

Support for Student-Led Initiatives

A-

- Queen's University Belfast provides a great deal of support and opportunities for student-led initiatives.
- Recommendations:** The university should provide greater publication of such initiatives, and encourage projects which emphasise planetary health issues. We strongly encourage the establishment of an annual Planetary Health or Sustainability conference or event in the university, and we hope that this will become more of a priority following the recent establishment of SECA.

Sustainability

C+

- Queen's University Belfast has prioritised sustainability through building practices, transportation options, recycling, food and beverage selections, procurement and lab spaces.
- Recommendations:** The university is still extremely lacking in terms of its commitment to carbon reduction and neutrality, renewable energy, and divestment from fossil fuels. We implore the university to urgently change their stance on this; to include detailed plans to tackle these issues in the new Sustainability Action Plan; and to greatly improve their transparency and publicly-available information on these issues.



St. George's, University of London

Overall

D+

Planetary Health Curriculum

C-

- St George's, University of London (SGUL) has good coverage of planetary health topics in the curriculum, but these are mainly discussed in a few lectures clustered towards the end of the course.
- **Recommendations:** A greater focus on integrating planetary health themes longitudinally throughout the curriculum, particularly on increasing coverage in earlier years. Where relevant, every lecture could have at least a slide on the environmental considerations of the area being taught.

Interdisciplinary Research in Health and the Environment

D

- SGUL has faculty members with a primary or secondary focus on planetary health, with research focused primarily on outdoor air and noise pollution in London, Europe and Sub-Saharan Africa.
- **Recommendations:** SGUL could join an international planetary health organisation such as the Planetary Health Alliance and/or the Global Consortium on Climate and Health Education. The 'Environment and Sustainability' webpage could be turned into a central hub for highlighting planetary health research at SGUL.

Community Outreach and Advocacy

D-

- University updates on environmental issues are covered in staff and student communications, although they are not regular. St George's Hospital Trust provides some post-graduate professional education related to sustainable healthcare.
- **Recommendations:** To introduce a dedicated section of the student/staff newsletter to planetary health issues. SGUL to run a public event to engage the community in local issues around sustainability and planetary health. The university or hospital trust to develop accessible educational materials about planetary health issues for patients.

Support for Student-led Initiatives

D

- SGUL has many active student groups; Ethical & Environmental Union Officers and societies such as EcoSoc and Vegan Society. There is a staff/student environmental working group who meet every month. There are few student-led sustainability initiatives offered to students directly by SGUL, and they are not funded.
- **Recommendations:** SGUL could introduce the option of carrying out a sustainability QI project as part of the curriculum, or offer funding for extracurricular student-led planetary health projects.

Sustainability

C-

- SGUL has made efforts to make the campus sustainable, with 2/3rds of buildings supplied with renewable energy and with a joint sustainable procurement strategy with Kingston University. The hospital bicycle user group has been effective at incentivising environmentally friendly transportation methods.
- **Recommendations:** Despite a pledge to reduce CO2 emissions, we would like the university to fully divest from fossil fuels. SGUL should focus on having 100% of buildings supplied by renewable energy and to introduce sustainable guidelines for food and beverage suppliers on site.



2021-2022 Summary Report
United Kingdom

Swansea University

Overall

C

Planetary Health Curriculum

B-

- Within the curriculum there are lots of changes on-going due to the curriculum review. This has involved many new additions within planetary health.
- The addition of the Future Medics fortnight has allowed the medical school to deliver more teaching in planetary health within the past year, as well as provide lectures on topics that they have struggled to fit into the condensed 4 year course.

Interdisciplinary Research in Health and the Environment

F+

- Unfortunately research has not improved based on last year.
- There is no dedicated department or group focused solely on planetary health. However, if students want to get involved there are opportunities within their own time or within set blocks called Learning Opportunities within the Research Setting (LORS).

Community Outreach and Advocacy

D

- This is another area that has not been improved upon when compared to last year.
- There is very little outreach or advocacy within the institution. This could be due to lack of interest.
- There is the opportunity to increase this even if it is just regularly publicising a newsletter highlighting how students and faculty could get involved.

Support for Student-led Initiatives

D+

- The medical school encourages societies and student-led initiatives that focus on sustainable healthcare, however there needs to be more financial and faculty support to enhance student interest.
- This however, has improved from last year with faculty members being employed in planetary health and more faculty involvement in societies.

Sustainability

A

- Overall campus sustainability is excellent both within the school of medicine and as a whole. The university is very keen on making this even better with new guidance coming out regularly. The university is entirely divested from fossil fuels and tries hard to create their own renewable energy where possible.
- The hospitals in the area are also working to become more sustainable with a solar plant being constructed on site of Morriston hospital.



University College London

Overall

B+

Planetary Health Curriculum

B+

Whilst the majority of planetary health teaching is given in standalone lectures, UCLMS is currently striving to integrate and embed more teaching longitudinally. There is currently an overarching Intended Learning Outcome for every year of MBBS stating “Appreciate the impact of climate change and sustainability in healthcare”. The Citizenship Toolkit module in Year 1 provides core teaching on sustainability. This, in addition to the elective course ‘Sustainability & Climate Change in Healthcare’, covers the majority of the issues on the PHRC. However, in future, topics could be explored in more depth in relevant existing lectures to ensure the issues are integrated throughout the curriculum.

Interdisciplinary Research in Health and the Environment

B

UCL has continued to support and fund planetary health and sustainability research, as evidenced by its [Grand Challenge of Global Health](#), the high number of UCL researchers carrying out this type of research, and the many conferences it holds that raise awareness on the issues of planetary health and sustainability. There are still areas where little improvement was made since the publication of last year’s report card. Namely, the Faculty of Medical Sciences (FMS) 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

C

Since last year, the FMS has been working on improving community outreach and advocacy of planetary health, although there is already a high level of involvement at the institutional level. The school has been involved in the organisation of various talks and conferences and has partnered with the Royal Free London NHS Foundation Trust, where medical students are invited to form part of the sustainability working groups at the hospital. Points were lost for the lack of regular communication about planetary health to students and the wider community. In future, more work is required to partner with community organisations and work is currently focused on creating educational material on the impacts of climate change on health to patients at the affiliated hospitals and GP practices.

Support for Student-led Initiatives

A-

UCL supports and encourages student-led initiatives through funding, offering and/or advertising opportunities related to sustainability and planetary health. However, the FMS could further facilitate student engagement and foster interest by offering paid research opportunities specifically for planetary health/sustainable healthcare projects. The new Sustainability at UCLMS website now facilitates the publication of planetary health/sustainable healthcare activities and mentors within the medical school, making it accessible to students.

Sustainability

A+

UCL is fully committed to a sustainable campus and is continually looking for areas of improvement. By 2024, UCL has ambitious goals of achieving net zero carbon buildings, a campus free of single-use plastic, and additional biodiverse space the size of 1.5 football pitches. When considering future areas to work on, we thought that whilst good guidance exists to improve sustainability in many areas, compulsory criteria in some cases could have a greater effect.



2021-2022 Summary Report
United Kingdom

University of Aberdeen

Overall

C

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

C-

- The medical school has a Students for Global Health society and MedAid society. We also have recently established a sustainable medicine society. Before the pandemic began the medical school contributed to both Café med and Café Sci events which were designed with a patient and community audience. Hopefully as lockdown restrictions continue to ease we can start these again.
- Occasionally communications from AUSA and school newsletters do detail sustainable healthcare topics.

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 a 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.



University of Birmingham Medical School

Overall

C-

Planetary Health Curriculum

D-

- The Medical School has given an opportunity to study planetary health in the student selected component however the core curriculum is currently greatly lacking in planetary health content.
- Further efforts need to be made to include planetary health in the learning objectives, lectures, and small group teaching sessions. One way planetary health could be easily integrated is in the Medicine in Society modules in years one and two. In addition, we feel that almost every lecture could easily include one line about the environment and how it impacts a certain health condition.
- It has been noted that the curriculum at Birmingham is currently being redesigned and planetary health is being made a topic that will be covered in the future.

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, particularly 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, especially as there is 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, however currently there is not much direct involvement of faculty members.
- There are intentions to start a "Student Sustainability Champion" Scheme to increase student and staff combined involvement in incorporating planetary health in the curricula across colleges.

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 goal realised by 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.



2021-2022 Summary Report United Kingdom

University of Bristol

Overall

C

Planetary Health Curriculum

C

- After the administration of the new sustainability lead, who has introduced more lectures and sessions on climate change, there has been more planetary health in the curriculum.
- **Recommendations:** Teaching could be extended to cover how climate change disproportionately affects communities like homeless people and about healthcare generated waste. Furthermore, there currently isn't teaching about how to have conversations with patients about climate change, taking an environmental history and how it can affect their health, this could be integrated e.g., into a respiratory teaching and explaining to a patient how pollution can affect asthma. Information about how social prescribing is better for the environment could easily be integrated into current teaching.

Interdisciplinary Research in Health and the Environment

C

- The Cabot Institute and the Elizabeth Blackwell Institute for research are the main drivers of Planetary Health research within the University.
- **Recommendations:** The University of Bristol could start a conference to do with planetary health and encourage the advent of faculty members whose primary focus is planetary health research.

Community Outreach and Advocacy

F+

- University of Bristol has some opportunities for sustainability volunteering for students and some courses for the community, but the medical school wasn't directly involved.
- **Recommendations:** Provide regular updates about sustainability to the medical school via the Sustainability Champion. Develop an SCC for students to complete leaflets about planetary health for patients.

Support for Student-Led Initiatives

B-

- The Green Apple Fund and the Inspire Research Funding provide opportunities for students to conduct planetary health research and conduct improvements. Student Societies e.g., Students for Global Health run events to do with planetary health.
- **Recommendations:** Develop sustainable research opportunities for students and include these on an easily accessible web page.

Sustainability

C+

- The university has good sustainability to do with campus food including meat Free Mondays and discouraging disposable cups by adding an extra charge. The University became divested from fossil fuels in 2020.
- **Recommendations:** Publish actionable plans to become carbon neutral and increase renewable energy usage.



2021-2022 Summary Report
United Kingdom

University of Buckingham

Overall

D

Planetary Health Curriculum

D+

- The University of Buckingham Medical School (UBMS) has yet to include Planetary Health (PH) as a standalone entity within the curriculum, however it is incorporated within various modules such as respiratory, infectious disease and gastrointestinal system. In addition, PH has been incorporated in the Global Health student selected component (SSC), as well as in the extreme medicine SSC.

Interdisciplinary Research in Health and the Environment

F

- UBMS has scored poorly in the interdisciplinary research category as there are many areas that need improving, however the University's small size impacts its ability for this research. However, there are current efforts to establish a public information forum to inform students, as well as faculty staff members regarding PH and climate change. In addition, UBMS is a member of the Global Consortium on Climate Health Education.

Community Outreach and Advocacy

D-

- UBMS sometimes includes sustainable healthcare topics within newsletter and social media posts, increasing the prevalence in their online presence. There are accessible resources for some of the affiliated hospitals and GP practices for patients, as well as students to access.

Support for Student-led Initiatives

D

- Students at UBMS are encouraged and supported when taking part in projects such as QI projects and audits. UBMS informs all students about research opportunities and students are encouraged to take on research in planetary health. PH was incorporated in co-curricular Global health and extreme medicine SSC modules.

Sustainability

F+

- New buildings on campus are sustainably built however older buildings have not been retrofitted. UBMS has a committee that incorporates sustainability into their function. In addition there are departmental recycling initiatives. An entire module spanning 18 months in the early years of the course, known as Narrative medicine, has been changed from face to face to online/over the phone consultations, in part to be more environmentally friendly. Although UBMS has a few initiatives and has made environmentally friendly decisions in some aspects, overall it scored poorly in the benchmarking in regard to campus sustainability.



2021-2022 Summary Report
United Kingdom

University of Cambridge

Overall

C-

Planetary Health Curriculum

C+

- The University of Cambridge does include planetary health content in the curriculum, but it severely lacks integration across the course and multiple important topics lack substantive engagement (such as cardiovascular health impacts, infectious disease spread changes, the impact of climate change on nutrition).
- **Recommendations:**
 - Planetary health could be integrated across the whole curriculum beyond the Improving Health lectures.
 - The School of Clinical Medicine could employ a member of faculty to specifically oversee and take responsibility for the incorporation of planetary health and sustainable healthcare throughout the course.
 - 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 in GP. There could be more student-selected projects relevant to planetary health.

