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PLANETARY HEALTH REPORT CARD MEDICINE



2022-2023 SUMMARY REPORT AN INTERNATIONAL HEALTH STUDENT INITIATIVE

Prepared by:

Medical students and faculty from 96 medical schools in Canada, India, Ireland, Germany, Greece, Japan, Malaysia, New Zealand, South Africa, Switzerland, United Kingdom, and United States

With Support from:

Planetary Health Alliance
Medical Students for a Sustainable Future
Global Consortium on Climate and Health Education
UK Health Alliance on Climate Change
University of California Center for Climate, Health and Equity
European Medical Students' Association
Practice Greenhealth
Health Care Without Harm

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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 is intentionally broad, intended to encompass 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 single biggest health threat facing humanity... Between 2030 and 2050, climate change is expected to cause approximately a quarter of a million additional deaths per year.” Paradoxically, healthcare delivery has an adverse impact on the environment, and therefore health. If the 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 four years ago, the PHRC community has grown to encompass 13 countries and over 100 medical schools. As it has spread across the world, it has left many examples of institutional change in its wake. Though initially developed to evaluate medical schools, the report card has now been adapted for nursing, pharmacy and physiotherapy schools, catalyzing 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 curriculum and resources
- Advance the planetary health movement in pursuit of a healthier and more equitable world

INITIATIVE GROWTH & FUTURE DIRECTIONS

The 2022-2023 Planetary Health Report Card is the fourth iteration of the initiative, now with additional schools and countries, and a growing 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

- Educating all future healthcare professionals about the effect of climate on health and encouraging them to be creative about climate action is crucial for a future where all health professionals work together to improve engagement of health systems with sustainability and planetary health.
- We are delighted to have publications from nursing, physiotherapy, and pharmacy, following successful pilots from nursing and pharmacy last year. Report cards for dentistry and veterinary medicine are underway for the 2023-2024 cycle.
- 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 2022 Planetary Health Report Card, our number of participating medical schools has grown to 96, including the addition of medical schools in Greece, India, New Zealand, South Africa, and Switzerland.
- Translation of the report card into Turkish has now been completed.
- Pilots in Turkey and Rwanda are underway, with ambitions to publish results later this year.

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.
- 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 Climate Resources for Health Education, an expert-reviewed, open-access repository of learning objectives, slides, and cases for climate change and health curricula. This year, we [mapped](#) their curricular materials to our metrics, thus 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.

COLLABORATION WITH THE GENERAL MEDICAL COUNCIL (GMC), UK

- At the end of the 2022 cycle, UK students associated with the PHRC wrote an open letter to the GMC, the UK medical regulator, expressing their concern with the lack of inclusion of planetary health or climate change in Outcomes for Graduates - the document outlining the required learning requirements for undergraduate medical students.
- Since then there has been really positive collaboration with the GMC, including an in person focus group in March 2023, discussing potential new outcomes and helping to draft a GMC Mission Statement committing to the GMC's inclusion of this topic in all their education regulatory documents on their next review. Hopefully this Mission Statement will be published soon.

TURKISH SCHOOLS ACKNOWLEDGEMENT

During our 2022-23 cycle, our lead for Turkey, Sıla Gürbüz, led the implementation of the Report Card in Turkey and recruited ten Turkish medical schools to participate. Due to the devastating earthquake on 6 February 2023, these report cards were not able to be completed by Earth Day. We thank Sıla and participating students for their hard work this year and will continue to work together with the goal to publish their report cards on a later date.

- Acıbadem University
- Ankara University
- Cukurova University
- Erciyes University
- Hacettepe University
- Istanbul University
- Kahramanmaraş Sütçü İmam University
- Karadeniz Technical University
- Koc University
- Uludag University

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 problem based learning cases and slide decks that correspond to our curriculum metrics, check out the [Climate Resources for Health Education website](#).

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 problem based learning cases and slide decks that correspond to our curriculum metrics, check out the [Climate Resources for Health Education website](https://climate-resources-for-health-education.org).

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METRICS

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

- The health and environmental co-benefits of avoiding over-medicalisation, over-investigation and/or over-treatment.
- The environmental impact of pharmaceuticals and over-prescribing as a cause of climate health harm. Alternatively teaching on deprescribing where possible and its environmental and health co-benefits would fulfill this metric.
- The health and environmental co-benefits of non-pharmaceutical management of conditions where appropriate such as exercise or yoga classes for type 2 diabetes; social group activities such as gardening for mental health conditions; active transport such as bicycle schemes. This is commonly known as social prescribing in the UK.
- Environmental impact of surgical healthcare on planetary health and the climate crisis, and how can it be mitigated.
- The impact of anaesthetic gasses on the healthcare carbon footprint and ways to reduce anesthesia environmental impacts, such as total intravenous anaesthesia or choosing less environmentally harmful anaesthetic gas options with reduced greenhouse gas emissions.
- The impact of inhalers on the healthcare carbon footprint and the environmental benefit of dry powdered inhalers over metered dose inhalers.
- Waste production within healthcare clinics and strategies for reducing waste in clinical activities (e.g. single use items in the inpatient or outpatient setting).

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 problem based learning cases and slide decks that correspond to our curriculum metrics, check out the [Climate Resources for Health Education website](https://phreportcard.org).

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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 problem based learning cases and slide decks that correspond to our curriculum metrics, check out the [Climate Resources for Health Education website](#).

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?

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?

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 medical school or 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?

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).

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?
- 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.



2022-2023 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	A-	A	A	D+	A-	A+
University College Cork	C	D+	C	D+	B	B
Trinity College Dublin	C	B	C	F	C	C
National University of Ireland Galway School of Medicine	C	D	B	F	B	C+
University College Dublin School of Medicine	D	C-	C-	F	D	C-



2022-2023 Summary Report

Canada

Planetary Health Report Card

University of Ottawa	C+	C-	B	C-	A-	C+
Universite de Montreal	C+	B+	C	D-	B	C
McGill University Faculty of Medicine and Health	C+	B	C+	C-	C	C
University of Saskatchewan	C	C+	C+	D	A	D
Dalhousie University	C	D	B+	D+	B-	C+
University of Alberta	D	D	D	D	C	D+

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

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

= Overall score improved from 2021-2022 to 2022-2023












2022-2023 Summary Report

United Kingdom

Planetary Health Report Card

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

Keele University School of Medicine 	A	A	A-	A	A-	A+
University College London 	A-	B+	B	B	A	A+
Brighton and Sussex Medical School 	B+	A-	A+	B-	A	B-
Queen's University Belfast 	B+	B+	B+	B	A	C+
Peninsula Medical School 	B	B	A	D+	A-	A-
Barts and The London Medical School 	B	A-	B-	B	B	C
University of Aberdeen 	B-	C	B	B	B	B+
University of Southampton	B-	A	C	D+	C	B+
University of Sheffield 	B-	B	B-	C	B	C+
Newcastle University, UK 	B-	B	B	D	B	B

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2022-2023 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	B-	B	B	D	B-	B
University of Warwick	C+	C+	B	D-	B	B+
University of Glasgow School of Medicine	C+	C+	B	D+	A-	C+
University of Bristol	C+	B	B	D+	C-	B+
University of Liverpool	C+	B	C	C	B-	C
Imperial College	C+	C-	B	B-	C	B-
University of Cambridge	C	B+	C-	F	C	B+
Lancaster University Medical School	C	B	C	D+	C	C
Swansea University	C	B+	F+	D-	C-	A
University of Leicester	C	C+	C	F	B	C+
Newcastle University, Malaysia	C	B	C-	C-	C	D
University of Manchester	C	D	B	D-	B-	A-
University of Birmingham	C-	D	B-	D	B-	C
St. George's University of London	C-	C+	D-	D-	C-	C+
University of Buckingham	D+	C	D	C	C-	F

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2022-2023 Summary Report
United States

Planetary Health Report Card

	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	B+	C+	A+	A	A-	B+
UC San Francisco	B	B	A+	B	A-	C+
UC Davis	B	C	A	C+	A	B+
The Ohio State University College of Medicine	B	B-	A-	B-	A	C
University of Colorado School of Medicine	B	B-	A	B	B	C-
Icahn School of Medicine at Mount Sinai	B-	C	A	B	C	B
University of Washington	B-	C	A	C+	C	B
University of Virginia	C+	C	A-	D+	B	B-
Northwestern (Feinberg)	C+	B-	A-	D	C	C
Geisel School of Medicine at Dartmouth	C+	C	B-	C	A-	D
University of Minnesota	C	C	C	B-	B	C
University of North Carolina	C	C	B+	D+	B	C
University of Massachusetts	C	C	C-	B-	B+	C
Washington State University	C	C+	C+	D	A	C-

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2022-2023 Summary Report
United States (Continued)

Planetary Health Report Card

	Overall	Curriculum	Research	Community Outreach & Advocacy	Support for Student-led Initiatives	Campus Sustainability
Oregon Health and Science	C	A-	C-	D+	C	C-
Albert Einstein College of Medicine	C	B	D-	C+	B	D
Chobanian & Avedisian School of Medicine (Boston University)	C	D+	B-	D	B	B+
Columbia University	C	C-	A	D	B-	C+
Rush Medical College	C	C+	C	C-	B	D+
Johns Hopkins School of Medicine	C	D	B+	C	B	C
The George Washington School of Medicine	C	C-	B	C-	B	D+
Brown University	C	C+	C	D	B-	C
University of Rochester	C	B	D+	D+	B	D+
Creighton University - Omaha Campus	C	C-	B	C-	B	D+
University of Pittsburgh	C	D	D+	B	B	B-
University of Arkansas	C	C+	D+	B-	B	D
Loyola University of Chicago	C	C	C	C	C-	B
Indiana University	C	C-	C	D+	B	C
Tufts University	C	C-	B	D	B	D

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2022-2023 Summary Report
United States (Continued)


Planetary Health Report Card

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

Rutgers Robert Wood Johnson Medical School	C	D	A	D-	B	C-
Vanderbilt University 	C	C-	C	C	C	C
University of Utah 	C	D+	B-	D	B	D+
Creighton University - Phoenix Campus	C	C-	C	D+	B-	D+
Mayo Clinic Alix School of Medicine	C-	C-	C-	B-	C	D
University of Connecticut	C-	B-	C-	D-	C-	D+
West Virginia University	C-	C-	C	D-	B	D
UC Irvine	D+	D	C	F	D	B
University of Missouri	D+	F	D+	D	A-	C+
University of Oklahoma	D	F	C	C-	C	D
University of Cincinnati	D	D	B-	D-	D	D-
University of Maryland 	D	C-	D	F-	C	C-
Virginia Commonwealth	D	D-	D-	F	C	D
Rosalind Franklin (Chicago Medical School) 	D	C-	F+	F	D	D

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2022-2023 Summary Report

New Zealand

Planetary Health Report Card

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

University of Otago - Dunedin	C	C	C	F-	B-	B
University of Otago - Wellington	C	C+	C	F-	B-	C+
University of Otago - Christchurch	C-	C	D+	F-	B-	B



2022-2023 Summary Report

Japan

Planetary Health Report Card

Nagasaki University 	C	C	A-	D+	B-	C-
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2022-2023 Summary Report


Germany

Planetary Health Report Card

Universität zu Köln	C-	B-	D	D+	D	D
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2022-2023 Summary Report

Switzerland

Planetary Health Report Card

	Overall	Curriculum	Research	Community Outreach & Advocacy	Support for Student-led Initiatives	Campus Sustainability
University of Lausanne	C	C+	B	F	B-	B
University of Genève	C	C+	C+	D+	B	D+
University of Basel	C	C	C	D	B	C+
University of Bern	C-	C-	C	F-	C-	B
University of Fribourg	D+	C	D	F-	C-	C
University of Zürich	D	D	D+	F	D-	C



2022-2023 Summary Report

South Africa

Planetary Health Report Card

University of Cape Town	C	C	C	D+	D-	C-
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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 2021-2022 to 2022-2023

phreportcard.org



2022-2023 Summary Report

India

Planetary Health Report Card

Srirama Chandra Bhanja Medical
College and Hospital



Overall

C-

Curriculum

A-

Research

D+

Community Outreach & Advocacy

D-

Support for Student-led Initiatives

D

Campus Sustainability

F+



2022-2023 Summary Report

Greece

Planetary Health Report Card

University of Patras

D

D

D+

D-

D

D

Aristotle University of Thessaloniki

D

D

D

F

C

D

University of Crete

D

D

D-

D-

D

D

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

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

= Overall score improved from 2021-2022 to 2022-2023

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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.

GEORGE WASHINGTON UNIVERSITY

"Our success in implementing a longitudinal climate change and human health curriculum is in large part due to the comprehensiveness of the Planetary Health Report Card metrics, particularly in the curriculum domain. This tool has been incredibly useful in identifying which aspects of our curriculum would be most effective to address. With the recent approval of the four-year Climate Change & Human Health curriculum theme at GW SMHS, we are excited to see our curriculum domain metrics improve on PHRC."

UNIVERSITY OF MANCHESTER

"Since working on the PHRC in 2020/21, several faculty members have created a working group focused on integrating planetary health and sustainability into the curriculum. They have involved students in the decision-making process and have made large steps forward in improving the delivery of ESH topics."

UNIVERSITY OF NORTH CAROLINA

"After several years of PHRC publications, we have noticed increased discussion regarding climate change, planetary health, and healthcare sustainability following presentations of the report results in class meetings. Notable tangible progress includes changes to the curriculum to increase the content focusing on climate change and its effects on health and the development of student-run waste audits for UNC-affiliated clinics. UNC SOM also developed a new scholarly concentration related to planetary health that will open up to students in fall 2023!"

PHRC-INSPIRED INSTITUTIONAL CHANGE

QUEEN'S UNIVERSITY BELFAST

"In QUB we have established the 'Sustainable Healthcare Development Group' which is composed of the PHRC team, faculty staff and estates staff. We discuss planetary health education, initiatives and wider sustainability on campus, which has resulted in changes to the medical curriculum and new sustainability projects on campus. We are also working on involving students from other healthcare degrees (eg. nursing and pharmacy), and hope to form a multi-disciplinary PHRC group at QUB in the coming years."

VANDERBILT

"The core MD curriculum has begun to incorporate some planetary health content into a few lectures. A group of students has developed and proposed a curriculum map that addresses climate change/planetary health topics where they are most relevant throughout the four-year MD curriculum. This has been met with a lot of enthusiasm from the medical school Deans especially after showing them this PHRC."

VIRGINIA COMMONWEALTH

"Following publication of PHRC, there have been a lot of curriculum changes, including implementing new elective classes and reaching out to course directors to include notes and clinical correlations with climate health in their lectures. We are also increasing medical student involvement in community events like legislative advocacy days, community partnerships through volunteering events, and are working on creating new research projects which examine intersections and relationships between climate and human health."

WASHINGTON STATE UNIVERSITY

"Following the implementation of the PHRC in 2022, students, faculty and staff worked together to create major changes in the medical school curriculum... These changes included multiple core lectures being added to cover specific aspects of planetary health, as well as a lecture dedicated to the effects of planetary health on health equity."

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:*
- [Climate Resources for Health Education](#) - an open-access repository of climate-health learning objectives, slides, and problem based learning cases for undergraduate and graduate medical education
- [MS4SF Curriculum Guide](#)
- [Education for Sustainable Healthcare - a curriculum for the UK](#)
- Centre for Sustainable Healthcare [Sustainable QI project resources](#)
- [Climate Health in Medical Education Network](#) - Irish Doctors for the Environment and the Royal College of Surgeons of Ireland.

2. ESTABLISH LEARNING OBJECTIVES

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

EXAMPLES

- A team of medical students at Emory University School of Medicine established and published [this set of climate and health learning objectives](#) for preclinical medical education, creating an integrated curricular plan of climate and health content which is now fully implemented.
- Barts and the London School of Medicine (UK) have at least 9 lectures dedicated to Planetary Health and Sustainable Healthcare across the course with associated learning outcomes.

RECOMMENDATIONS

3. INTEGRATE CURRICULAR CONTENT LONGITUDINALLY

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

EXAMPLES

- *At Emory University (US), the [Climate Change & Health curriculum](#), first introduced for the class of 2024, spans most organ-systems across the first 18 months of medical school. The Climate & Health Curriculum team engaged faculty members to incorporate climate learning points into existing lectures and to create new dedicated climate lectures. The curriculum also adds environmental health discussion points to small group activities.*
- *At University College London (UK), there is an overarching Intended Learning Outcome (ILO) to “appreciate the impact of climate change and sustainability in healthcare”. Through the ‘Climate Change and Sustainability Working Group’, students can discuss how well the issues surrounding climate change and sustainability and their impact on healthcare are integrated, and how teaching might be implemented or improved, thereby bringing the conversation closer to senior management within the medical school.*
- *The medical school at QUB (UK) continues to roll out its new C25 Curriculum across all years of the course. The theme of ‘Global and Population Health’ is one of the central themes in this curriculum and includes the sub-themes of ‘Social Accountability & Sustainable Healthcare’, and ‘Public & Population Health’.*

4. OFFER ELECTIVES AND STUDENT SELECTED COMPONENTS

In addition to the core curricular content on planetary health 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

- *‘Global Health MOOC - Achieving Sustainable Development’, ‘Climate Change and Health’, and “Better understand the links between health, medicine and the environment” are examples of electives offered by universities Trinity College Dublin (Ireland), University of Virginia (US), and Geneva (Switzerland).*
- *Peninsula Medical School (UK) 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 (UK) introduced a new elective this year “Mapping the Sustainable Development Goals”, primarily focusing on ESH/PH.*
- *The University of Saskatchewan (Canada) offers a 2-week Environmental Medicine elective in Saskatoon. They also offer an Indigenous Health elective which may provide the opportunity to gain insight from Indigenous leaders on planetary health-related themes depending on community experience and preceptorship.*

RECOMMENDATIONS

5. PROVIDE 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 clinical curriculum on taking an environmental history and communicating information on planetary health to patients.

EXAMPLES

- *At Barts and The London School of Medicine (UK), in a 3rd year session, students learn how to discuss with patients about their environmental impacts and lifestyle changes that positively impact people and the planet. Interventions include reducing meat consumption and active travel.*
- *At Srirama Chandra Bhanja Medical College (India), students are required to be able to counsel patients on the links between climate change and disease in a simulated assessment environment. Students should be able to cover evidence based links between infection and changing environments, and the health impacts of climate change, with both local and personal context to the patient.*

6. SITUATE TEACHING IN A GLOBAL CONTEXT

The ecological crisis is a global issue and given the interconnected nature of human health globally, medical students should understand the health impacts of climate change throughout the world, its disproportionate effects on low-resource nations, and impacts on global stability through mechanisms such as food security.