Interdisciplinary Research in Health and the Environment

D-

- This year the School of Clinical Medicine joined the Global Consortium on Climate and Health Education.
- **Recommendations:** The School of Clinical Medicine could set up a resource for students to contact academics to source projects on planetary health, work more closely with the Global Consortium on events and contributions, and organise a conference directly related to Planetary Health.

Community Outreach and Advocacy

F

- Some student societies such as Cambridge University Science and Policy Exchange (CUSPE) do exist which allow for community outreach and advocacy work in partnership with the local government.
- **Recommendations:** The School of Clinical Medicine could consider partnering with local organisations to run outreach programs on environmental health harms. Opportunities for students to get involved in such work could also be made.

Support for Student-Led Initiatives

C-

- The Living Lab, part of the wider University, has opportunities for student-led projects. However, the School of Clinical Medicine has a student representative on its Climate Change and Sustainability Working Group.
- **Recommendations:** The medical school could introduce and advertise student-selected projects on sustainability/quality improvement and liaise with the relevant research groups from across the University to ensure the projects can happen.

Sustainability

B-

- The School of Clinical Medicine makes efforts to retrofit buildings and all new buildings are in line with sustainable building codes. Green lab initiatives are also taken up by many of the research institutes under the School of Clinical Medicine.
- **Recommendations:** Compost bins should be made widely available for staff and students to use. Event guidelines on sustainability should be enforced if possible.



2021-2022 Summary Report
United Kingdom

University of Exeter

Overall

B

Planetary Health Curriculum

B

- The medical school has actively engaged in the need for improved planetary health content. The inclusion of a study unit in the second year titled 'Global Planetary Health' in the core curriculum ensures Exeter medical students have a strong grounding in the significance of planetary health.
- The establishment of the Planetary Health Thematic Forum which includes senior management is working hard to guide the medical school to continue making improvements. It also encompasses other degree programmes in the College of Medicine and Health (Nursing, Medical Sciences, Medical Imaging).
- There is still room for improvement in terms of the longitudinal inclusion of planetary health and sustainability. The inclusion of clear learning objectives in relevant lectures such as respiratory medicine or diet and nutrition could provide formal opportunities to educate students on the complexity of climate change and human health.

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.
- 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

C+

- The Public Engagement in Medical Education (PIME) group at Exeter is well established, and now has two members with interests in sustainability and planetary health.
- There are limited patient and community-facing educational resources but this provides an opportunity for a student-led quality improvement project.

Support for Student-Led Initiatives

B

- 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. Two societies exist at the University that run events for medical students touching on topics such as planetary health and environmental factors.
- Year 3 students are required to undertake an 'Improving Healthcare' project including a business proposal. This provides an opportunity to encourage students to consider the sustainability of quality improvement projects.

Sustainability

A-

- The University of Exeter has declared a Climate Emergency and has published a working paper outlining their roadmap to completely net-zero by 2050.
- There is an established Sustainability Office, but no paid member specifically for the medical school.



2021-2022 Summary Report
United Kingdom

University of Glasgow

Overall

C

Planetary Health Curriculum

C-

- Education on planetary health is largely reliant on electives.
- Students have nonetheless benefitted from two additional lectures on planetary health this year in the core curriculum and there are plans to appoint a “Global and Planetary Health” Vertical Theme lead.
- **Recommendations:** Include the health effects of climate change in relevant lectures throughout the curriculum and strategies to make the NHS more sustainable, with using local examples relevant to Glasgow.
- For clinical years, reiterate the importance of sustainable healthcare, and introduce teaching on how to have conversations with patients about the health effects of climate change.

Interdisciplinary Research in Health and the Environment

B

- The Centre for Sustainable Solutions (CSS) continues to provide a hub for climate innovation, with an interdisciplinary research group and many conferences, events and courses around sustainability.
- **Recommendations:** The medical school should further engage with the Centre, developing more research projects around planetary health, as well as hosting events, accessible to the public, on the topic.

Community Outreach and Advocacy

D+

- Medical School community outreach programmes are not focussed on planetary health. The CSS, however, partners with various communities to co-produce sustainable solutions, with health co-benefits.
- **Recommendations:** The Medical School could more actively participate in projects already in place at the University (GALLANT, “Sustainable Glasgow”, “Climate Ready Clyde”) and build connections with other environmental justice groups in Glasgow (eg Docs not Cops, Medact).
- They could also encourage affiliated medical centres and hospitals to educate patients around the health effects of climate change and environmental toxins, by providing resources and pamphlets, for example.

Support for Student-led Initiatives

C

- This year has seen more student-led, sustainability-focussed events than ever. Many of these are intersectional and interdisciplinary, with planetary health not being the main focus but nonetheless included. While the university is largely supportive of these initiatives, efforts are predominately “bottom-up”
- **Recommendations:** Funding for planetary health initiatives and QI projects would be greatly welcomed. More attainably, the medical school could develop a webpage centralising information around PH.

Sustainability

B-

- Given that most decisions are run centrally by the University, the medical school has little control over campus sustainability measures. Nonetheless, given the considerable impacts of climate change on health, the medical school should advocate for increased sustainability measures (divestment from fossil fuels).
- **Recommendations:** The medical school should engage with the CSS S-Lab initiative. They should also create a set of sustainability guidelines for their events and better promote active travel.



2021-2022 Summary Report United Kingdom

University of Leeds

Overall

C

Planetary Health Curriculum

C+

- The University of Leeds has made some provision to include planetary health (PH) teachings introduced in 2021/2022 curriculum. The core principles of PH teachings are taught however, still lacks teachings on intersectionalities of climate change, how doctors can communicate PH to patients etc. possibly due to the lack of time available in this short module. This new module also currently has minimal outreach amongst clinical years.
- **Recommendations:** There are currently plans for students to get involved in becoming PH advocates for each core body system within the faculty. Having a particular sustainable healthcare lead who's able to map the curriculum and help clinicians include planetary health in the general curriculum would be helpful. Supporting student initiatives and ensuring that every student is Carbon Literacy trained can help expose PH to those who did not undertake the module.

Interdisciplinary Research in Health and the Environment

D-

- The wider University has a strong research commitment where they encourage students to highlight their sustainable research/projects e.g. annual sustainability research conference e.g. Leeds Healthcare Students for Climate Action (HeSCA) initiative was awarded highly commendable for delivering first Carbon Literacy Training for Healthcare students 2021.
- **Recommendations:** Leeds Medical School could organise a conference directly related to Planetary Health or support student-led initiatives through funding, expertise etc. They could also join the Planetary Health Alliance and the Global Consortium on Climate and Health Education, to be more informed around the topic and also add PH section into newsletters to help staff and students engage more into this. There could also be more PH research projects promoted for students.

Community Outreach and Advocacy

C

- The medical school, in general, are invested in community outreach e.g. working with patient care community to improve patient safety however lacks initiatives focussed on PH. HeSCA have organised several community outreach events such as tree planting and litter picking but lacked engagement from central staff to help promote and engage in these projects.
- **Recommendations:** Work with student-led initiatives to help promote their events amongst both students and staff to increase reach and accessibility. The central university's sustainability team to liaise with the medical school to promote sustainable activities.

Support for Student-led Initiatives

C-

- There is a society, Leeds HeSCA dedicated to advocating for planetary health in all healthcare departments in Leeds. The staff at the medical school has been fairly receptive to our ideas but most of the support we've received is based off of University-wide initiatives (funding from the LUU etc.).
- **Recommendations:** Support for student-led initiatives mostly comes from the wider University rather than the Medical School. It would be helpful to have a dedicated to implementing PH staff, who can work with HeSCA to help support their initiatives.



2021-2022 Summary Report
United Kingdom

University of Leeds (Continued)

Sustainability

C+

- Leeds Medical School has made good progress in improving sustainability on campus through hiring a 'Sustainability Architect' for the faculty and many infrastructures have been made more sustainable in line with the central universities sustainability goals. However, some aspects of the medical school e.g. travel to placements are not included in the universities sustainability plan.
- **Recommendations:** The medical school and university have not declared a climate emergency and there are no clear goals and plans set in place in terms of sustainability in the medical school.

Expanded score explanations can be found at phreportcard.org.



University of Leicester

Overall

C-

Planetary Health Curriculum

D-

- The University of Leicester briefly mentions planetary health (PH) in the curriculum, but lacks longitudinal integration. In the first and second years, PH is discussed during population sciences, respiratory and reproduction lectures, and history taking workshops.
- **Recommendations:** Specific teaching on the impacts of climate change on health and the impacts of healthcare on the climate should be added. Teaching on the impacts of extreme weather events on health should be covered. Teaching during practical history-taking sessions should cover taking a focussed pollutant exposure history and cover the environmental impact of metered dose inhalers. The relationship between mental health and the neuropsychological effects of environmental degradation should be addressed. The Health Enhancement Programme should include the environmental/health benefits of a plant based diet.

Interdisciplinary Research in Health and the Environment

C

- There is a dedicated Centre of Environmental Health and Sustainability for interdisciplinary research but research is not directly aimed at medical students nor is it conducted by medical faculty.
- **Recommendations:** The Leicester Medical School could organise a conference directly related to Sustainable healthcare which could be hosted by members of the medical faculty interested in planetary health. They could also join the Planetary Health Alliance and the Global Consortium on Climate and Health Education and foster more partnerships with the Centre of Environmental Health and Sustainability.

Community Outreach and Advocacy

F

- Other than University initiatives, there is little PH community outreach by the medical school.
- **Recommendations:** More community PH projects and research. A medical school website page featuring sustainable healthcare communications. Post-graduate courses on PH and/or sustainable healthcare.

Support for Student-led Initiatives

B

- The University of Leicester and the Medical School support student planetary health groups. More opportunities, such as research projects and medical school sponsored grants could be offered.
- Sustainable Medicine, a medical society, receives Student Union funding but there other institutional PH societies like 'Plan - it change' and 'Students for Global Health.'
- **Recommendations:** The medical school could create opportunities for students to participate in co-curricular planetary health programs through SSCs, volunteering programs and seminars run by faculty.

Sustainability

B-

- The University of Leicester Medical school has made good progress in becoming a sustainable campus including fossil fuel divestment, using fully renewable energy on site, and setting carbon neutrality goals. The Medical School building is also the largest PassiveHaus, built to minimise the school's carbon footprint.
- **Recommendations:** Educate students and staff on ways to maximise usage of PassiveHaus building in order to maximise efficiency. Compost bins and sustainable event guidelines should be implemented.



2021-2022 Summary Report
United Kingdom

University of Liverpool

Overall

C

Planetary Health Curriculum

B

- The medical school curriculum briefly touches upon the links between planetary health and individual health, however most topics lack appropriate knowledge and depth. In year 3 lectures highlight the waste generated by the NHS and ways to tackle the environmental burden, and longitudinal education in CCP (communications) for eliciting thorough social and environmental histories exist. Introducing conversations of climate change and health would make a worthy addition to CCP training (perhaps in later years). The significance of topics is diminished however when PH/ESH are signposted with an image or often skip lecture slides however. There are also few opportunities for students to undertake elective learning in this area, however as discussed a base of researchers is being collated.
- There is a joint hope that after connecting meaningfully with the interdisciplinary Climate Futures theme, alongside getting Global Health and Medical Education experts involved in the creation of the course, the Education for Sustainable Healthcare (ESH) as well as improvements in planetary health education in the core curriculum will be present in the following academic years.

Interdisciplinary Research in Health and the Environment

C

- The school has been making efforts this year to increase the coverage of PH and Sustainability in research and create a strong foundation of PH research, and has been approached by The LUHFT Clinical Sustainability Group, building a base of researchers interested in PH and Sustainability. Furthermore, the wider institution has been developing a Climate Futures theme to centralise all researchers in this area across the university, thus creating an interdisciplinary network. However, this is rather disjointed from the medical school at present and the students are somewhat disconnected from the researchers alongside experts in GH and PH. Additionally, methods to encourage marginalised populations to be involved are still in the ideation stage of development. The medical school is also not currently part of wider organisations such as the PHA or GCCHE.

Community Outreach and Advocacy

C

- Many affiliated hospitals have readily accessible patient information on environmental exposures and infectious diseases, although few provide information on the much broader topic of climate change and its effects. Regarding the school itself, whilst global health and sustainability updates are sometimes included on email communications, these are not regular and often dependent on student society events rather than information from the school or institution. We recommend increased communications either weekly or monthly, perhaps with a dedicated PH/sustainability section to include relative society events, external links and resources, and relevant news to engage and encourage students and staff. The school should also think about forming links and partnerships with relevant organisations to offer events, and to increase the number of specific CPD courses and elective courses.