In teaching about planetary health and climate change, curriculum should acknowledge how Indigenous communities, who have long lived in harmony with the planet, have knowledge and value systems that are an essential part of the solution, yet are tragically disproportionately affected by climate change.

EXAMPLES

- *At the University of Southampton (UK), the core curriculum includes a lecture on global health and chronic disease. This lecture covers the importance of partnerships with local rural healers and effects of colonialism on indigenous knowledge.*
- *The Critical Health Humanities course at University of Cape Town (South Africa) describes the link between ecosystem health and food and water security. It also covers the effects of environmentally damaging activities, like mining, on ecosystem health.*
- *West Virginia University (US) has a Global Health Track that discusses factors that affect health, including one's physical environment, access to food and water, and local ecosystem health. The lecture "Health in All Places" highlights the importance of health equity in the background of these issues.*
- *At the University of Fribourg (Switzerland), the lecture "Health and Climate Change Co-benefits" describes how rising temperatures, extreme weather events, ocean acidification and other air pollutants impact various health sectors as well as lowers the agricultural productivity and therefore global food security and the dynamic of vector-borne diseases."*

RECOMMENDATIONS

7. RESPECT FOR INDIGENOUS KNOWLEDGE

In teaching about planetary health and climate change, a 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. This topic should be covered across all health professional education internationally regardless of whether indigenous populations are locally present.

EXAMPLES

- *At the University of Southampton (UK), the core curriculum includes a lecture on global health and chronic disease. This lecture covers the importance of partnerships with local rural healers, effects of colonialism on Indigenous knowledge, and the outsized health impacts of mining and soil degradation on the indigenous people of the Pacific islands.*
- *The University of Oregon has a specific elective on Native American and Alaskan Native Health, there is course content from and discussion around Indigenous perspectives on land and activism, including traditional ways of using land. For example, there is a required Native American Health Seminar series talk entitled “Climate, Identity, and our Health: Indigenous Lessons and Voice from the Front Lines to Prevent Climate Collapse”.*

8. 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

- *At Geisel School of Medicine at Dartmouth (US), the Race and Health Equity Longitudinal Curriculum includes three first-year sessions on environmental racism and discrimination. Additionally, there is a recently formed sub-committee focused on planetary health within a medical-school wide group dedicated to making longitudinal curricular changes related to race and health equity.*
- *University of Cambridge (UK) has several lectures that cover the impacts of climate change on marginalized communities, including the fourth year “Environmental Change and Health” lecture that discusses increased exposure of communities of color to environmental toxins. The exacerbation of existing vulnerabilities in society by the climate crisis is also explored in the Year 4 Migrant and Refugee Health lecture*
- *At the University of Washington School of Medicine (US) students are taught about how the health impacts of climate change disproportionately affect marginalized communities. This lecture is accompanied by a case study which focuses on the disproportionate impact of climate change on the health of Indigenous communities.*

RECOMMENDATIONS

9. DELIVER SOLUTION-ORIENTATED SUSTAINABLE HEALTHCARE TEACHING ALONGSIDE PROGRESSIVE AFFILIATED HOSPITALS

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 projects. For this learning to be effective, associated hospitals should be promoting sustainable practices and educating staff and patients.

EXAMPLES

- Geneva Medical School (Switzerland), University of Sheffield (UK), Emory University (US), Queen's University Belfast (UK) and University of Fribourg (Switzerland) have lectures on the harmful impacts of healthcare systems on the environment and the role of health professionals in mitigating environmental impact.
- At Newcastle University (UK), all final year students will complete a SusQI project in their second General Practice assistantship, a project in collaboration with the Centre for Sustainable Healthcare.
- University College London Hospital (UK), the primary hospital affiliated with UCL, has declared a [climate emergency](#) with a plan to reach net zero within 10 years.

10. PROVIDE MENTORSHIP INCLUDING A DEDICATED FACULTY POST

Facilitate accessible mentorship of students with an interest in planetary health. Create a dedicated paid faculty position to oversee planetary health curricular integration, student mentorship, and other planetary health initiatives.

EXAMPLES

- An increasing number of schools have dedicated faculty leads in Education for Sustainable Healthcare, Planetary Health, and/or Sustainable Healthcare. A few examples include Dr. Husein Moloo (University of Ottawa, Canada), Dr. Rebecca Philipsborn (Emory University, US.), Dr. Anna Jones (Brighton and Sussex Medical School, UK), Prof. Trevor Thompson and Prof. Kate Tilling (University of Bristol, UK), and Dr. James Bevan (Southampton University, UK).
- Nagasaki University (Japan) as a "Planetary Health Promotion Headquarters" comprising multiple faculty members with the role to promote initiatives related to Planetary Health.
- Brighton and Sussex Medical School's Sustainable Healthcare Group has a comprehensive website which includes faculty members, their contact information, and their research projects. The Institute for the Environment at University of North Carolina hosts a central website which clearly lists institutional faculty who have research, mentoring, or teaching roles in environmental health.

RECOMMENDATIONS

11. 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 (US) [EaRTH center](#) offers an Environmental Scholars Program - a funded, three-year, community-based clinical and research fellowship for medical and nursing students interested in Environmental Health.
- The University of Otago (NZ) runs a 10-week summer studentship programme which includes planetary health research topics. Medical students can apply for up to \$6,000NZD to fund a project in this area.
- Many schools have grants for student sustainability projects, such as McGill's (Canada) Sustainability Projects Fund totalling 1 million dollars annually, Tufts University (US) Green Fund, Keele University's (UK) Sustainable Fund, Emory University's General Sustainability and Social Justice Incentives Fund, the University of Geneva (Switzerland) offering up to CHF 5,000, and University of Basel's (Switzerland) Impulse Funding Programme.
- Many schools have active student groups with faculty support. These include the 'Climate Health Interest Group' at University of Arkansas (U.S.), 'Earth Resus Team' at University of Birmingham (UK), and the 'Environmental Team of AUTh' at Aristotle University of Thessaloniki (Greece).

12. 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 UCSF (US), the Community Engagement Core of the EaRTH Center informs all EaRTH Center priorities based on community input through the [Stakeholder Advisory Board](#) (SAB) in monthly meetings.
- During orientation at University of Pittsburgh (US), students attend required neighborhood tours in underserved areas and meet community leaders of local nonprofits. On each tour, students visited a community garden and learned about available volunteer opportunities.
- At University of Sheffield (UK), phase 2 medical students have opportunities to work with community organizations that promote planetary and environmental health during their 4 week Social Accountability SSC. Examples include working at Heeley City Farm to address inequality and lack of opportunity in the local community, educating students on the link between climate change and health at King Edward VII School, and promoting physical activity, environmental projects and Green prescribing at Manor & Castle Development Trust.
- As part of the Year 2 course at Queen's University Belfast (UK), medical students can take the module "Medics in Primary School" through which they have the opportunity to teach health and medicine in local schools. Planetary health was added as a suggested lesson for the 2021/22 cohort, and continues to be taught by our medical students in a number of local primary schools.

RECOMMENDATIONS

13. LAUNCH AN INTERDISCIPLINARY CENTER

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

Examples of such centers include:

- Newcastle University's (UK) [One Planet](#) interdisciplinary research center.
- The University of California's (US) newly launched [Center for Climate, Health, and Equity](#).
- The University of North California (US) [Institute for the Environment](#).
- Queen's University Belfast's (UK) [Centre for Sustainability, Equality And Climate Action](#).
- The University of Leicester's (UK) [Centre for Environmental Health and Sustainability](#).
- University of Galway's (Ireland) [Centre for One Health](#).
- University of Otago's (NZ) Coastal people: [Southern Skies](#) interdisciplinary research center.

14. 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

- In December 2022, Emory (US) launched the [Emory Climate Research Initiative](#) to strengthen Emory's academic response to the global climate crisis. The Group's research topics include integration of planetary health into medical curriculum, effects of climate change on vulnerable populations, and healthcare sustainability.
- Brighton and Sussex Medical School (UK) annually host the [Sustainable Healthcare Academic Research and Enterprise \(SHARE\)](#) conference which aims to facilitate collaboration among healthcare professionals, students, and service-users on topics related to sustainability and health and healthcare practice. Keele University has a [website](#) dedicated to sustainability and planetary health research at their school.
- At University of Geneva (Switzerland), the research program [Human, Animal and Environmental Health](#) performs interdisciplinary research and teaching activities that include public and global health, animal health, ecology, epidemiology, and environmental sciences.

RECOMMENDATIONS

15. 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

- In addition to aiming for [Net Zero](#) carbon emissions by 2040, the University of Leicester Medical School (UK) aims to achieve [EcoCampus](#) platinum by 2025 and to be carbon neutral for scope 1 and 2 carbon emissions by 2030. Following the Climate Emergency Statement, Newcastle University (UK) has committed to achieve net-zero carbon dioxide emissions by 2030.
- The University of Otago (New Zealand) has a commitment to reducing true emissions by 50% from 2019 levels and achieving carbon neutrality by 2030. There is a full-time staff member at the Sustainability Office who manages the Net Zero programme and has created a tangible roadmap to achieve this target.
- University College London (UK) 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 following institutions are some examples of institutions fully divested from fossil fuels (links to divestment policies included where available): [University of Manchester Medical School](#) (UK), University College Dublin (Ireland) and Emory University (US)

16. 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

- Royal College of Surgeons Ireland (Ireland) has been using [100% green electricity](#), with all power produced by wind farms, for several years.
- McGill University (Canada) has created a [Sustainable Labs Guide](#) to reduce the negative environmental impacts of research to improve waste management practices, promote green chemistry as well as reduce energy and water use. The University of Washington (US) [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.
- University of Birmingham (UK) has a [Sustainable Procurement Policy](#) that applies sustainability criteria to its supply procurement decisions, including reducing carbon footprint, assessing environmental/social impacts, promoting waste hierarchy & circular economy principles, using Fairtrade products, fulfilling duty of care obligations, using ethical suppliers, and communicating the policy.

SCHOOL-SPECIFIC REPORT CARDS



2022-2023 Summary Report

Canada

Dalhousie University

Overall

C

Planetary Health Curriculum

D

The Dalhousie Faculty of Medicine has incorporated some Planetary Health recommendations through the curriculum refresh by including one core-curriculum lecture and corresponding tutorial in year one that discusses climate change and the impacts of health but there lacks a longitudinal integration of this subject.

Recommendations: We propose that the Faculty create a leadership role in Planetary Health/Sustainable Health Systems within the next year, similar to the University of Ottawa's Faculty of Medicine's Director of Planetary Health, to clearly signal that the climate emergency is important and urgent. The Faculty should also incorporate more lectures that address the relationship between climate change and health risks.

Interdisciplinary Research in Health and the Environment

B+

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, Planetary Health Alliance and Emerging Leaders for Environmental Sustainability in Healthcare (ELESH).

Recommendations: As the Healthy Populations Institute is already a leader in interdisciplinary population health research and sustainable health systems, we recommend that Dalhousie clearly articulates the link between the Faculty of Medicine and the Healthy Populations Institute in this area.

Community Outreach and Advocacy

D+

While Dalhousie University partners with community organizations and provides community facing events, the Medical School has few events pertaining to Planetary Health including a conference and speaker series.

Recommendations: The Faculty of Medicine should encourage staff and students to take a Continuing Professional Education program with a focus on Planetary Health and/or Sustainable Health Systems, such as those offered by CASCADES Canada. To increase opportunities for outreach and advocacy related to healthcare sustainability, the Faculty should build on the foundation set by the Healthy Populations Institute, Dalhousie Planetary Health Community of Practice and Dalhousie Medicine Green Team.

Support for Student-Led Initiatives

B-

Dalhousie Medical School offers continued support for student initiatives related to sustainability and medicine (research, quality improvement projects, community outreach etc.).

Recommendations: We 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.

Campus Sustainability

C+

Dalhousie University, including the medical campuses, has made strides to increase the sustainability of the institution through recycling programs and subsidizing transportation, and has set carbon neutrality goals.

Recommendations: 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.



2022-2023 Summary Report

Canada

McGill University Faculty of Medicine and Health Sciences

Overall

C+

Planetary Health Curriculum

B

Planetary Health (PH) connections exist within the core medical curriculum, though they are mostly found within a solitary lecture dedicated to climate change and health. Over the past year, PH connections have significantly augmented thanks to curricular integrations of the Climate Wise slides throughout the pre-clerkship organ systems.

Recommendations: PH connections in the curriculum should have more dedicated time allocated consistently throughout medical education. The medical school should identify PH (including climate change) as a priority theme and include that material in learning objectives and test questions, in addition to filling in content gaps.

Interdisciplinary Research in Health and the Environment

C+

McGill University hosts an annual Sustainability Research Symposium (SRS), as well as other conferences, events, and workshops relating to PH.

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.

Campus 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.



2022-2023 Summary Report Canada

University of Alberta

Overall

D

Planetary Health Curriculum

D

The University of Alberta has an incomplete planetary health curriculum, and lacks integration longitudinally. Most of the planetary health education comes from one 50 minute lecture.

Recommendations: There are more areas throughout the curriculum where planetary health issues can be inserted, including neuropsychological and reproductive effects of environmental events, as well as planetary health equity and sustainability from an indigenous lens. More case-based discussion of planetary health issues are needed. Social justice and planetary health equity topics can be integrated within various areas of the curriculum. The addition of a planetary health elective team can also be beneficial to the diversification of the curriculum.

Interdisciplinary Research in Health and the Environment

D

The University of Alberta lacks an interdisciplinary planetary health community that can engage in research and scholarship. Moreover, resources for students to participate in planetary health research are scarce.

Recommendations: Currently, planetary health resources are not accessible to students. Compiling a research database that identifies available projects, research groups and opportunities would be helpful in navigating scholarship. Additionally, creating a dedicated and interdisciplinary group or society for planetary health research would be beneficial to both students and to furthering planetary health research at our institution.

Community Outreach and Advocacy

D

University of Alberta Medical School currently has limited outreach and advocacy programs in place.

Recommendations: We recommend the creation of a task force that will be able to identify the needs of the community and evaluate the areas in which improvements are necessary. Then, we can begin addressing these issues more systematically. Additionally, lobbying to Alberta Health Services for the inclusion of more patient-targeted planetary health resources would be critical. Lastly, more dedicated partnerships with national and local planetary and environmental health communities such as CAPE can benefit the institution.

Support for Student-Led Initiatives

C

The University of Alberta has adequate support for student-led initiatives surrounding topics of environmental sustainability. However, the Medical School itself lacks such support.

Recommendations: We suggest the formation of a faculty-supported, student-led planetary health group to better facilitate student-led initiatives. Moreover, centralization of environmental sustainability groups on campus can help create community and support for students and their initiatives.

Campus Sustainability

D+

The University of Alberta Medical school has made some progress to become a more sustainable campus in conjunction with the wider University, however more work must be done.

Recommendations: Simple infrastructural changes, such as the introduction of compost bins to the medical building could further these efforts. Moreover, creating updated and concrete energy plans are recommended.



2022-2023 Summary Report Canada

Université de Montréal

Overall

C+

Planetary Health Curriculum

B+

The Université de Montréal has a longitudinal curriculum on the health impacts of climate change, with the recent introduction of several lectures and clinical cases with associated learning objectives. The medical school is in the process of further expanding the curriculum on planetary health and sustainable healthcare.

Recommendations: The curriculum could be expanded to further develop subjects related to sustainability in healthcare and planetary health issues outside the scope of climate change.

Interdisciplinary Research in Health and the Environment

C

The medical school at Université de Montréal recently organised and hosted several conferences and symposiums on planetary health and sustainable healthcare, and has ongoing plans to pursue this involvement in the future.

Recommendations: The medical school could develop a website dedicated to planetary health to help students to find relevant information about research projects and activities related to planetary health and sustainable healthcare.

Community Outreach and Advocacy

D-

The Université de Montréal offers many opportunities for students to be involved in community outreach and advocacy as well as a well established Patient-Partner Office. However, no such opportunities involve communities impacted by climate change or environmental perturbations specifically.

Recommendations: Partnership with community organisations in relation to planetary health could be secured for interested students within the "Community medicine" or "Social medicine" clerkship rotations. The Patient-Partner Office and Social Accountability Office could further develop partnerships with communities most impacted by the effects on climate change and environmental perturbations.

Support for Student-Led Initiatives

B

The Université de Montréal and its medical school have a dynamic student life with many opportunities for involvement in planetary health or sustainability initiatives. However, funding for these projects often come from sources outside the institution.

Recommendations: The medical school could increase its support for planetary health or sustainability initiatives by creating dedicated grants for those projects. Such projects could also receive further formal recognition and be credited in the curriculum.

Campus Sustainability

C

The Université de Montréal has committed to carbon zero emissions for 2040 and has a clear associated action plan.

Recommendations: Further efforts could be made to facilitate active transport or carpooling and/or offer free public transit passes for students during their clerkship years.



2022-2023 Summary Report Canada

University of Ottawa

Overall

C+

Planetary Health Curriculum

C-

In January 2023, the Faculty of Medicine Phase 3 Planetary Health Curriculum Working Group began meeting to create recommendations for a longitudinal, spiral planetary health curriculum at the University of Ottawa Faculty of Medicine (uOttawa FoM).

Recommendations: The working group will focus on longitudinal integration of planetary health into medical education, expanding beyond the single, one-hour lecture that is currently devoted to the topic in Year 2. We acknowledge the ongoing efforts of the FoM and encourage further progress. Additionally, we support their intention to adhere to the 11 curricular competencies identified by the Canadian Federation of Medical Students' Health and Environment Adaptive Response Task force.

Interdisciplinary Research in Health and the Environment

B

The appointment of Dr. Husein Moloo as Director of Planetary Health continues to create momentum for planetary health research. Dr. Moloo ensured that the uOttawa FoM joined the Global Consortium on Climate and Health Education and established the first research symposium on planetary health. His work in creating and interdisciplinary Planetary Health Council has also promoted knowledge-sharing between hospitals and departments related to planetary health research.

Recommendations: A department specifically dedicated to planetary health research has yet to be established. Additionally, there is no policy by which the FoM's research agenda remains accountable to communities disproportionately impacted by climate change. Community partnership represents an avenue for improvement.

Community Outreach and Advocacy

C-

A number of public-facing events & professional development activities related to planetary health took place at the FoM this year. However, the FoM does not partner with community organizations at this time.

Recommendations: Development of strong, longitudinal community partnerships, and integration with the curriculum, should remain a priority.

Support for Student-Led Initiatives

A-

Interested medical students can pursue planetary health initiatives through existing programs with non-specific focuses, such as the fourth-year Leadership Elective. A planetary health website was also created this year.

Recommendations: Listings of planetary health events on the website could be updated more frequently. Increased availability of planetary health-specific research funding and opportunities to connect with relevant Faculty would also improve student engagement.