2021-2022 Summary Report
United Kingdom

University of Liverpool (Continued)

Support for Student-led Initiatives

C-

- The support provided for Student-Led initiatives is encouraging, with efforts being made to increase the number of projects available for students to undertake research. A student staff relationship has been established with the working group being created this year, meeting every 6-8 weeks, to encourage and support student participation with sustainable issues. The lack of funding for student-led initiatives is the main weakness for this section, however there are plans for funding/prizes to be introduced for the coming academic year.

Sustainability

C+

- Overall, general campus sustainability is promising. There are currently many strategies to further develop the sustainability of the medical school and begin to make conscious decisions as an institution regarding sustainability. Strengths of both the school and institution are that staff and working groups are dedicated to make plans for sustainability in the university and achieve net zero, sustainable building plans and divestment from fossil fuels. Weaknesses are due to current ideas not being implemented yet, e.g. buildings are not retrofitted with sustainable materials but plans do exist for this. Sustainable travel and the recycling/ composting programmes are not promoted enough. Food and beverage, procurement, events and lab spaces have no requirement to be sustainable.

Expanded score explanations can be found at phreportcard.org.



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, seminars and 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.

Interdisciplinary Research in Health and the Environment

B-

- 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:** The Medical School could organise a conference directly related to Planetary Health (PH), join a PH organisation like the Planetary Health Alliance or the Global Consortium on Climate and Health Education, or set up a website for 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', but no similar option in the 2b Social Accountability SSC. Sheffield Teaching Hospitals do have some accessible educational materials for patients.
- **Recommendations:** The Medical School could look to engage in professional education activities for post graduation individuals, to ensure their knowledge and skills in PH and sustainable healthcare remain up to date.

Support for Student-led Initiatives

B-

- 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 is mostly from the wider University before the Medical School. To increase the support offered to students interested in sustainable initiatives, we recommend creating a website advertising mentors or opportunities related to PH or ESH, and prioritising grants for related research.

Sustainability

C+

- The Medical school has made good progress towards a more sustainable campus with the wider University by: divesting from fossil fuels, using fully renewable energy on site, and setting achievable carbon neutrality goals.
- **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.



Albert Einstein College of Medicine

Overall

D+

Planetary Health Curriculum

C

- While Einstein includes planetary health (PH) topics in its curriculum, they are mainly covered in a standalone overview lecture in the Health Systems and Health Equity course with little integration in systems courses, though environmental contributions to respiratory health are discussed in the pulmonary course.
- **Recommendations:** Students can be taught to discuss the health effects of climate change with patients and take an environmental history, best suited to the Communication Skills Module of the Introduction to Clinical Medicine course. Topics covered in the Health Systems and Health Equity course should be expanded to provide more in-depth coverage. Greater integration into the system courses is also essential.

Interdisciplinary Research in Health and the Environment

D-

- There are some researchers primarily engaged in PH research. However, no department for interdisciplinary research exists and there is no institutional website consolidating information about health and the environment.
- **Recommendations:** 1) Development of an institutional website including information about resources and research relating to PH. 2) Einstein could hold a conference related to PH. 3) Consider joining a national or international PH organization. 4) Consider implementing a process in which community members impacted by environmental injustice can provide input regarding the environmental research agenda.

Community Outreach and Advocacy

D

- Einstein's affiliated hospitals have educational materials about environmental health exposures. A student group on campus partners with a community organization to promote environmental health.
- **Recommendations:** More community partnerships in PH should be established. Einstein or affiliated hospitals should also develop educational materials about the health effects of climate change. Einstein should consider offering PH events for the community or PH courses for post-graduate providers, as well as regularly communicate with students about efforts and updates regarding PH and sustainable healthcare.

Support for Student-led Initiatives

C

- Einstein Sustainability Club is dedicated to PH and sustainability in healthcare and has faculty support. There are a variety of other PH programs, such as gardens, community supported agriculture, speaker series for students, and wilderness programs for students. There is also a fellowship opportunity related to PH research.
- **Recommendations:** Information regarding research, projects, and mentors relating to PH or sustainable healthcare should be added to the Office of Energy and Sustainability website or a new website created.

Sustainability

D

- Einstein offers and promotes lower-carbon transportation options and has robust recycling programs.
- **Recommendations:** We recommend that Einstein divest from fossil fuels and state a CO₂ emission target, specifically a carbon neutrality goal by 2040. Moreover, sustainability guidelines should be established for events, food purchases, and laboratory spaces. Recycling should be expanded and composting introduced.



2021-2022 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 impacts of environmental health on patients in the setting of asthma and other cardiopulmonary illnesses. The School of Public Health, which is located on the BU Medical Campus, has a robust offering of environmental health and sustainability courses.
- **Recommendation:** 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 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 and frequent symposia regarding topics in planetary health.
- **Recommendation:** 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.
- **Recommendations:** BUSM can leverage their community based environmental partnerships to support student engagement. Because of its vast community network 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.

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 or research have appropriate avenues to do so. The creation of a Medical Campus Sustainability Intern role has further strengthened partnerships between the medical campus and the BU Office of Sustainability this year.

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. Major successes of the past year have included a commitment to divest from fossil fuels and new procurement guidelines that focus on sustainable purchasing.
- **Recommendations:** BU can continue to create, implement and enforce guidelines for sustainability for our student groups and food vendors on campus to reduce associated catering and event waste.



Brown University

Overall

C

Planetary Health Curriculum

C+

- While the core curriculum at Brown includes a range of planetary health content, these topics are usually briefly mentioned. The curriculum also has no clearly defined longitudinal objectives regarding planetary health.
- **Recommendations:** Brown has made progress in its curriculum and should aim to longitudinally integrate the health and environmental impacts of climate change in its curriculum as well as challenge students to think critically and act on issues of planetary health and injustice. The importance of the subject should be emphasized and connected to not just social medicine but also to scientific and clinical based knowledge.

Interdisciplinary Research in Health and the Environment

C-

- Alpert Medical School (AMS) has several faculty focused on planetary health research. The Ruth Sauber Medical Education Fund for Planetary Health allows for students to pursue research in this field. The medical school does not have a department supporting environmental research or mechanisms for community input.
- **Recommendations:** AMS can better support planetary health research by increasing collaboration with the Institute at Brown for Environment & Society, the School of Public Health, and the Office of Sustainability.

Community Outreach and Advocacy

F

- AMS has made no significant progress in planetary health community outreach and advocacy this year, despite opportunities for meaningful change and advocacy at the state and local level. Previous lecture series have not been continued despite ongoing relevance. This is an area in which AMS should be doing more.
- **Recommendations:** There are several successful student outreach initiatives focused on sexual health, social justice, and housing advocacy which could serve as models for student outreach. AMS ECo should reach out to RI organizations including Sunrise Providence which have been successful community partners in the past.

Support for Student-Led Initiatives

C

- Support for student-led initiatives is strong at AMS, but organization and action of student groups has been disrupted in various ways due to the COVID-19 pandemic. Student-led initiatives surrounding planetary health can be small and are often isolated from one another.
- **Recommendations:** Student-led groups should collaborate in pursuit of larger goals regarding curriculum implementation, promotion of interdisciplinary research on planetary health, and work with the larger Brown planetary health community. Involving Brown's Program in Liberal Medical Education students in medical school activities would be helpful in generating sustained momentum for student initiatives.

Sustainability

C+

- Brown University continues to progress towards its goal of carbon neutrality by 2040, with its three solar plants on track to open in March of 2022. AMS remains disconnected from the Office of Sustainability.
- **Recommendations:** In addition to reducing emissions through carbon offset, the university should continue to promote increased renewable energy generation throughout New England as AMS receives all its power from the ISO-NE grid. AMS should form closer ties with the undergraduate campus and its resources.



2021-2022 Summary Report United States

Columbia University

Overall

C+

Planetary Health Curriculum

C

- Integration of planetary health topics into the medical school core curriculum is limited, but expanding. The medical school has hired new faculty committed to climate health in the past year.
- **Recommendations:** VP&S should continue to expand planetary health topics in its curriculum. Areas of implementation may include Public Health Commute lecture slides; Foundations of Clinical Medicine course; and The Body: In Health and Disease course.

Interdisciplinary Research in Health and the Environment

A

- Columbia University has several strong interdisciplinary research efforts, including the Earth Institute and the new Climate School. 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 more well integrated into the network of interdisciplinary resources and should make these resources more readily available to medical students.
- **Recommendations:** 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.
- **Recommendations:** The medical school should seek to develop stronger collaborations with community organizations and involve students in these efforts.

Support for Student-led Initiatives

B

- The administration is supportive of and enthusiastic about student efforts. Recent improvements include a centralized list for potential collaborators in planetary health and a new student chapter of Medical Students for a Sustainable Future.
- **Recommendations:** Dedicated student funding for environmental health funding would be an area for growth.

Sustainability

C+

- Columbia University has taken concrete steps towards sustainability, with particular strengths including transportation, renewable energy, commitment to building new buildings up to LEED standards, and committing to carbon neutrality.
- **Recommendations:** The medical school can make composting available on its campus.



Creighton University

Overall

C

Planetary Health Curriculum

C-

- Creighton School of Medicine (SOM) established a Planetary Health & Sustainability Horizontally Integrated Discipline in 2021. This track is intended to provide longitudinal education on Planetary Health (PH) and Sustainability, but apart from one intro lecture, few PH objectives have been introduced into preclinical blocks.
- The SOM can continue to improve by ensuring that PH topics are integrated into all curricular tracks as well as clerkship years. These efforts will promote longitudinal learning and the development of physicians aware of the pathophysiology as well as social processes implicated in PH.

Interdisciplinary Research in Health and the Environment

C+

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

Community Outreach and Advocacy

C-

- The University partners with local organizations to promote PH. However, the SOM is not engaged directly in these relationships. The SOM is in the process of developing a process for engagement with the community when determining advocacy, research, and community partnership priorities.
- Creighton can advocate for its hospital affiliates to offer patients accessible materials on the health impacts of climate change, such as education on the symptoms of heat stroke during severe heat waves.

Support for Student-led Initiatives

B

- The SOM created a Planetary Health and Sustainability Task Force (TF) in response to the 2020 PHRC. The TF houses a branch for student-initiated PH projects. Overall, the SOM has avenues for support and funds. Lack of awareness of programs and few PH-focused faculty mentors are limiting factors to sustainability initiatives.
- Institutional attention on PH and the publication of efforts on online platforms would improve engagement.

Sustainability

D

- Creighton's Office of Sustainability is leading slow but deliberate movement toward Creighton's sustainability goals – notably, plans for full divestment by 2030 and a path for carbon neutrality.
- Urgently, there is a need for more rigorous sustainable building practices, particularly in the building of the new medical school.
- The SOM lacks basic sustainability practices seen in other parts of the university, such as composting. The SOM can improve by reconciling these differences and developing its own rigorous sustainability standards.



Emory University

Overall

A

Planetary Health Curriculum

A-

- Emory University School of Medicine is in its second year of implementing a climate change & health curriculum for pre-clinical students, with learning points across lectures and small group sessions. The climate curriculum team has built on the first cohort's success to address gaps in climate & health learning. Emory approved another proposal in January 2022 that formalizes the effort to extend climate learning through all four years of medical school.
- **Recommendations:** Curriculum development will continue with an emphasis on co-creation and content integration. Future opportunities include the standardized patient curriculum, didactic teaching in the M3 clerkship year, and courses highlighting sustainable healthcare delivery.

Interdisciplinary Research in Health and the Environment

A+

- Interdisciplinary collaboration across graduate and undergraduate programs is central to Emory University's vision. Climate health and sustainability funding can be found through the Woodruff Health Sciences Center, notably the Synergy Research Award. HERCULES and the Urban Health Initiative both leverage local community participation to direct community-guided research.
- **Recommendations:** The School of Medicine could more visibly promote existing clinical sustainability efforts and also encourage participation of medical school faculty and students in interprofessional sustainability initiatives.

Community Outreach and Advocacy

A

- The new CME course, "Climate Crisis and Clinical Medicine" and the SOM Climate & Health Curriculum have bolstered climate education and awareness within the medical community. Emory maintains a "Climate Talks" series and introduced a podcast, "AmpliFIRE: Raising Voices Against Rising Temperatures." The Hercules Exposome Research Center and the Pediatric Environmental Health Specialty Unit also contain online community resources.
- **Recommendations:** Students and faculty should work to improve the distribution of educational materials pertaining to environmental exposures, associated health impacts and climate change across all affiliated hospitals and clinics.