Campus Sustainability

C+

The uOttawa Office of Campus Sustainability is well-established, with multiple programs for the entire university. PPE recycling and sustainable event guidelines were initiated at the FoM in 2021.

Recommendations: Most sustainability initiatives occur at the main campus, separate from the medical school. Focus on expansion of the application of the FoM's sustainable event guidelines, sustainable food selection, and sustainability in lab spaces is recommended.



2022-2023 Summary Report

Canada

University of Saskatchewan

Overall

C

Planetary Health Curriculum

C+

The University of Saskatchewan (USask) has been making significant progress towards integrating environmental and planetary health into the curriculum. There is however, a need for content to be integrated longitudinally throughout the curriculum in order for students to be competent and well versed on planetary health issues and their relation to patient health.

Recommendations: There is a need to make a distinction in our current curriculum that defines how planetary health differs from environmental health given that a significant amount of time is allocated to environmental hazards rather than planetary health and climate change. The respiratory health and climate lecture greatly improved our curriculum score as it briefly touched on other areas evaluated by the report card. However, we do not feel that the content was sufficient enough to offer students an adequate understanding of the corresponding topics. We would strongly encourage the expansion of such topics in the system-specific modules.

Interdisciplinary Research in Health and the Environment

C+

An initiative spearheaded by medical students and faculty members of the College of Medicine (CoM) is currently underway to host the inaugural USask healthcare trainee hub for the CASCADES Summer Institute on Sustainable Health Systems.

Recommendations: The USask CoM may benefit from becoming a member of a planetary health organization and developing a process by which disproportionately impacted communities can contribute to its research agenda and future efforts.

Community Outreach and Advocacy

D

The USask CoM has had limited engagement with community partners to create meaningful partnerships related to planetary health.

Recommendations: Increase community partnerships related to planetary health, including ones that target a public audience. Create a database of institutionally developed patient resources that encompasses geographically- and population-specific education.

Support for Student-Led Initiatives

A

The CoM is eager to support student-driven curricular change, sustainability efforts and leadership opportunities. The Division of Social Accountability within the CoM has also supported student efforts by hosting a student-led planetary health webinar in early 2022

Recommendations: It is recommended that an accountability process be implemented so that student efforts have a lasting impact.

Campus Sustainability

D

The USask has made strides towards improving campus sustainability, primarily through the Office of Sustainability. Being a signatory of the Climate Charter for Canadian Universities and initiating a study on decarbonization options are positive initial steps that require further follow through.

Recommendations: Though some of these categories are allocated to institutional related change, there are a set of recommendations that the College of Medicine should consider. We recommend further engagement in sustainability initiatives by the College of Medicine, such as advertising sustainable transportation



2022-2023 Summary Report

Germany

Universität zu Köln

Overall

C-

Planetary Health Curriculum

B-

The Faculty of Medicine at the University of Cologne specifically addresses the topic of Planetary Health (PH) in a few subject areas, but it has not yet been integrated into all subjects in a structured way. Two voluntary electives in which PH aspects were addressed were offered.

Recommendation: PH should be integrated longitudinally and in a structured way into the compulsory curriculum. Here, solutions to climate protection and climate adaptation measures should be focussed on.

Interdisciplinary Research in Health and the Environment

D

The Faculty of Medicine makes only a minor contribution to research in PH and is not a member of any planetary health organization. There is the newly established Institute of General Medicine, which has a research focus on "[General Practice and Climate Change](#)" and has integrated PH into teaching, research and clinical practice.

Recommendations: PH-Research should be strengthened, encouraged and supported by the faculty. To this end, financial incentives could be created and organizational assistance provided.

Community Outreach and Advocacy

D+

There is little community involvement. There is a steady exchange between the medical school and the city of Cologne, but without a focus on PH.

Recommendations: More community partnerships related to PH should emerge. To this end, the medical faculty of the University of Cologne could become more involved in the continuation of the [heat action plan](#) of the city of Cologne. Regular staff training on PH should be introduced.

Support for Student-Led Initiatives

D

At the Faculty of Medicine, the Medical Student Council supports the student working group "Public Health". There are no explicit funding offers or project announcements concerning PH by the faculty.

Recommendations: Financial and organizational support by the Faculty of Medicine could encourage students to become more involved in PH.

Campus Sustainability

D

At the faculty there are several working groups dealing with sustainability on campus. However, the faculty does not yet have specific sustainability goals and policies.

Recommendations: Mandatory policies and sustainability criteria should be adopted. Measures to educate and implement waste prevention and separation and resource conservation should be implemented. Energy supply should be increasingly sourced from renewable sources.



2022-2023 Summary Report

Greece

University of Crete - School of Medicine

Overall

D

Planetary Health Curriculum

D

Our Medical School does not include planetary health in its core curriculum in neither compulsory or elective courses, with the exception of few brief optional covers in some courses.

Recommendations: Specific courses about planetary health should be integrated as well as supplement the existing ones (especially the main aspects that cause disease, such as air pollution).

Interdisciplinary Research in Health and the Environment

D-

Our institution, through the affiliated University Hospital, the interdisciplinary Research Center unit (UCRC) and the Foundation for Research & Technology - Hellas (FORTH), do engage in various research activities related to planetary health / sustainable healthcare, such as: relevant labs and studies (including ongoing european-granted projects about climate change effects and microbiological hygiene of water and food), and the hosting of several conferences and webinars in the context of global environmental-collaboration networks. However, there is still lack of sufficient interdisciplinary-approach applications, systematic engagement and externalisation.

Recommendations: Deeper focus needs to be given in gradually conducting planetary-health and sustainable-healthcare research as a separate field by: analysing past progress and future prospects, creating realistic plans, reinforcing interdisciplinary approach, projects and collaborations nationally and worldwide.

Community Outreach and Advocacy

D-

University of Crete has little community outreach relating to planetary health and climate change. Little effort is put in raising awareness about the health risks of climate change. They seem to support but not sufficiently promote community organisations that address these issues, neither they share updates about the current affairs of climate change.

Recommendations: More effort needs to be put in systematic impact recording, information providing, and the promotion of opportunities seeking for inclusive involvement among the students, the academic community and the general public.

Support for Student-Led Initiatives

D

There doesn't seem to be any formal pathway for encouraging students to express their interest or apply to University' environmental activities. Only students' special interests and initiatives would lead them to seek for such opportunities and maybe end up partaking, such as the student voluntary "Green Team" engaging in environmental voluntary activities incl. the cleaning of the campus. Such actions are promoted through the University's monthly newsletter.

Recommendations: We recommend that the University put more effort in systematically encouraging and promoting student-led initiatives, as well as taking their input into better consideration.

Campus Sustainability

D

Our institution has made good steps to increase sustainability of its campus but there's still room for improvement. Indicatively, there are plans and policies for SDGs, recycling and renewable energy usage, but they are not sufficiently supervised. Also relevant research activities do take place about alternative energy sources, solar fuel production, environmental remediation etc.

Recommendations: We recommend trying to update the campus' buildings so as to be more environmentally-friendly, and better monitor the application of relevant policies.



2022-2023 Summary Report

Greece

Aristotle University of Thessaloniki

Overall

D

Planetary Curriculum

D

The Medical School of Aristotle University of Thessaloniki (AUTH Medical School) includes planetary health only briefly in the curriculum, mostly in the first and second years. Most of the time the coverage of planetary health as a subject seems like more of an afterthought and not as the actual goal of the lectures. Only specific courses reference planetary health and there is much to be desired and many steps to take towards integration in the curriculum.

Recommendations: There should be core curriculum courses that are more specifically centred on planetary health, parallel to the subject being interwoven in all aspects of the curriculum.

Interdisciplinary Research in Health and the Environment

D

AUTH Medical School conducts research on a basic level and only a part of it is about topics around planetary health. Also, the university doesn't have a big role in organising conferences or symposiums about planetary health.

Recommendations: The goal of AUTH Medical School should be the more active participation in the research of topics around planetary health in the near future.

Community Outreach and Advocacy

F

AUTH Medical School has little community outreach relating to planetary health, and it is mostly related to health care professionals. Overall, community outreach is something our university generally lacks.

Recommendations: More community partnerships relating to planetary health, as well as more events aimed towards the public on this subject.

Support for Student-Led Initiatives

C

The Aristotle University of Thessaloniki and the Medical School support student groups dedicated to planetary health. There is the "Environmental Team of AUTH" whose actions are shaped around environmental issues that primarily concern the university and secondarily the local community in which the students study and live. In addition, the AUTH Vet School organises an electronic competition, that has actions to promote sustainable mobility (supply of electric cars, electric bicycles and a charging station to cover the needs of the AUTH), while the "Environmental Conference of Macedonia" is addressed to students and has topics about planetary health.

Recommendations: Support for student-led initiatives mostly comes from the wider University rather than the Medical School. We recommend the medical school offers increased support to students interested in sustainable initiatives for example via creating a website that advertises mentors or opportunities for students relating to PH or ESH and prioritises grants for related research.

Campus Sustainability

D

The AUTH Medical School has made some moves in recent years on campus sustainability. The steps are mostly theoretical, and other than recycling, little has been done in practice.

Recommendations: There are still many practical changes to make on campus regarding sustainability, especially to the older buildings that make up a lot of the faculties.



2022-2023 Summary Report

Greece

University of Patras

Overall

D

Planetary Health Curriculum

D

University of Patras does not include planetary health in the core curriculum. However, in the second year, various aspects of planetary health are discussed in lectures of the subject Hygeine and also it is sporadically brought up as a topic of discussion in other subjects.