Support for Student-Led Initiatives

A+

- Emory University's Office of Sustainability Initiatives (OSI) offers sustainability and social justice grants to students annually. Students are also supported in volunteer community engagement programs across Atlanta.
- **Recommendations:** We advise Emory to dedicate funding to student-led, hospital-based sustainability initiatives, starting by matching OSI initiatives. In addition, we recommend our research website designate a specific tab to mentors involved in PH related research.

Sustainability

B+

- Emory University has cultivated widespread acceptance of sustainability on campus, including at the medical school. Emory ranked #6 for top green colleges in 2022 according to the Princeton Review, and is aiming for 50% energy reduction per square foot for Emory College and 25% for Emory Healthcare by 2025.
- **Recommendations:** Emory's greatest challenge resides in clean energy sourcing. Emory plans to self-generate 10% of its energy by 2025 and we recommend that Emory enlists the support of major backers such as Emory Healthcare for investment in these initiatives to reduce and diversify energy usage.



2021-2022 Summary Report United States

Geisel School of Medicine at Dartmouth

Overall

C-

Planetary Health Curriculum

D+

- Planetary health (PH) is inadequately covered in the core curriculum, but efforts are being made to incorporate it. Electives focused on planetary health have been proposed at Geisel, which is an exciting development.
- **Recommendations:** Topic areas where planetary health could be incorporated are noted in the score explanations. Discussing aspects of planetary health with patients should be added to the On Doctoring Curriculum. PH connections should be added to core course objectives.

Interdisciplinary Research in Health and the Environment

C

- 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, or climate change modeling) is led by independent researchers in various departments and is not centralized or easily accessible.
- **Recommendations:** 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

D-

- Healthcare sustainability is not transparent within the medical school or at our affiliated hospitals, but the MS4SF chapter at Geisel is working to expand connections within sustainability across the campus. We are also planning an Earth Day Celebration to bridge the gap between climate change and health in our community.
- **Recommendations:** Continued administrative support of student involvement in healthcare sustainability efforts and direct partnership with community organizations such as NH Healthcare Workers for Climate Action to further educate about planetary health within the Dartmouth community is needed.

Support for Student-Led Initiatives

B

- 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.
- **Recommendations:** The medical school administration could further support student initiatives by ensuring medical students are aware of existing opportunities and developing a student fellowship 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.
- **Recommendations:** Geisel could benefit from enhanced communication with the Sustainability Office to increase green practices including sustainable purchasing, transportation initiatives, laboratory sustainability, and waste management.



2021-2022 Summary Report United States

Georgetown University

Overall

C+

Planetary Health Curriculum

C

- The Georgetown University School of Medicine (GUSOM) includes certain Environmental Sustainable Health Topics throughout the pre-clinical blocks in certain lectures.
- **Recommendations:** GUSOM should emphasize the importance of adding an environmental health history through the students' Clinical Skills workshops.

Interdisciplinary Research in Health and the Environment

B-

- Current Georgetown faculty and students have produced environmental-focused research, through the Georgetown Environment Initiative, Global Health Initiative, and Climate Center.
- **Recommendations:** In addition to joining the Planetary Health Alliance, GUSOM should build a more transparent method for those who have been disproportionately affected by climate change to drive environmental research at the institution.

Community Outreach and Advocacy

C

- GUSOM and MedStar Georgetown Hospital have community partnerships that enable students to volunteer their time in creating healthier and environmentally sustainable projects.
- **Recommendations:** There should be a continuing medical education (CME) course that enables 4th years or GUSOM alumni to learn about the dynamic global effects of climate change.

Support for Student-led Initiatives

B

- The School of Medicine has a Climate Health and Medical Sustainability Group that is allowed input into adding environmental sustainable topics in the pre-clinical curriculum.
- **Recommendations:** Each incoming class of the medical school should have an environmental sustainability representative that can be a liaison between university protocols and student-led environmental curriculum improvement, research opportunities, and sustainable practices.

Sustainability

B-

- GUSOM has done much to curb CO2 emissions, make Georgetown a bike-friendly campus, and build new eco-construction.
- The university has pledged to achieve carbon neutrality by 2030.
- **Recommendations:** The medical school should publish guidelines regarding utilizing environmentally sustainable practices when hosting events. These include eliminating single use plastics and using recyclable plates and cutlery.



2021-2022 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. Improvements have been made to Fundamentals of Health and Disease, an MS1 course, to make more explicit connections between climate change and human health.
- **Recommendations:** Planetary Health connections in the curriculum should be made more explicit, with more dedicated time. The medical school should identify Planetary Health 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 became a member of the Global Consortium on Climate and Health Education in January 2022.
- 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.
- **Recommendations:** The medical school should provide funded planetary health research opportunities for students.

Community Outreach and Advocacy

D-

- 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.
- **Recommendations:** 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

- The Medical Student Council approved the IUSM chapter of Medical Students for a Sustainable Future in February 2022.
- **Recommendations:** 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.
- **Recommendations:** 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.



Loyola University Chicago Stritch School of Medicine

Overall

C-

Planetary Health Curriculum

D+

- LUC Stritch School of Medicine (SSOM) has made improvements this year with the initiation of a for-credit elective focused on planetary health. There are several standalone lectures in the preclinical curriculum that address topics related to climate change and health, but no longitudinal integration.
- **Recommendations:** Topics of planetary health should be incorporated into the core curriculum more substantially, and such material should be included in learning objectives and test questions. The Patient Centered Medicine courses could instruct students on how to counsel patients regarding climate change health effects in clinical encounters.

Interdisciplinary Research in Health and the Environment

C-

- Loyola's Public Health and School for Environmental Sustainability programs may have many climate related research opportunities, but these projects are not made available for students in the medical school. The medical school itself offers no research opportunities specifically concerning planetary health or sustainability.
- **Recommendations:** Loyola SSOM could work closely with other Loyola graduate schools to facilitate interdisciplinary opportunities. The medical school could also join the Planetary Health Alliance and the Global Consortium on Climate and Health Education.

Community Outreach and Advocacy

D+

- Loyola SSOM is involved with very few community-focused environmental justice programs and opportunities for community engagement.
- **Recommendations:** The Center for Community and Global Health could partner with the Group for Environmental Medicine and Sustainability (GEMS) student organization and students in the School of Environmental Sustainability and Public Health programs to initiate more community outreach events regarding planetary health and environmental issues in our surrounding community. We should establish a working relationship with Loyola Medicine and Trinity Health to provide climate health related education material to patients.

Support for Student-led Initiatives

D

- Overall, the administration has been supportive of student led initiatives to bring broader awareness to planetary health. The school was very supportive in helping the student organization GEMS initiate a for-credit elective focusing on planetary health within the institution.
- **Recommendations:** We recommend Stritch continue this support to increase student opportunities for planetary health projects, research, and outreach, including grant opportunities or a student fellowship program. This could also be done with improved collaboration across other graduate schools and programs currently doing work related to planetary health.

Sustainability

B

- Loyola University as a whole has made impressive progress in regards to institutional sustainability. We hope we can build on these advancements within the medical school to meet sustainability goals and lessen the healthcare sector's impact on the climate crisis.
- **Recommendations:** There is still much to improve in regards to campus sustainability at SSOM. Goals and plans are currently in place at the medical school in regards to improving recycling and beginning composting systems. There remains improvement for waste disposal education. Furthermore, a medical student liaison could be present for all medical school campus sustainability decisions.



The Ohio State University College of Medicine

Overall

C

Planetary Health Curriculum

F

- The Ohio State University College of Medicine (OSUCOM) curriculum includes minimal planetary health but is currently undergoing major climate curriculum changes including new electives and updated lectures.
- **Recommendations:** Planetary health can be taught in lectures, e-modules, group discussions, service projects, and elective courses in M1-2 and rotation orientation lectures and 4th year electives for M3-4s.

Interdisciplinary Research in Health and the Environment

A

- OSUCOM has faculty researchers in climate health but lacks a centralized department. Two websites have climate health research information but are not directed towards medical students. OSUCOM hosted the Climate Change and Health conference in 2021 and are members of MS4SF and GCCHE.
- **Recommendations:** OSUCOM could make climate focused researchers more accessible to medical students and centralize their work on a more visible, unified website. OSUCOM should continue to support the Climate Change and Health: Implications for Clinical Practice conference as an annual effort.

Community Outreach and Advocacy

C+

- OSUCOM could improve planetary health outreach. OSUCOM helped host the publically available Climate Change and Health: Implications for Clinical Practice conference. The hospital website offers articles about climate health that are free for patients, but no climate change information is included in updates, or emphasized in community partnerships. OSUCOM does not offer CME credit planetary health courses.
- **Recommendations:** OSUCOM could establish partnerships with community organizations, include climate change relevant information in regular communications, and create internal Planetary health courses for CME credits. OSUWMC could also have more information for patients regarding climate change.

Support for Student-led Initiatives

A

- OSUCOM supports the registered student group Sustainability in Medicine (SiM), which offers extensive programming for students. SiM is an affiliate of Medical Students for a Sustainable Future. OSUCOM does not offer research opportunities or mentorship in planetary health, but will fund independent research projects. Students can join the Green Team, Interprofessional Council, and President & Provosts Council.
- **Recommendations:** OSUCOM should continue to work closely with SiM and create a climate focused website. SiM should continue to build partnerships with other student organizations. OSUCOM should institute a program for research in sustainability with projects and mentorship.

Sustainability

C+

- OSUWMC follows university goals and has a dedicated sustainability program (on [this website](#)), including: 1 Sustainability Program Manager, a Commodity Manager in supply chain, and an energy engineer.
- **Recommendations:** Although great progress has been made, much work is left to accomplish 2050 carbon neutrality. Sustainability needs to be embedded into core operational decision-making to accomplish this.



2021-2022 Summary Report
United States

Oregon Health & Science University

Overall

C

Planetary Health Curriculum

B-

- OHSU does include planetary health in the curriculum, but it is sporadic and not integrated. In first and second year, various aspects of planetary health are discussed in a few lectures. There is also some discussion of planetary health in clinical phase intersessions. There is an interprofessional education elective course called Climate Change and Human Health that is available to all OHSU students which covers planetary health in depth.
- **Recommendations:** There is a lack of consistent education on planetary health in the core curriculum. This could be integrated through a curricular thread on Planetary Health.

Interdisciplinary Research in Health and the Environment

D+

- OHSU as an institution houses the Oregon Institute for Occupational Health but this is not a part of the medical school. There are researchers at this institute, the School of Public Health, and at OHSU hospital who do planetary health research, but none that are specifically part of the medical school.
- **Recommendations:** OHSU SOM could direct resources to creating an interdisciplinary research group that focuses on planetary health research and create an associated website to centrally present their work to the public.

Community Outreach and Advocacy

D+

- OHSU SOM offers few community-facing courses or events regarding planetary health. There have been a few from the Oregon Institute of Occupational Health Sciences, a part of the larger OHSU institution.
- **Recommendations:** Create accessible educational materials for patients about environmental health exposures and the health impacts of climate change.

Support for Student-led Initiatives

C

- OHSU supports the student group OHSU Students for a Sustainable Future which is dedicated to planetary health and receives faculty leadership and student government funding.
- **Recommendations:** Create grant funding for students to lead sustainability initiatives. Provide support to connect students with planetary health research mentors.

Sustainability

C

- OHSU has made good strides towards becoming a sustainable institution and medical school by offering financial incentives to take alternative transportation to campus, providing recycling and composting services, and sourcing cafeteria food from sustainable sources. They have also responded positively to a student-lead divestment campaign and begun to partially divest from fossil fuels.
- **Recommendations:** OHSU create a structured and funded Office of Sustainability to lead efforts in establishing sustainability goals and implementing interventions to achieve those goals. Areas for improvement would be specific carbon footprint reduction goals, event sustainability guidelines, and recommendations for lab spaces on sustainable practices.



2021-2022 Summary Report United States

Rush Medical College

Overall

D

Planetary Health Curriculum

D

- Rush Medical College (RMC) of Rush University Medical Center (RUMC) sparingly includes planetary health in elective curricula. The principles of planetary health, and its co-benefits with human and community health, are not included in the core curricula provided to all students.
- **Recommendations:** Planetary health and sustainable healthcare practice topics should be added to preclinical didactic materials. We also suggest the creation of a student liaison position to represent sustainability interests to The Committee on Curriculum and Evaluation and the Student Curriculum Advisory Committee.