Recommendations: There is a lack of teaching about introducing conversations about planetary health into conversations with patients and general lack of information. Due to this situation, it could be beneficial if in the lesson Hygeine there is more information offered and important aspects of some topics covered in depth.

Interdisciplinary Research in Health and the Environment

D+

The University of Patras only recently has begun hosting events regarding planetary health. However, they are not directly aimed at medical students and there is a lack of post graduate programmes regarding environmental health and management in the field of medicine.

Recommendations: Patras Medical School could organise a conference directly related to Planetary Health. They could also join the Planetary Health Alliance and the Global Consortium on Climate and Health Education.

Community Outreach and Advocacy

D-

University of Patras Medical School has little to no community outreach relating to planetary health. There are both lack of information and initiative.

Recommendations: more community partnerships relating to planetary health and education regarding several aspects of the environment and its immediate effects to us.

Support for Student-Led Initiatives

D

The University of Patras and the Medical School do not actively support student groups dedicated to planetary health. Even though there are some initiatives taken in the past there is a long way to go.

Recommendations: Support for student-led initiatives mostly comes from the wider University rather than the Medical School. We recommend the medical school offers increased support to students interested in sustainable initiatives for example via creating a website that advertises mentors or opportunities for students relating to PH or ESH and prioritises grants for related research.

Campus Sustainability

D

Patras Medical school does not actively harm the environment with excessive pollution, however it does not actively take any important action to protect it or become more sustainable.

Recommendations: There is much to improve with the campus sustainability. Due to the fact that students spend a lot of time in labs, maybe sustainability during laboratory work could be the start of a more environmental friendly UoP.



2022-2023 Summary Report

India

Srirama Chandra Bhanja Medical College and Hospital

Overall

C-

Planetary Health Curriculum

A-

SCBMCH has taken great efforts to integrate planetary health longitudinally into the curriculum. Across the first three years, various aspects of planetary health are discussed in different lectures. However, there is no discussion of planetary health or carbon footprint in the seminars or tutorials.

Recommendations: A separate coursework or module discussing planetary health and different health impacts of climate change would be helpful. The development of flashcards highlighting the locally relevant health effects of climate change to encourage dialogue with patients is needed.

Interdisciplinary Research in Health and the Environment

D+

Although SCBMCH has an ethics committee it does not have a dedicated department with a comprehensive list of interdisciplinary research publicly available. There is no website that provides information on ongoing and past research, nor are there conferences related to planetary health research.

Recommendations: SCBMCH should form a committee dedicated to planetary health and sustainable development research in collaboration with Utkal University's Centre for Environment, Climate change & Public Health. Setting up a website dedicated to planetary health updates and news would be useful.

Community Outreach and Advocacy

D-

Campaigns and activities organised by our medical school do not actively involve the community. Hospitals do not have any accessible educational materials for patients.

Recommendations: SCBMCH should form a planetary health committee with a student representative dedicated to organising outreach activities in schools and other colleges to promote awareness and education on the health impacts of climate change.

Support for Student-Led Initiatives

D

SCBMCH supports student-driven activities but there have not been many initiatives related to planetary health. The lack of a dedicated research group and no proper supervision/encouragement at the undergraduate level in medical school makes it difficult to carry out QIPs or research related to planetary health.

Recommendations: The medical school should support students interested in working in the field of planetary health by providing a platform to network with faculty/other researchers having similar interests.

Campus Sustainability

F+

SCBMCH has made a good start towards becoming a more sustainable campus in terms of using sustainable building materials as well as energy optimisation. Water management systems have demonstrated a reduction of 28.9% according to the Green Rating for Integrated Habitat Assessment. However, there is a long way to go in order to become a carbon-neutral campus.

Recommendations: SCBMCH campus should have a net zero carbon goal. To reduce the carbon footprint and promote good health, active travel such as walking and the use of bicycles should be encouraged amongst the students & faculty within the campus.



2022-2023 Summary Report

Ireland

Royal College of Surgeons

Overall

A-

Planetary Health Curriculum

A

At RCSI, Planetary health (PH) connections exist throughout the medical curriculum. In the last few years, the administration has made a concerted effort to increase the PH content. A new module on "Climate Change and Sustainability in Global Public Health" is now in the core curriculum in the Pharmacy programme.

Recommendations: Specific aspects, such as the mental health and neuropsychological effects of environmental degradation or the unequal regional health impacts, can be more extensively explored rather than briefly mentioned in one or two lectures.

Interdisciplinary Research in Health and the Environment

A

RCSI lacks a formal institute for interdisciplinary PH research that solely focuses on Planetary Health. However, there is a considerable number of projects led by RCSI researchers dedicated to minimizing the environmental impacts on human health. As of 2023, RCSI has formally joined a range of internationally recognized environmental organizations, such as 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+

RCSI continues to perform the weakest in this area; however, RCSI's collaborative works with other universities in Ireland to develop planetary health / sustainability curriculum content are making substantial progress every year.

Recommendations: Encouraging affiliated hospitals to provide accessible educational materials about climate change and health impacts 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 consistently offers their time, funding, and enthusiasm for student-led work in planetary health initiatives.

Recommendations: The administration could facilitate more planetary health-specific connections between research mentors and students, and by developing a student fellowship program designated for PH. Students would also benefit from more co-curricular planetary health programs, such as local volunteer opportunities, to gain experience in sustainable practices while giving back to the community.

Campus Sustainability

A+

RCSI has shown strong initiative in this area by developing a Sustainability Committee consisting of both student and staff members, resulting in this year's Best Green Campus Award in Educations Awards, following last year's Beacon status with the Centre for Sustainable Health care.

Recommendations: To develop a formal Sustainability office with salaried staff who would assist in oversight of the implementation and progress of sustainability goals and practices.



Trinity College Dublin

Overall

C

Planetary Health Curriculum

B

TCD's medical curriculum includes a module called 'Global Health' which covers aspects of sustainable development. However, it does not fully cover the concepts of Planetary Health or Climate Change. The addition of the 'Sustainable Healthcare' workshop this year was a major improvement, due to the platform for discussion among students about the relationship between climate change and healthcare.

Recommendations: Further additions such as the aforementioned workshop are needed. We would like to see a larger emphasis on climate change as a threat to global health and it being added longitudinally to the core curriculum. We would like to see additional modules being added devoted to Planetary Health and the Environment.

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. Additionally, the Nature+ research group tackled to focus on planetary health and sustainability has no members from the School of Medicine. TCD is a member of the Global Consortium on Climate and Health Education.

Recommendations: Organisation of a planetary health focused conference would be of benefit. Membership to the Planetary Health Alliance could be considered. Expansion of the Healthy Trinity Webpage to a full website including planetary health news, events, and research contacts, perhaps through liaising with the Nature+ research group would prove beneficial in further promoting interdisciplinary research.

Community Outreach and Advocacy

F

TCD Medical School and its affiliated hospitals have little community outreach relating to planetary health. The University does have some links to planetary health organisations, but the medical school itself has no direct role.

Recommendations: Patients of the affiliated hospitals and students of the medical school should be informed about planetary health through educational materials, email updates, events, and academic learning opportunities. Obvious opportunities for improvement include engagement with community gardens and other such local organisations.

Support for Student-Led Initiatives

C

TCD has an "Irish Doctors for the Environment" student working group. TCD has also launched various sustainability-related initiatives, including the E3 "Balanced Solutions for a Better World", and the Green Campus Programme. TCD offers research grants for students, however the projects must be initiated by the students themselves and are not necessarily related to sustainability.

Recommendations: Increased support is needed for TCD medical students seeking sustainability-related research. We recommend the medical school launch a planetary health webpage, where students can learn about ongoing projects and search for mentors. TCD should also create a student representative role related to sustainability.

Campus Sustainability

C

Trinity College Dublin has made consistent progress and efforts into becoming a more sustainable campus and has tried to involve all staff and students to participate in such efforts, as well as making relative facilities and services more accessible.

Recommendations: There is still much to improve with the campus sustainability. Goals and plans are already in place at the Medical School, but have yet to be achieved. The college, and different schools within the college have set goals and plans; but those specific to the medical school are far from enough, and lacking of information.



2022-2023 Summary Report

Ireland

University College Cork

Overall

C

Planetary Health Curriculum

D+

University College Cork (UCC) includes planetary health in the curriculum, but it lacks both comprehensive coverage of important topics and integration longitudinally throughout the years. Various topics regarding planetary health are discussed in first and second year lectures, but are not included in the curriculum in the later years.

Recommendations: More lectures and group discussions on these topics could be introduced through clinical case-based teaching sessions or lectures throughout all years.

Interdisciplinary Research in Health and the Environment

C

UCC's Environmental Institute is heavily involved in research regarding climate health, however there is no direct association to the School of Medicine. UCC also hosted many events on topics related to planetary health and sustainability in 2022.

Recommendations: The UCC School of Medicine could offer research opportunities or elective courses in sustainable healthcare, planetary health, and the impacts of climate change on human health. They could also join the Planetary Health Alliance and the Global Consortium on Climate and Health Education.

Community Outreach and Advocacy

D+

UCC promotes planetary health and sustainable healthcare via the working student group under the Irish Doctors for the Environment. University-affiliated hospitals have easy-access webpages for patients to view. UCC also has various community-facing courses and events regarding planetary health including the UCC Green Campus initiative podcast, as well as the Adult Continuing Education diploma titled "Environment, Sustainability, Climate".

Recommendations: Market environmental health webpages more to the patients, lectures regarding planetary health and impact of climate change on human health integrated into the medical teaching curriculum.

Support for Student-led Initiatives

B

UCC and the Medical School support student groups dedicated to planetary health. UCC also had some planetary health programs and initiatives through various societies, though they are not specifically targeted at medical students.

Recommendations: The school could dedicate a webpage or other resources available to students to locate planetary health or sustainable healthcare projects, activities and initiatives. Also, in addition to each class electing two class representatives each year, at least one cohort representative should be

Campus Sustainability

B

UCC as a whole, including the School of Medicine, successfully established the Green Campus program. Many existing university buildings that facilitate School of Medicine activities have won awards for sustainable energy and design.

Recommendations: Although there are environmentally friendly transportation options available to medical students, these are not properly advertised, so students are unaware of them and their benefits. Promotion on the Students Union and Medical Society social media pages will increase this awareness.



2022-2023 Summary Report

Ireland

University College Dublin

Overall

D

Planetary Health Curriculum

C-

Planetary health (PH) exists throughout medical education. However, the level of detail remains sparse, and inclusion of PH relies on individual lectures.

Recommendation: PH connections in the curriculum should be made more explicit, and more dedicated time should be invested. The medical school should identify PH (including climate change) as a priority theme and include that material in learning objectives and test questions, in addition to filling in content gaps. We want to emphasise that UCD recently partook in the Climate and Health in Medical Education (CHIME) workshop, aimed at improving PH teaching in Irish medical schools, with a particular focus on public health.

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.

Recommendation: Student-led research within PH currently relies too heavily on student initiatives. Thus, we would like to see a greater level of facilitation from the medical school to further enhance research opportunities within PH.

Community Outreach and Advocacy

F

This is the medical school's weakest metric. There is poor awareness of environmental advocacy programming amongst the students and faculty and a clear lack of community engagement from the institution, medical school, and hospital trusts.

Recommendation: We suggest that related material (e.g., clubs, events) gets communicated to the student body as a means to encourage engagement and advocacy.

Support for Student-Led Initiatives

D

The faculty and administration are supportive of student-led PH initiatives. However, we would like to see a greater level of support for such initiatives, e.g., facilitating connections between research mentors and students, and providing stipends for research projects.

Recommendation: 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.

Campus 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, in terms of influencing the university, but also affiliated hospitals and other healthcare settings.

Recommendation: A crucial starting point would be to assign one or more staff members to this endeavour.



2022-2023 Summary Report

Ireland

University of Galway

Overall

C

Planetary Health Curriculum

D

The school of medicine is currently undergoing a curriculum review to renew the medical school curriculum. There is support for greater planetary health and sustainability focus, however the translation of this support to tangible learning outcomes is still not there yet. There is some mention of topics related to planetary health in the existing curriculum, however the school should expand on these areas further and link them closer to the effects of climate change.

Recommendations: University of Galway has an amazing opportunity to become more planetary health focused in their teaching through the ongoing curriculum review. The School of Medicine should take this opportunity to develop planetary health learning outcomes across all years and disciplines.

Interdisciplinary Research in Health and the Environment

B

University of 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. Unfortunately, few of the projects 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

F

University of Galway has few community outreach initiatives and events relating to planetary health. These include an annual conference hosted by The Centre for One Health, sustainability events hosted by University Hospital Galway, and sustainability activities hosted by multiple student societies. However, the School of Medicine is not involved in any of these initiatives or events.

Recommendations: The School of Medicine should partner with initiatives already present in the hospital as well as the university community. 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 Irish Doctors for the Environment. Faculty and administration have invited one of the students to participate in the Medical Curriculum Review Steering Group to completely renew the medical curriculum. We hope to incorporate more planetary health topics into the medical curriculum. Student research in the area of planetary health is possible, but remains unfunded and largely based on student and individual lecturer initiative.

Recommendations: Although we greatly appreciate the support already received within the School of Medicine, we recommend the school become active partners to student-led initiatives, by providing a planetary health primary contact person in the School of Medicine with whom the students could liaise.

Campus Sustainability

C+

University of Galway is making great progress to make the campus more sustainable. The School of Medicine is aligned with this development through the university-wide Sustainability Strategy.

Recommendations: The School of Medicine is part of the university's 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 collaborate with the hospital.



2022-2023 Summary Report

Japan

Nagasaki University

Overall

C

Planetary Health Curriculum

C

Nagasaki University School of Medicine has many core curriculum subjects related to medicine. Although there are subjects that explain the relationship between the environment and disease, there seem to be few subjects that introduce them in depth. Also, like last year, we haven't had a chance to learn about the impact of medical care on the environment.

Recommendations: At Nagasaki University, there is a TBL class in which students deepen their learning through team discussions. Using this teaching method and treating the environment and illness as the theme will increase the student's knowledge and understanding of the relationship between the environment and disease.

Interdisciplinary Research in Health and the Environment

A-

In Nagasaki University, the Planetary Health Promotion Division has been promoting initiatives such as holding public lectures. With the establishment of Nagasaki University Interfaculty Initiative in Planetary Health in October 2022, we expect more researchers to focus 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

D+

At the Nagasaki University School of Medicine,, there is a series of lectures on local initiatives related to planetary health. Not only students but citizens can also participate in this course. In addition, a Japanese translation of "PLANETARY HEALTH" was released, making it easier for citizens to learn about planetary health. However, like last year, the collaboration between local public health centres and medical institutions is for conventional medical and nursing education purposes, not for planetary health education.

Recommendations: We think that efforts to promote global health in the community will increase and that the existing cooperation with medical institutions and connections with remote islands will be improved by including the purpose of planetary health education.

Support for Student-Led Initiatives

B-

Nagasaki University has an environment that supports the research of students interested in planetary health and the activities of student groups, making it a great place to deepen your knowledge of planetary health. However, it is rare for these to be made public to all students, and events that all students can participate in are not held, which led to this evaluation.

Recommendations: We believe that all students will be able to learn about global health research and student activities by introducing them in class and posting them on our website and SNS.

Campus Sustainability

C-

We are working on the environment based on the country's basic policy and consideration for the transportation environment. In addition, Nagasaki University's unique efforts, such as food and recycling, which were not last year, have improved, such as providing vegetarian meals in the cafeteria.

Recommendations: Student participation is essential for these efforts. New student-centered efforts, such as coordinating student cafeteria menus with co-ops and holding events where students present food waste, are highly beneficial.



2022-2023 Summary Report

New Zealand

University of Otago-Christchurch

Overall

C-

Planetary Health Curriculum

C

The University of Otago – Christchurch school of medicine (UOC) delivers most of its planetary health content in 4 sessions across 3rd and 4th year. While the breadth of teaching is thorough, the longitudinal integration of its delivery could be improved. Given the lack of elective teaching intrinsic to the degree structure, all students are exposed to a foundational level of planetary health teaching, however there is little scope for those with a particular interest in the field to pursue further structured content.

Recommendations: Longitudinal integration of planetary health teaching would likely improve the preparedness of graduates for the challenges they will experience in health due to climate change. Brief discussion of planetary health topics could be added to existing modules without major restructuring (e.g. describing the effects of extreme heat on cardiovascular disease in the general medicine modules).

Interdisciplinary Research in Health and the Environment

D+

The UOC is engaged with planetary health interdisciplinary research on an institutional level, however there is little local focus within the UOC itself.

Recommendations: A website which pools the planetary health research of the UOC and institution more broadly would be a good way to engage students, staff, and the broader community in how planetary health is evolving. Long-term hiring a member of staff within the UOC to perform such research would be ideal.

Community Outreach and Advocacy

F-

There appears to be minimal community action by the UOC.

Recommendations: It would be a good starting point for UOC to directly engage with community partners in order to help promote local buy-in addressing the local health implications of climate change. Additionally, due to the small size of the UOC, coordination with larger local institutions such as the University of Canterbury could be an effective approach.

Support for Student-Led Initiatives

B-

The UOC provides good coverage of planetary health issues, and opportunities for students to engage in planetary health projects, however coordinated student engagement (including at the institutional level) is lacking.

Recommendations: A centralised website for students to find planetary health projects would be beneficial for helping students to easily connect with supervisors who are engaged in this research. Additionally, including students within institutional bodies that are responsible for sustainability could help guide organisational processes so that any initiatives are better utilised by students.

Campus Sustainability

B

The office of sustainability is engaged in designing sustainability standards for the campus, such as carbon neutrality by 2030, and energy efficient/low waste buildings. Full divestment away from fossil fuels has been implemented on an institutional level. Student options for sustainable transport, however, are limited.

Recommendations: Focusing on enabling sustainable transport options for students would be an achievable goal to help improve the sustainability of the campus. This could be done through discounts for student bus transport and partnerships with community organisations to help students acquire, and learn to do basic maintenance on, bikes.



2022-2023 Summary Report

New Zealand

University of Otago-Dunedin

Overall

C

Planetary Health Curriculum

C

Planetary health is included within the University of Otago - Dunedin School of Medicine (DSM) curriculum, however it is heavily dependent on 2 lectures in 3rd year by a single lecturer and 1 in first year, with little relevant teaching in the clinical years (4th-6th). Given the lack of elective teaching intrinsic to the degree structure, all students are exposed to a foundational level of planetary health teaching, however there is little scope for those with a particular interest in the field to pursue further structured content.