Interdisciplinary Research in Health and the Environment

D+

- The institution has limited faculty involved in planetary health research, with little institutional support for these efforts. There are select opportunities for students to engage in this field of research with these faculty.
- **Recommendations:** The Rush Office of Research Affairs should integrate planetary health questions into existing research workflows. We also recommend the establishment of a department within the institution dedicated to planetary health, providing resources to faculty who wish to pursue research within this field.

Community Outreach and Advocacy

D-

- RMC has multiple partnerships with community stake-holders. Students are involved in planetary health education initiatives and multiple city gardening programs. The institution is lacking accessible education materials for students, providers, and patients alike regarding planetary health.
- **Recommendations:** We recommend the addition of a centralized planetary health information center on the institution's website, focusing on environmental health exposures, the impact of climate change on human health, and sustainable healthcare practices.

Support for Student-led Initiatives

B-

- RMC supports student planetary health endeavors through the Office of Student Life and Engagement. Rush Students for Social Responsibility was established in 2020.
- **Recommendations:** RMC could further support student initiatives via the addition of planetary health-focused awards and research opportunities. We also suggest the creation of a student liaison position to represent sustainability interests on the Rush University Student Council.

Sustainability

D+

- The institution's Office of Sustainability has established environmentally-conscious transportation options, and laid the groundwork for campus-wide recycling and compost programs. Current goals include reducing the institution's CO2 emissions and developing sustainable food and beverage guidelines.
- **Recommendations:** We recommend the addition of institution-wide sustainability guidelines for laboratory spaces and event planning.



2021-2022 Summary Report United States

Tufts University

Overall

D+

Planetary Health Curriculum

D-

- Inclusion of planetary health in the Tufts School of Medicine curriculum is not prioritized nor emphasized when appropriate. In the pre-clinical years, environmental pollutants, changing disease dynamics, and sustainable diets are all mentioned but the impact of climate change and anticipated future exacerbations are not mentioned.
- **Recommendations:** Planetary health should receive its own dedicated lecture time throughout the longitudinal, content integration aspect of the curriculum, Threads. Additionally, a session on engaging patients regarding planetary health and associated health issues should be included prior to beginning rotations.

Interdisciplinary Research in Health and the Environment

B-

- Both Tufts University and The Friedman School of Nutrition have broader research emphasis on sustainability and planetary health. The Tufts University School of Medicine Maine track has some faculty who focus on these issues, but the Boston campus lacks opportunities dedicated to medical students.
- **Recommendations:** The comprehensive sustainability and planetary health programs embedded within the undergraduate and Maine campuses could be extended to the medical school, raising the profile of this research and hopefully making it more accessible to medical school students.

Community Outreach and Advocacy

F

- Tufts University School of Medicine has little community outreach relating to planetary health.
- **Recommendations:** Tufts has the solid foundation of the Community Service Learning program to build upon - a required service learning opportunity for most medical students. This presents the opportunity to develop a program tailored to planetary health and community engagement.

Support for Student-led Initiatives

B-

- Tufts University School of Medicine offers support for students if they take initiatives. There are grants available if students pursue them, select research mentors that can be sought out (primarily on the Maine campus) and funding for the sustainability club's meetings. There is also an unofficially Sustainability chair. However, many of these initiatives are purely student led and not institutionalized.
- **Recommendations:** We hope to solidify the Sustainability Chair position by making them an official member of Student Council. It's also recommended that planetary / environmental health becomes a tag for research offerings so it is easier for students to identify opportunities in this realm. Finally, we hope to find and engage official faculty sponsorship for our student club and initiatives.

Sustainability

D+

- Tufts University broadly has made great strides in progressing towards a more sustainable campus. New construction is thoughtful and Tufts has partially divested from fossil fuels.
- **Recommendations:** We hope to continue focusing on making lab spaces more sustainable and improve/introduce sustainable guidelines for events and procurement.



UC Berkeley-UCSF Joint Medical Program

Overall

A-

Planetary Health Curriculum

B

- The Joint Medical Program (JMP) does include many planetary health concepts in the curriculum, but it falls short on many topics related to the carbon footprint of the healthcare system, indigenous knowledge, impacted communities, and clinical conversations about environmental hazards. The JMP core curriculum and electives thoroughly cover health impacts of extreme weather and pollution. The case based curriculum offered in the JMP does allow for integration of many concepts of environmental health with the basic science and clinical curriculum.
- **Recommendations:** New developments to the JMP's curriculum improvement structure, such as the PBL working committee, offer opportunity for student and faculty advocacy. We recommend utilization of this setting to increase coverage of planetary health concepts, especially as they pertain to environmental justice and antiracism, within the PBL and Clinical Skills course infrastructures.

Interdisciplinary Research in Health and the Environment

A

- The JMP is housed within UC Berkeley's School of Public Health, which has multiple dedicated departments for interdisciplinary environmental research. These many departments and faculty members have historically provided mentorship and research opportunities for JMP students in pursuit of their Master's Thesis.
- **Recommendations:** The JMP specifically, rather than the School of Public Health at large, should organize a conference directly related to Planetary Health: this would also provide an important opportunity for medical student advocacy and networking within the field of environmental health.

Community Outreach and Advocacy

A

- UC Berkeley's School of Public Health has a great deal of community outreach related to planetary health within the context of research, advocacy, student groups, and volunteer work.
- **Recommendations:** Relationships with community partners related to planetary health should be built out within the JMP specifically, and sustainability updates should be implemented into the JMP's weekly newsletter.

Support for Student-led Initiatives

B

- The JMP supports student groups dedicated to planetary health, but does not provide faculty sponsorship. JMP students and student groups can receive funding for projects and events related to planetary health from the Associated Students of the University of California, the School of Public Health, the Green Initiative Fund, and the JMP. The UC Berkeley community also offers a variety of student led programming around planetary health, resilience, and advocacy.
- **Recommendations:** Support for student-led initiatives mostly comes from the wider University rather than the Medical School. We recommend the medical school offer increased support to students interested in sustainable initiatives such as a web repository of mentors and funding. Additionally, program requisites towards Quality Improvement should integrate conversations and project opportunities around planetary health.



2021-2022 Summary Report
United States

UC Berkeley-UCSF Joint Medical Program (Continued)

Sustainability

A-

- UC Berkeley and UCSF have made ambitious progress towards sustainability and carbon neutrality, including fossil fuel divestment and using fully renewable energy on site. The JMP, however, does not utilize all of the sustainability programs made available by both of these campuses.
- **Recommendations:** The JMP should make use of UC Berkeley's green event resources for community meetings. Berkeley Way West has a superior sustainability profile to University Hall; transition of classroom use to the prior should continue.

Expanded score explanations can be found at phreportcard.org.



2021-2022 Summary Report
United States

University of Arizona College of Medicine - Phoenix

Overall

C

Planetary Health Curriculum

D

- University of Arizona College of Medicine - Phoenix (UACOM-P) does include planetary health in the curriculum, but it lacks integration longitudinally. In the first and second year, various aspects of planetary health are discussed in lectures. There is also some discussion of planetary health in the first year public health elective.
- **Recommendations:** Develop a plan to incorporate planetary health topics longitudinally into the curriculum rather than in isolated lectures. Include additional topics and consider incorporating the climate change and public health lecture information from the first year public health lecture into the core curriculum.

Interdisciplinary Research in Health and the Environment

C

- UACOM-P lacks resources for planetary health research, but has extensive opportunities for collaboration with the University of Arizona Tucson campus mainly through the Mel and Enid Zuckerman College of Public Health.
- **Recommendations:** Forge connections with the Mel and Enid College of Public Health or similar UA-Tucson departments with the goal of providing more opportunity for faculty and student research engagement in planetary health focused areas on the Phoenix campus.

Community Outreach and Advocacy

C

- UACOM-P has some community outreach presence in the form of the Connect2STEM program and various student interest group events focused around culinary medicine and public health interdisciplinary events.
- **Recommendations:** Continue to foster student programs aimed at planetary health engagement, and assist local healthcare partners with public health information and messaging regarding planetary health.

Support for Student-led Initiatives

C

- UACOM-P provides extensive support for student-led initiatives as a whole through scholarly project/research support, certificate of distinction projects, and student interest group support, but provides very little direction specifically aimed at sustainability focused projects.
- **Recommendations:** Establish specific funding opportunities for student sustainability projects. Establish a student representative position within administration to support sustainability interests. Set up a publicly available web page promoting ease of access for student involvement in/education on planetary health projects.



2021-2022 Summary Report
United States

University of Arizona College of Medicine - Phoenix (Continued)

Sustainability

B-

- UACOM-P has made many positive efforts towards campus sustainability in the form of LEED energy utilization building standards, a commitment to future carbon neutrality, recycling and composting programs, public transportation options/bicycle infrastructure, and “green supply procurement”.
- **Recommendations:** Improvements could be made by advocating for institutional divestment from fossil fuels, utilizing a higher percentage of renewable energy sources on campus, allocation of staff/faculty to specifically support Phoenix campus sustainability efforts, and establishing guidelines for sustainability at medical school hosted events.

Expanded score explanations can be found at phreportcard.org.



University of Arkansas for Medical Sciences

Overall

B-

Planetary Health Curriculum

B

- Planetary health topics are addressed in preclinical modules at UAMS, and some are reinforced through core curriculum. Course content regarding PH and sustainability lacks a focus on how climate change impacts UAMS' immediate environment, Arkansas communities at large, and indigenous populations worldwide. Students and faculty are working to increase PH content integration, however, these efforts need organization and consistency.
- Recommendations:** We suggest identifying PH as a priority in the core curriculum; appointing faculty dedicated to overseeing longitudinal implementation of PH education in COM curriculum; developing course material that highlights the impact of climate change on local Arkansans and indigenous populations; and creating a senior elective on PH to provide in-depth education not achieved through core curriculum.

Interdisciplinary Research in Health and the Environment

B-

- Researchers at the UAMS COM, Translational Research Institute, and Environmental and Occupational Health department have contributed to PH research conducted at our institution. Breadth of research topics explored is lacking. Active efforts are being made to increase support for PH research, sustainability QI projects, and community-facing projects.
- Recommendations:** We suggest creating a link, within an already existing webpage, to current and past PH research projects at our institution; clearly advertising student and faculty opportunities to participate in or gain financial support for PH research or community-facing projects; and collaborating with other researchers and community-based organizations to highlight PH and healthcare sustainability projects.

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 expand opportunities across UAMS.
- Recommendations:** We suggest increasing coverage of PH issues in the UAMS monthly journal; providing easily accessible educational resources for students and patients; and partnering with communities affected by climate change to educate about environmental health threats and opportunities for student involvement.

Support for Student-led Initiatives

B

- UAMS supports student involvement in various initiatives related to PH. Students may participate in the student-led Climate and Health Interest Group, sustainability QI projects, PH research, and other activities.
- Recommendations:** We suggest establishing an honors track for students interested in pursuing in-depth, longitudinal study of PH; clearly advertising student opportunities, such as participation in research or QI projects; and providing opportunities for students to learn from local environmental advocates.

Sustainability

D

- UAMS has a goal for carbon neutrality by 2030, a dedicated office of sustainability, and recycling programs on campus. There is room for progress regarding campus sustainability.
- Recommendations:** We suggest reinstating a composting program with Organix; establishing sustainability guidelines for events hosted at UAMS; and integrating sustainability guidelines for supply procurement.



University of California San Francisco

Overall

B+

Planetary Health Curriculum

B-

- While climate health content is integrated throughout the preclinical core curriculum, these topics are sparse and limited in their depth as it is associated with only two testable learning objectives. However, there are ongoing student and faculty efforts to implement the Climate Health and Sustainability Education (CHASE) curriculum.
- We recommend more substantial discussion of and engagement with planetary health (PH) topics, such as those covered by the Inquiry Immersion Mini-Course on climate change. Additionally, clinical training could be improved by providing students with strategies on how to counsel patients affected by climate change.

Interdisciplinary Research in Health and the Environment

A+

- The EaRTH Center, Program for Reproductive Health and the Environment, the Office of Sustainability, and the Center for Climate, Health, and Equity all provide interprofessional opportunities for environmental health engagement in addition to research and funding opportunities.
- Similar to the EaRTH Center's Stakeholder Advisory Board, we encourage the broader SOM to consider institution-wide strategies for incorporating the feedback of community members disproportionately affected by climate change.

Community Outreach and Advocacy

B

- Although UCSF has the infrastructure to communicate climate change impacts on human health, neither the University nor the School of Medicine uses their platform to its full potential to advocate for the environmental health of the community.
- We recommend more engagement in community partnerships that support Planetary Health initiatives and improved communication to the student body on issues related to planetary health and sustainable healthcare.

Support for Student-led Initiatives

A-

- The administration is supportive of student-led PH initiatives, offering 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.
- We recommend the institution have a student liaison who represents sustainability interests and serves on a medical school or institutional decision-making council to advocate for curriculum reform and/or sustainability best practices.

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 university has committed to achieve carbon neutrality by 2025. Despite current efforts, only 62% of total energy consumption is clean and sustainability criteria only require 25% of indicated products and services to be from sustainable sources. Efforts must be substantially expanded to meet carbon neutrality by 2025.



2021-2022 Summary Report United States

University of Cincinnati

Overall

D+

Planetary Health Curriculum

F+

- The University of Cincinnati College of Medicine (UCCOM) includes some discussion of respiratory health and infectious disease in the context of a changing climate. Additionally, M4 students have the opportunity to learn more about diet, global health, and the environment during their electives.
- **Recommendations:** Planetary health could be integrated into the core curriculum during the preclinical years. There is opportunity to educate on treatment approaches (ie. diet) that are beneficial for both patients and the environment.

Interdisciplinary Research in Health and the Environment

B

- UCCOM is conducting ground-breaking research on the environment and health. However, much of this research is not integrated around the subject of planetary health nor is it specifically highlighted by UCCOM for addressing the adverse health impacts of climate change.
- **Recommendations:** UCCOM could include a tag on their research website highlighting work that addresses climate change. They could also join the Planetary Health Alliance and the Global Consortium on Climate and Health Education and encourage more research on how our changing climate affects Ohioans.

Community Outreach and Advocacy

F

- UCCOM has limited outreach regarding planetary health. While the University of Cincinnati (UC) has partnerships and leadership able to foster outreach and advocacy, UCCOM does not participate in these efforts.
- **Recommendations:** UCCOM could create specific partnerships with organizations that currently work with UC, such as green umbrella. To foster these partnerships, UCCOM could designate a liaison for the medical school that connects with the Office of Sustainability at UC.

Support for Student-led Initiatives

B-

- The University of Cincinnati and the medical school support student groups dedicated to planetary health (The Medical Student Sustainability Club) both financially and with administrative resources.
- **Recommendations:** We recommend that the medical school offer increased support to students interested in sustainability initiatives. One option would be to create a website that advertises mentorship or opportunities for students relating to PH or ESH and prioritizes grants for related research.

Sustainability

D+

- UCCOM has made progress to become a more sustainable campus in conjunction with the wider University. The LEED Gold certification of the Care-Crawley building is a huge accomplishment and other health sciences buildings are continually being upgraded to become more sustainable.
- **Recommendations:** UCCOM could begin working with UC to develop a sustainability plan that prioritized financial divestment from fossil fuels, waste reduction, and access to healthier foods on campus.



2021-2022 Summary Report United States

University of Colorado

Overall

C+

Planetary Health Curriculum

C+

- In 2021 CUSOM officially launched the new Trek Curriculum which integrated planetary health more longitudinally into the core curriculum. Various aspects are discussed in lectures, especially in the pulmonary block. Elective coursework and enrollment at the Fort Collins branch campus, which emphasizes the concept of One Health, offer deeper dives.
- **Recommendations:** Planetary health concepts could be discussed in additional organ blocks and weekly clinical skills sessions could include content centered around discussing planetary health with patients.

Interdisciplinary Research in Health and the Environment

A

- CUSOM has faculty dedicated to interdisciplinary research and hosts webinars regarding planetary health. The CU Consortium for Climate Change & Health organizes research happening in the field across the various campuses associated with CU but is not directly aimed at medical students.
- **Recommendations:** CUSOM could reach out to communities most affected by climate change to gather their input on how best to utilize our resources.

Community Outreach and Advocacy

D+

- CUSOM does not currently have many opportunities for community outreach related to planetary health, but curricular reform could change this. All students must now complete a Service Learning project with “Climate Change and Health Equity” being a possible focus area.
- **Recommendations:** Plan more community outreach opportunities for planetary health and centralize information we do have such that students can more easily find it.

Support for Student-led Initiatives

B-

- CUSOM supports multiple student groups dedicated to planetary health and hosts yearly sustainability solutions challenges that reward innovative student projects. The branch campus in Fort Collins has a focus on the One Health concept.
- **Recommendations:** A website on the topic of climate and health features news and course offerings; but could include more information about how students can get involved.

Sustainability

C-

- CUSOM has some basic campus sustainability measures in place including public transportation, basic single stream recycling and initiatives for environmentally sustainable lab spaces. New buildings are built sustainably, but old buildings have not been retrofitted or upgraded. Campus emissions reduction goals align with state targets, but don't aim for carbon neutrality and there are no sustainability guidelines for events.
- **Recommendations:** Pursuing renewable energy on campus and moving the institution's endowment portfolio away from fossil fuels are larger, but necessary, moves towards campus sustainability.



2021-2022 Summary Report United States

University of Connecticut

Overall

C-

Planetary Health Curriculum

B-

- The University of Connecticut School of Medicine (UConn SOM) does include planetary health in the curriculum, but it lacks integration longitudinally. In M1 and M2, various aspects of planetary health are discussed in two particular lectures dedicated to this topic, but there is no comprehensive coverage outside of these. There is also a course related to planetary health through the school of public health accessible to medical students but it is optional and not well advertised.
- **Recommendations:** Discuss planetary health topics in greater depth longitudinally throughout the curriculum. Additionally, incorporate sustainable clinical practices into the core curriculum and increase administrative support for its integration.

Interdisciplinary Research in Health and the Environment

D+

- UConn SOM does not have dedicated departments for interdisciplinary research regarding planetary health. There are conferences regarding planetary health but they are not directed towards med students.
- **Recommendations:** UConn SOM should organize a conference related to Planetary Health. They could also officially join the Planetary Health Alliance, the Global Consortium on Climate and Health Education, and set up a website with planetary health news with specific discussions relating to the medical field.

Community Outreach and Advocacy

D-

- UConn SOM does not have much in the line of community outreach and advocacy. Few resources are available to patients, institution staff only receive some singular presentations, and there are no ongoing partnerships or educational materials.
- **Recommendations:** We recommend that UConn SOM build community partnerships relating to planetary health and that the hospital system focuses on emphasizing planetary health in patient educational materials.

Support for Student-led Initiatives

C

- UConn supports student groups dedicated to planetary health. There is one medical group (Sustainability at UConn Health) dedicated to this topic that works closely with a faculty mentor and allies within the medical school. In addition, UConn offers opportunities for students to participate in planetary health-related research or QI projects if they choose.
- **Recommendations:** Offer increased support to students interested in sustainable initiatives. For example, a specific website that advertises mentors or opportunities for students relating to Planetary Health and prioritizes grants for related research. One option for integrating more co-curricular planetary health programs/initiatives is to collaborate more with the DPH, as they have speakers and courses that address the health implications of environmental hazards and climate change.



2021-2022 Summary Report
United States

University of Connecticut (Continued)

Sustainability

C-

- UConn SOM has made some efforts to be a sustainable campus. In conjunction with the wider University, sustainable building practices are utilized for new buildings and the majority of old buildings have been retrofitted to be more sustainable. The new food service company, Morrison Healthcare, has sustainability guidelines for food and beverages. Additionally, the medical school offers environmentally-friendly transportation options.
- **Recommendations:** A designated staff member and/or committee in charge of medical school and/or hospital sustainability would be an asset in the plans to improve campus/hospital sustainability. We also recommend a more ambitious CO2 emission reduction goal and divesting from fossil-fuel companies. We also recommend focusing on making lab spaces more sustainable, introducing composting on campus, and improving/introducing sustainable guidelines for events and supply procurement.

Expanded score explanations can be found at phreportcard.org.



2021-2022 Summary Report United States

University of Hawai'i

Overall

C+

Planetary Health Curriculum

C

- **Strength:** Since July 2020, the “Learning Communities” Program fostered longitudinal relationships between first, second, third, and fourth year medical students. Students from each Learning Community were required to visit different local communities in O’ahu to learn about their respective community’s unique set of struggles, including environmental issues.
- **Weakness:** Lack of curricula that address (a) the health effects of climate change, (b) the effects of anthropogenic toxins on human health, and (c) sustainable clinical practice, and integration of the aforementioned topics into the core curriculum.
- **Recommendation:** The Learning Communities program at JABSOM may expand its curriculum to further explore: (1) the health effects of climate change, (2) environmental health, (3) sustainability, and (4) clinical applications for all of the above.

Interdisciplinary Research in Health and the Environment

B

- **Strengths:** (1) Having a dedicated institute for planetary health research, (2) hosting conferences on topics related to planetary health, and (3) joining an international planetary health organization.
- **Weaknesses:** (1) Having researchers engaged in planetary health or healthcare sustainability, (2) engaging vulnerable and underrepresented communities in the research agenda, and (3) creating a website about research related to planetary health.
- **Recommendations:** JABSOM may collaborate with the UH Institute for Sustainability and Resilience, UH Office of Public Health, and UH School of Ocean & Earth Science & Technology to: (1) identify researchers whose primary research foci are related to planetary health or healthcare sustainability, and who may be interested in having medical students assist with research, and (2) collaborate on a website that functions as a portal to prior and ongoing research from all three UH organizations. This website may also advertise resources and opportunities for research.

Community Outreach and Advocacy

C+

- **Strength:** Partnering with community organizations to promote planetary and environmental health.
- **Weaknesses:** (1) Offering community-facing events about planetary health, (2) regular coverage of planetary health in school communications, (3) offering continuing medical education for planetary health, and (4) offering accessible educational material for patients about (a) environmental and occupational health exposures and (b) health impacts of climate change.
- **Recommendations:** JABSOM may consider working with the UH Office of Public Health Studies (OPHS) and its professors to (1) offer a community event regarding planetary health, (2) include a section in the UH Med Weekly newsletter dedicated to planetary health, and (3) apply to The Hawai’i Consortium for Continuing Medical Education (HCCME) to start a regular CME.

Support for Student-led Initiatives

B

- **Strength:** Planetary health programs and initiatives in sustainable food systems, environmental justice, wilderness excursions, etc.
- **Weaknesses:** (1) Funding for and connections to (a) initiatives and (b) research, (2) website about sustainability and planetary health, (3) student liaison for curriculum reform and sustainability best practices, (4) funding for and connections to research.
- **Recommendations:** JABSOM may benefit from hiring a faculty member dedicated to working with both administration and students to advance sustainability and planetary health initiatives. Said faculty member may coordinate: (1) research projects, (2) student-led initiatives, and (3) website for the aforementioned research and initiatives.



2021-2022 Summary Report
United States

University of Hawai'i (Continued)

Sustainability

C+

- **Strengths:** (1) Sustainable building practices, (2) sustainable lab spaces, and (3) portfolio investments divested from fossil fuel.
- **Weaknesses:** (1) Plans to reduce carbon footprint, (2) utilizing renewable energy, and (3) sustainability requirements for events.
- **Recommendations:** JABSOM may consider (1) transitioning to a goal of carbon neutrality using solar energy, (2) establishing food waste bins for composting, (3) negotiating with food vendors, event organizers, and shuttle services to offer locally-sourced food, waste-free events, and transportation between the school and local hospitals.

Expanded score explanations can be found at phreportcard.org.



2021-2022 Summary Report United States

University of Maryland School of Medicine

Overall

D

Planetary Health Curriculum

D+

- The University of Maryland School of Medicine (UMSOM) teaches planetary health through one standalone lecture delivered during the second year. We applaud the inclusion of this lecture but recognize it is insufficient. The disproportionate burden of climate change on disenfranchised communities is largely absent from the core curriculum.
- **Recommendations:** Longitudinally incorporate planetary health and environmental justice into relevant lectures within each block and into patient cases to teach the management of environmentally-mediated disease. Maintain a commitment to a dedicated faculty position to oversee this part of the curriculum.

Interdisciplinary Research in Health and the Environment

F+

- There is a lack of planetary health research and institutional research grant support at UMSOM. Environmental justice groups do not currently contribute to the environmental health research agenda at UMSOM.
- **Recommendations:** Join the Global Consortium on Climate and Health Education, prioritize environmental health research in seed grant programs, encourage recruitment of planetary health researchers and educators, and partner with local environmental justice groups to identify high-priority research needs.

Community Outreach and Advocacy

F-

- UMSOM has no environmental community partnerships, community outreach about the intersection of climate change and health, or continuing medical education for post-graduate providers.
- **Recommendations:** Establish at least one environmental community partnership for the first-year service learning requirement, with organizations such as Blue Water Baltimore. Work towards an annual UMSOM community-oriented planetary health event. Partner with the Office of Sustainability to create a planetary health newsletter for the University of Maryland Baltimore (UMB) students and faculty.

Support for Student-Led Initiatives

D

- UMSOM does not promote environmental health research or projects to students, though it must be noted that the Office of Student Research (OSR) does not often promote specific research interests.
- **Recommendations:** Host an Environmental Health Research roundtable through OSR, similar to the Health Equity roundtable hosted in early 2022. Expand funding and opportunities for students to create and implement sustainability QA/QC efforts in the campus community.

Sustainability

C-

- The Office of Sustainability is leading major sustainability initiatives at UMB, including sustainable event guidance and greener lab spaces. However, the office is newly established and many of these projects are only in the beginning stages. Commendably, sustainability has recently been prioritized as part of UMSOM's strategic planning.
- **Recommendations:** Support the Office of Sustainability in their efforts to make the campus more green. Make this Office more accessible to students by holding a sustainability workshop for first-year students during orientation.



University of Massachusetts Chan Medical School

Overall

C

Planetary Health Curriculum

D

- Although some climate change and planetary health topics are integrated into the medical school curriculum, these topics are concentrated in the first and second years of medical school and leave out many important topics.
- **Recommendations:** UMass Chan should update its climate change curriculum website to allow students to join existing curricular projects and explore the current state of climate and health curriculum integration at UMass. UMass should prioritize the integration of the outsized impact of climate change on marginalized communities, global climate and health inequities, and the impact of climate change on indigenous communities.

Interdisciplinary Research in Health and the Environment

C-

- UMass Chan Medical School joined Practice Greenhealth and the Global Consortium on Climate Change and Health Education this past year. The medical school encourages students to participate in research through the research pathway, capstone projects, and summer fellowships, but there are no specific research fellowships dedicated to planetary health.
- **Recommendations:** UMass Chan should consider developing an interdisciplinary climate and health research center in collaboration with the other UMass campuses.

Community Outreach and Advocacy

C+

- UMass Chan meaningfully partnered with two local organizations, ReGreen Springfield and Elders Climate Action MA during the population health clerkships in the fall of 2021, allowing students to develop real world climate advocacy skills and to learn more about environmental justice in their community.
- **Recommendations:** UMass should continue to foster and grow partnerships with climate-minded organizations in addition to developing a community facing climate and health course for the local community.

Support for Student-led Initiatives

C

- UMass Chan has a funded student and faculty supported organization, UMMS Coalition for Climate Action, which is now in its third year of operation. UMass also supports a thriving, student-run community garden.
- **Recommendations:** The UMass Chan Student Body Committee should develop a student sustainability liaison position on their governing body. This position would help to streamline sustainability initiatives across the campus and better communicate student requests, concerns, and recommendations to clinical faculty, administrators, and the Office of Sustainability.

Sustainability

C

- The Office of Sustainability at UMass Chan Medical School works tirelessly to support student-led initiatives around climate and health, most recently by increasing the number of electric vehicle charging stations available on campus and facilitating the distribution of community farm shares to students.
- **Recommendations:** The UMass system should prioritize divesting from all indirect fossil fuel holdings in the coming year.



2021-2022 Summary Report United States

University of Michigan

Overall

C+

Planetary Health Curriculum

C-

- University of Michigan Medical School (UMMS) includes planetary health in the elective curriculum. However, climate change is only addressed in scattered lectures and discussions in the core curriculum.
- **Recommendations:** The role of planetary health can be more effectively integrated into the systems-based lectures throughout the first year core curriculum, or in intensive weeks during the 2nd and 3rd years. Discussions with and between curriculum leads can help facilitate these future improvements.

Interdisciplinary Research in Health and the Environment

C+

- UMMS is peripherally involved in planetary health research. There are no faculty members in the medical school with primary appointments to be engaged in planetary health research, however faculty at the medical school are connected to institutional planetary health research.
- **Recommendations:** UMMS should incorporate research on planetary health topics into its priorities in existing medical departments or consider creating a new research department on the subject altogether. The medical school should also consider joining a global alliance network for planetary health research.

Community Outreach and Advocacy

D+

- UMMS has yet to do much community outreach around planetary health. Overall there is a lack of structure around how much outreach to do, where to do it, and in what ways.
- **Recommendations:** There are many things that the school may consider in improving their outreach and advocacy as it pertains to planetary health. This includes; establishing community partnerships relating to planetary health, adding climate change related topics to patient education resources, establishing more training opportunities for providers in planetary health, and utilizing newsletters in the health system to more regularly communicate about climate change.

Support for Student-Led Initiatives

A-

- UMMS supports students dedicated to planetary health. The student organization White Coats for Planetary Health receives faculty and institutional support. By enabling students to seek opportunities available through the broader institution, the school also encourages students to be engaged in co-curricular projects and research.
- **Recommendations:** The school could reduce barriers to information access, for example, by composing a list of sustainability mentors and funding resources available through the school and institution.

Sustainability

B

- UMMS has made good progress in sustainable operations and it has also been connecting well with institution-wide resources and programs. The school has also divested from fossil fuels and established robust transportation alternatives.
- **Recommendations:** The soon-to-be created committee on carbon neutrality for the medical school can develop concrete goals, which should include utilizing a greater proportion of sustainable energy and creating procurement policies that better incentivise more sustainable choices.



2021-2022 Summary Report United States

University of Minnesota

Overall

C

Planetary Health Curriculum

C

- Planetary health (PH) connections exist mainly in one lecture. The main climate change lecture covered a variety of planetary health topics, but does not include a live or recorded lecture component.
- **Recommendations:** PH connections could be more frequent and more in-depth and should appear in test questions. Topics that are not in the curriculum at all (such as the impact of climate change on marginalized communities), should be prioritized. Students should learn how to discuss PH with patients.

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. Multiple webpages provide some PH resources, but none of these are comprehensive.
- **Recommendations:** U of M should work more closely with IonE and explicitly encourage students and faculty to engage in PH research. There should be a webpage that centralizes all resources related to PH. Communities disproportionately impacted by climate change should participate in the process of forming a research agenda.

Community Outreach and Advocacy

C-

- University of Minnesota Medical School has slightly improved their community outreach relating to planetary health over the course of the last year. In conjunction with the primary affiliated hospital, the medical school hosted a [Climate Health Action Program \(CHAP\)](#). Medical school communications have occasionally included information about planetary health, and affiliated hospitals have educational material on [environmental hazards](#).
- **Recommendations:** Communications and lecture series surrounding planetary health should be made more consistent, affiliated hospitals should develop patient resources explicitly about planetary health.

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. Multiple PH programs and initiatives taking place in the past year.
- **Recommendations:** 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. The institution should also continue to develop co-curricular PH programs and events, to encourage exposure to PH.

Sustainability

C+

- The University of Minnesota has an Office of Sustainability that engages in various sustainability projects on campus.
- **Recommendations:** We recommend the medical school connect with the Office of Sustainability and integrate itself more deeply into sustainability initiatives. We recommend focusing on implementing sustainability guidelines for medical school events and improving strategies that support planetary health, sharing the value of sustainability and climate justice with its community.



2021-2022 Summary Report United States

University of North Carolina at Chapel Hill

Overall

C+

Planetary Health Curriculum

C-

- **Strengths:** The University of North Carolina School of Medicine (UNC SOM) includes planetary health in the curriculum, but it lacks specific topics and depth of materials.
- **Recommendations:** UNC SOM could include planetary health in the core competencies and offer planetary health-specific electives. Education could include the significant carbon footprint of healthcare.

Interdisciplinary Research in Health and the Environment

A-

- **Strengths:** UNC has researchers and departments focused on planetary health and its impacts on human health, but healthcare sustainability and carbon footprint of UNC Health are not researched. The medical school has not hosted a conference and is not a member of an international planetary health organization.
- **Recommendations:** UNC researchers could research healthcare sustainability. UNC SOM could organize a planetary health conference and join the Planetary Health Alliance and the Global Consortium on Climate and Health Education.

Community Outreach and Advocacy

C-

- **Strengths:** UNC Health has maintained its partnership with CleanAIRE NC. The health care system has also added an Environmental Health Learning Center to its online Health Library for patients.
- **Recommendations:** UNC SOM could add content to the online learning center. Planetary health and sustainable healthcare news and events could be featured in UNC Health's newsletter Vital Signs. The SOM could collaborate with the school of public health to create public education courses and events on planetary health. UNC could create and clearly list planetary health-related CME courses on UNC department websites.

Support for Student-Led Initiatives

B

- **Strengths:** UNC SOM is supportive of student-led initiatives related to planetary health. Funding for CLEAN Med UNC was awarded for 2021-2022 academic year. Administration is willing to receive and act on feedback related to including more planetary health issues in required courses.
- **Recommendations:** UNC SOM could create an organized, easily-navigable website detailing ongoing research projects/mentors and related grant opportunities specifically addressing planetary health. UNC could develop student research-funding grants related to planetary health and could make a dedicated planetary health academic program (such as a Scholarly Concentration or MPH concentration for medical students focusing on planetary health).

Sustainability

C

- **Strengths:** The town surrounding UNC Chapel Hill has a reliable, free public transportation system with goals to shift to 100% renewable energy sources by 2050. Composting and recycling sites are mildly accessible on campus, and the UNC Green Labs program encourages labs to have sustainable practices.
- **Recommendations:** The school could retrofit older buildings with environmentally-friendly strategies. UNC could purchase renewable energy from their current energy source, Duke Energy, and could move money away from fossil-fuel companies and towards environmentally-friendly and sustainable sources.



University of Utah

Overall

C-

Planetary Health Curriculum

D

- Some planetary health education is taught in the basic science curriculum throughout the first two didactic years, however it is limited to several stand alone lectures. There is one elective course which covers topics from environmental justice to local environmental health. Despite recognition of climate change as a societal problem by the curriculum committee in 2019, there has been little action within the past year to develop a plan to incorporate planetary health in core education.
- **Recommendations:** Overall, planetary health content at the University of Utah School of Medicine (UUSOM) is lacking and action should be taken to incorporate it into the core curriculum. With the initiation of MedEdMorphosis, a program focused on developing sweeping curricular changes, the medical school is well poised to take action. Appointing a faculty member dedicated to overseeing implementation of planetary health topics would be beneficial in achieving this goal.

Interdisciplinary Research in Health and the Environment

C

- There are UUSOM faculty who conduct research related to planetary health or healthcare sustainability, but it is not their primary focus and is focused on air quality and pollution. There are currently no opportunities for community feedback regarding planetary health research. There is no dedicated group at UUSOM, however the institution has a Global Change and Sustainability Center which compiles researchers and hosts an annual symposium on sustainability-related research.
- **Recommendations:** Due to institution size and the volume of research related to planetary health, UUSOM would benefit from a database to compile research across the campus to encourage accessibility and interdisciplinary collaboration. UUSOM would also benefit from a stand alone department (or designated staff member) that could provide scholarships and facilitate planetary health research efforts within the medical school and in conjunction with the broader university.

Community Outreach and Advocacy

D-

- Through the Global Change and Sustainability Center, there are opportunities and resources for community outreach and advocacy. UUSOM should use this support to develop educational and volunteer experiences to educate the public about the effects of climate change on health. There have been excellent planetary health outreach events led by faculty and students to foster conversations at our institution and in the community and we hope these events and related projects continue.
- **Recommendations:** We recommend planetary health updates via the weekly student body email. Partnerships can also be formed with community organizations focused on planetary health. We also recommend increased education about environmental health exposures through pamphlets for patients and community-facing publications such as Scope.

Support for Student-led Initiatives

B

- Overall, UUSOM is supportive of student efforts for planetary health, but has not instituted specific grants or hired dedicated faculty. There is a hospital committee to manage these topics and it has recently expanded to include student representation. There are ample projects and mentors that have potential for student involvement but these are not well advertised.
- **Recommendations:** We recommend research grants dedicated to planetary health research as well as an online database that students can use to connect them with mentors and projects within the institution that involve planetary health topics.



2021-2022 Summary Report
United States

University of Utah (Continued)

Sustainability

D+

- UUSOM and the Hospital are increasing sustainability efforts with the new U of U Health Green Team. There are guidelines for new buildings but there are none for lab spaces, food options, and events. There is student support for fossil fuel divestment and campus-wide initiatives to become carbon neutral by 2050 but these goals are less ambitious than necessary.
- **Recommendations:** We recommend green lab initiatives to improve sustainability in existing and new lab spaces as well as required guidelines for more sustainable medical school events and food options. We also recommend more ambitious carbon neutrality goals as well as a commitment to fully divest from fossil fuel corporations.

Expanded score explanations can be found at phreportcard.org.



2021-2022 Summary Report United States

University of Virginia

Overall

C

Planetary Health Curriculum

D

- A major advancement since the previous PHRC was the student-led and faculty-supported development of a fourth-year elective that covered many of the topics discussed in the PHRC. However, there remains a notable dearth of PH coverage through the preclinical curriculum and clinical rotations.
- **Recommendations:** Include at least one testable learning objective on PH in each pre-clinical system. Incorporate how to approach conversations about planetary health into conversations with patients in the clinical setting during Foundations of Clinical Medicine course, or the inter-clerkship intercessions.

Interdisciplinary Research in Health and the Environment

B+

- UVASOM and the broader university have a multitude of resources for students to engage with PH research, however the resources within the medical school are still growing. Medical school faculty who are engaged in PH research are now more visible compared to last year. In the last year, UVA has also hosted climate change-related conferences that allow for interdisciplinary discussions and increased awareness of PH.
- **Recommendations:** Recruit and encourage participation of community stakeholders in research.

Community Outreach and Advocacy

D+

- UVASOM's main PH-related community outreach work with the Charlottesville City Schoolyard Garden has been put on hold due to COVID with plans to resume in 2022. No organization at UVA currently offers community-focused courses or events about climate change, nor do UVA students receive regular PH communication from the SOM or the Office of Sustainability.
- **Recommendations:** Develop new community-facing educational events. Using Inova Hospital in Fairfax as an example, publish educational materials about climate and public health.

Support for Student-Led Initiatives

B

- The student body at the University of Virginia is energized toward climate action, and overall the institution offers readily available support. This year the Student Clinicians for Climate Action at UVA launched our website which contains contact information and details about our projects.
- **Recommendations:** Integrate medical school initiatives and medical student leadership with the larger university.

Sustainability

B-

- The UVA Office of Sustainability has a dedicated project coordinator overlooking the health system. UVA has a plan in place with goals to be carbon neutral by 2030, and fossil-free by 2050. Despite not having a composting program, there is a well-established recycling program. Where UVA primarily falls short is that only 20% of its electricity comes from renewable resources, and there are no sustainability guidelines in place for medical school events.
- **Recommendations:** Implement a series of guidelines that medical school events must follow, as well as more sources of renewable energy at the school.



2021-2022 Summary Report United States

University of Washington

Overall

C+

Planetary Health Curriculum

D

- The University of Washington School of Medicine (UWSOM) offers medical students an introduction to planetary health through elective coursework and interest groups, but lacks substantial, longitudinal incorporation of planetary health concepts within its core curriculum.
- **Recommendations:** Student engagement with planetary health content should be a requirement, rather than a self-driven process. We recommend incorporating planetary health concepts into small group case-based exercises in both the foundational science curriculum and the required Themes in Medicine course.

Interdisciplinary Research in Health and the Environment

A

- UWSOM has multiple groups involved in research on planetary health, including the Center for Health and the Global Environment (CHanGE) and the UW Climate Impacts Group. CHanGE faculty make annual contributions to the Intergovernmental Panel on Climate Change publications. The medical school recently joined the Global Consortium on Climate and Health Education.
- **Recommendations:** We support establishing a more robust and streamlined process for incorporating marginalized communities that are disproportionately impacted by climate change in ongoing research and community projects.

Community Outreach and Advocacy

B

- UWSOM is partnered and actively involved with several community organizations, including the Washington Healthcare Climate Alliance and Washington Physicians for Social Responsibility. Resources on environmental health exposures and climate change health impacts exist but are not always easy to find as a patient.
- **Recommendations:** Opportunities exist for incorporating information on planetary health and sustainable healthcare into regular UWSOM communications. This information should be made more accessible to patients.

Support for Student-led Initiatives

B

- The University of Washington as an institution has many student-led planetary health initiatives, spanning wilderness programs, cultural arts events, and community-supported agriculture, which medical students have access to. However, the medical school itself does not offer specific opportunities or support for sustainability initiatives.
- **Recommendations:** UWSOM should encourage medical students to get involved in sustainability initiatives and quality improvement projects through mini-grants and/or formal incorporation into the curriculum.

Sustainability

B

- The University of Washington has an Office of Sustainability with full-time employees, a dedicated website where students have access to ongoing sustainability projects, and a comprehensive plan to reduce its carbon footprint with a goal of zero emissions by 2050. Existing buildings used by the medical school for teaching rely largely on carbon-free, but not renewable, resources.
- **Recommendations:** UWSOM should continue to invest in renewable energy and divest fully from fossil fuels.



Vanderbilt University

Overall

C-

Planetary Health Curriculum

D

- The new elective course for medical students, “Ecology and Health: Climate, Food and Justice” covers a broad range of planetary health topics.
- **Recommendations:** The core MD curriculum does not address planetary health in a way that is organized or intentional. Our suggestion is to develop and propose a curriculum map that addresses climate change/planetary health topics where they are most relevant throughout the four-year MD curriculum (similar to the Race in Medicine proposal).

Interdisciplinary Research in Health and the Environment

D

- Several Vanderbilt University Medical school faculty, including Dr. Eva Parker, dedicated to planetary health issues in their research and broader careers.
- **Recommendations:** Vanderbilt University Medical school could organize 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

- Medical students have spearheaded recent efforts to engage with the broader community on issues of planetary health. In addition, Vanderbilt University regularly hosts events related to issues of climate change and planetary health, which are open to the broader public.
- **Recommendations:** We suggest that the medical school partner with Vanderbilt University’s Sustainability and Environmental Management Office (SEMO) to identify additional opportunities for community outreach on the issue of planetary health.

Support for Student-led Initiatives

C

- Vanderbilt University Medical School supports student-led sustainability efforts through the Social Mission Committee. The administration was particularly supportive of the creation of the new advanced elective, “Ecology and Health: Climate, Food and Justice”.
- **Recommendations:** Support for student-led initiatives in sustainability should be encouraged in additional areas of the medical school experience, including in completion of the research immersion and quality improvement projects that are required for graduation. As part of the Social Mission Committee’s ongoing effort to identify health equity related research opportunities for students, there should also be inclusion of research topics related to planetary health. Finally, the medical school should consider adding a “sustainability representative” to CCO, our student government.

Sustainability

C

- Vanderbilt University has made great progress in sustainability goals through SustainVU.
 - <https://www.vanderbilt.edu/sustainability/>
- **Recommendations:** The medical school should implement the FutureVU Sustainability recommendations for food and beverage purchase and event planning. Those can be found here:
 - <https://cdn.vanderbilt.edu/vu-wp0/wp-content/uploads/sites/69/2019/09/23154509/Sustainable-Event-Greening-Guide-Sep-2019.pdf>



Virginia Commonwealth University

Overall

D

Planetary Health Curriculum

D

- The School of Medicine at Virginia Commonwealth University includes health impacts of climate change in the core curriculum, but this topic is primarily covered in a new, stand-alone lecture, with sparse mentions scattered throughout various courses. Climate change is not addressed in clinical education.
- **Recommendations:** Continue integrating climate change into pre-clinical courses as well as honing its inclusion in the longitudinal pre-clinical curriculum. Adopt and refine a clinical elective with the goal of implementing a longitudinal track throughout the clinical years. Introduce training on taking an environmental history.

Interdisciplinary Research in Health and the Environment

D

- There are biology, ecology, and planetary health researchers based on VCU's undergraduate campus but none directly affiliated with the medical school. Some students have independently sought out projects adjacent to planetary health with guidance from SOM faculty.
- **Recommendations:** A feasible start would be to connect faculty and students interested in planetary health research through a centralized database.

Community Outreach and Advocacy

D-

- While community outreach efforts are regularly made on VCU's undergraduate campus, those efforts do not extend to the medical school or the health system.
- **Recommendations:** More medical school involvement in community-facing events, better availability of educational materials for patients on environmental toxins and the health impacts of climate change, and CME credits for providers regarding climate change.

Support for Student-led Initiatives

C

- Support for students involves funding for research projects, faculty involvement (including the local branch of MS4SF), and volunteering opportunities through the larger undergraduate campus. In addition, the newly formed Sustainability Plan Committee includes significant student representation.
- **Recommendations:** There is no incentive for students to take valuable time away from their education to engage in sustainability/QI projects with the health system. Funding, or even curricular credit, would change that. In addition, funding earmarked specifically for planetary health research projects would spur the development of those projects.

Sustainability

D+

- VCU School of Medicine offers recycling options, employed green building design in the recent medical school facility, and promotes sustainable transportation. Additionally, VCU Health has a newly appointed Sustainability Director, who is working to oversee sustainability efforts.
- **Recommendations:** No meaningful efforts have been made to divest from fossil fuels. In addition, there are no sustainability guidelines or procurement requirements for events, no efforts to make lab spaces more sustainable, and no efforts to retrofit old buildings.



Washington State University

Overall

D

Planetary Health Curriculum

F+

- The Washington State University Elson S. Floyd College of Medicine does have several examples of planetary health in the pre-clerkship curriculum, championed by individual instructors. However, there are no specific courses, lectures, or learning objectives that tie in planetary health.
- **Recommendations:** There should be a purposeful integration of planetary health into the core curriculum. Initial steps could include adding planetary health learning objectives to lectures and case-based-learning.

Interdisciplinary Research in Health and the Environment

D+

- The WSU College of Medicine is a member of the Global Consortium on Climate and Health Education. WSU has the Center for Environmental Research, Education, and Outreach (CEREO) and the Center for Sustaining Agriculture and Natural Resources. However, there is no planetary health research associated with the College of Medicine, nor a process for communities affected by climate injustice to have a role in research decisions.
- **Recommendations:** The WSU College of Medicine could host a symposium directly related to planetary health, recruit researchers and projects that examine the health impacts of climate change, or create a system for communities affected by environmental injustice to influence research.

Community Outreach and Advocacy

D-

- The WSU College of Medicine does partner with some community hospitals which have patient education materials on environmental health exposure and climate health impacts. There are also student groups which partner with community organizations promoting environmental health. Unfortunately, the College of Medicine itself does not have any meaningful community outreach relating to planetary health.
- **Recommendations:** There should be more community partnerships relating to planetary health, including community-facing events, regular sustainability communications, or CME courses.

Support for Student-led Initiatives

B

- The area of greatest strength for the WSU College of Medicine is the support given to student-led planetary health initiatives. There are two faculty-supported student groups, which have held many co-curricular events. Opportunities through WSU Pullman campus include a Student Green Fund, CEREO, and a graduate student liaison to the WSU Sustainability and Environment Committee.
- **Recommendations:** University wide student opportunities should be more clearly advertised in the College of Medicine. Additionally, the institution should begin to host co-curricular planetary health events.

Sustainability

D

- The WSU College of Medicine does have some sustainable practices, such as recycling and LEED certification. However, there are insufficient goals to reduce carbon emissions, no compost accessible to students and faculty in the College of Medicine, and no sustainability guidelines for campus dining, supplies, lab spaces, or campus events. There has also been no move to divest from fossil fuels.
- **Recommendations:** The institution should implement a composting program and sustainability guidelines for campus activities. The university is updating goals for carbon reduction and neutrality, which should be mirrored by the College of Medicine. Finally, divestment from fossil fuels should be considered.

LIMITATIONS

The 2021-2022 Planetary Health Report Card is the third iteration of the initiative, now with more participating schools, 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.

OVERALL GENERALIZABILITY

While we do 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 maximize consistency, this subjective element cannot be avoided completely. In the future, we hope to formally evaluate inter-rater concordance.

INTERNATIONAL GENERALIZABILITY

Despite our efforts to anticipate limitations in the international generalizability of metrics and to refine metrics for a global audience, 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. Last year's metrics were refined in response to feedback from participating teams with the aim of becoming a uniform international document. There were significantly fewer discrepancies this year. However, as German universities do not have endowments, institutional divestment was deemed not applicable for some institutions and therefore one metric was removed from those German schools. As we continue to expand globally, we will work to anticipate and respond to feedback regarding international generalizability and cultural bias.

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