Recommendations: Longitudinal integration of planetary health teaching would likely significantly improve the preparedness of graduates for the challenges we will experience in health due to climate change. Brief discussion of planetary health topics could be added to existing modules without requiring major restructuring e.g. describing the effects of extreme heat on CVD in the general medicine modules.

Interdisciplinary Research in Health and the Environment

C

The DSM is engaged with planetary health interdisciplinary research on an institutional level, however there is little local focus within the DSM itself with much of the research being on a national level.

Recommendations: A website which pools the planetary health research of the DSM and institution more broadly would be a good way to engage students, staff and the broader community in how planetary health is evolving. Further engagement with community to steer the research agenda could also help the local applicability of such research.

Community Outreach and Advocacy

F-

There appears to be minimal community action by the DSM.

Recommendations: The DSM directly engaging with community partners, as is done already in other areas of the university, would be a good start point to helping promote local buy in to addressing the local health implications of climate change.

Support for Student-Led Initiatives

B-

The DSM provides reasonable average of planetary health issues and opportunities for students to engage in planetary health projects, however coordinated student engagement including at the institutional level is lacking.

Recommendations: A centralised website for students to find planetary health projects would be beneficial to helping students easily connect with supervisors who are engaged in this research. Additionally, including students within institutional bodies which are responsible for sustainability could help guide organisational processes so that any initiatives are better utilised by students.

Campus Sustainability

B

The office of sustainability is engaged in designing sustainability standards for the campus, such as carbon neutrality by 2030, and energy efficient/low waste buildings. Full divestment away from fossil fuels has been implemented on an institutional level. Student options for sustainable transport, however, are limited.

Recommendations: Focusing on enabling sustainable transport options for students would be an achievable goal to help improve the sustainability of the campus. This could be done through discounts for student bus transport and partnerships with community organisations to help student acquire and learn to do basic maintenance on bikes. Additionally, school-wide recycling and compost would help reduce waste.



2022-2023 Summary Report

New Zealand

University of Otago-Wellington

Overall

C

Planetary Health Curriculum

C+

The University of Otago – Wellington school of medicine (UOW) has a thorough workshop in 4th year which covers many elements of planetary health, with several other isolated episodes of planetary health teaching over the course. Given the lack of elective teaching intrinsic to the degree structure, all students are exposed to a foundational level of planetary health teaching, however there is little scope for those with a particular interest in the field to pursue further structured content.

Recommendations: Longitudinal integration of planetary health teaching could significantly improve the preparedness of graduates to deal with the impact climate change will have on health. Brief discussion of planetary health topics could be added to existing modules without requiring major restructuring e.g. describing the effects of extreme heat on cardiovascular disease in the general medicine modules.

Interdisciplinary Research in Health and the Environment

C

The UOW is engaged with planetary health interdisciplinary research on an institutional level, however there is little local focus within the UOW itself with much of the research being on a national level.

Recommendations: A website which pools the planetary health research of the UOW and institution more broadly would be a good way to engage students, staff and the broader community in how planetary health is evolving. Further engagement with community to help steer the research agenda would also help the local applicability of such research.

Community Outreach and Advocacy

F-

There appears to be minimal community action by the UOW.

Recommendations: The UOW directly engaging with community partners, as is done already by other areas of the university, would be a good start point to helping promote local buy in to addressing the local health implications of climate change. Additionally, due to the small size of the UOW, coordination with larger local institutions such as Victoria University of Wellington could be an effective approach.

Support for Student-Led Initiatives

B-

The UOW covers planetary health issues and provides opportunities for students to engage in planetary health projects, however coordinated student engagement, including at the institutional level, is lacking.

Recommendations: A centralised website for students to find planetary health projects would be beneficial to helping students easily connect with supervisors who are engaged in this research. Additionally, including students within institutional bodies which are responsible for sustainability could help guide organisational processes so that any initiatives are better utilised by students.

Campus Sustainability

C+

The office of sustainability is engaged in designing sustainability standards for the campus, such as carbon neutrality by 2030, and energy efficient/low waste buildings. Full divestment away from fossil fuels has been implemented on an institutional level. Student options for sustainable transport, however, are limited.

Recommendations: Focusing on sustainable transport options for students would be an achievable goal to help improve the sustainability of the campus. This could be done through further discounts for student bus transport and partnerships with community organisations to help students acquire and learn to do basic maintenance on bikes. Additionally, school-wide recycling and compost would help reduce waste.



2022-2023 Summary Report

South Africa

University of Cape Town

Overall	C
Planetary Health Curriculum <p>Planetary health (PH) and sustainable healthcare (SH) topics are included in the FHS medical (MBChB) and health and rehabilitation sciences (HRS) programmes. Chronic curriculum overload; 'siloed' learning and timetabling; and low consciousness among educators are key barriers to integration however. There is growing awareness of the need for SH, despite insufficient leadership; few 'best-practice' examples; and the general priority given to cost-cutting over an ethic of sustainability.</p> <p>Recommendations: Adopt trans-disciplinary and inter-faculty approaches towards integration of PH and SH Incorporate indigenous ecological knowledge and values into curriculum design and delivery Integrate PH and SH into foundational year lectures and problem-based learning (PBL) cases Teach clinical educators about SH for more sustainable practice in clinical teaching environments</p>	C
Interdisciplinary Research in Health and the Environment <p>UCT's Khusela Ikamva ("Secure the Future") Sustainable Campus project is developing a diverse community of practice that is informed by leading research.</p> <p>Recommendations: Khusela Ikamva should include more FHS researchers. The FHS should seek local and international partners in PH research.</p>	C
Community Outreach and Advocacy <p>There is little awareness-raising and advocacy by the FHS to protect local communities' health from environmental and climate threats, and to promote more sustainable healthcare.</p> <p>Recommendations: Develop more active community partnerships that address environmental health threats. Produce educational materials about how to mitigate climate-health impacts.</p>	D+
Support for Student-Led Initiatives <p>The FHS provides little support and no funding for PH and SH-related student projects.</p> <p>Recommendations: Offer opportunities for quality improvement (QI) and community-based sustainability projects. Collaborate with student leaders for sustainability in curricula development and campus operations.</p>	D-
Campus Sustainability <p>UCT's Environmental Sustainability Strategy has a goal of a net zero carbon, water and waste-to-landfill campus by 2050 or sooner, led by a Director of Sustainability. Waste recycling is promoted; and sustainable water management is practised, but without effective monitoring and evaluation. Renewable energy use is low and green building standards are not prevalent. A pilot orientation course is being transformed into a 'sustainability literacy' course for all faculties.</p> <p>Recommendations: Increase energy efficiency and solar power on new green building projects. Increase staff training about promotion of waste recycling. Implement and evaluate the pilot orientation course on sustainability.</p>	C-



2022-2023 Summary Report

Switzerland

University of Basel

Overall

C

Planetary Health Curriculum

C

The Medical Faculty (MFac) of the University of Basel developed a comprehensive longitudinal Planetary Health curriculum and started implementing courses in autumn semester 2022. Correspondingly, several topics are still missing. Three elective courses on Planetary Health are offered for master students.

Recommendations: Teaching about strategies for communication with patients about the effects of environmental crises should be integrated in the core curriculum as well as components of sustainable clinical practice. Apart from frontal lectures, seminar and group sessions/project work would be valuable. Elective courses should be made available for bachelor students.

Interdisciplinary Research in Health and the Environment

C

The Sustainable Future Research Network at the University of Basel coordinates interdisciplinary research in the field of sustainability. However, Planetary Health is not a designated research field yet. The Swiss Tropical and Public Health Institute (Swiss TPH) conducts research in some fields of Planetary Health.

Recommendations: The MFac could facilitate interdisciplinary research projects on Planetary Health and offer master/doctoral thesis on the topic. The MFac should continue hosting yearly events (e.g. conference or symposium) related to Planetary Health, maybe in collaboration with other Swiss faculties.

Community Outreach and Advocacy

D

The MFac is a member of the Planetary Health Alliance, its European Hub and the GCCHE, but is not part of community partnerships. In 2022 the MFac organised an event open to the community and intends to organise yearly events for a community audience.

Recommendations: The MFac could facilitate events related to Planetary Health together with local organisations, students and teachers in order to involve the local community. Professional postgraduate education activities could be promoted and educational material for patients could be developed.

Support for Student-Led Initiatives

B

The student organisation Health for Future at the MFac dedicated to Planetary Health works with faculty members on courses and events. The University offers a funding program to lecturers and students to integrate sustainability topics into their courses.

Recommendations: The MFac could increase support to students interested in sustainable initiatives for example by creating and updating content on Planetary Health on its website (current developments, research opportunities, funding programs, mentors, etc.). The student representatives that serve on decision-making committees of the MFac could represent Planetary Health topics more prominently.

Campus Sustainability

C+

Sustainability is anchored in the University's Strategy 2022-2030 and Mission Statement. The Sustainability Office coordinates numerous projects and is currently developing a climate-neutrality strategy. Both the MFac as well as the University Hospital of Basel source about 70 % renewable energy.

Recommendations: A systematic review regarding the integration of sustainability criteria for procurement and events is still pending and the MFac should engage in these efforts as well. Environmental-friendly mobility could be facilitated and incentivised and measures for sustainable building practices need to be applied.



2022-2023 Summary Report

Switzerland

University of Bern

Overall

C-

Planetary Health Curriculum

C-

University of Bern does include Planetary Health (PH) in the curriculum. The topic is integrated in several lectures in the first year, but it lacks integration longitudinally.

Recommendations: We recommend improvements in different parts of the curriculum. On the one hand, at the level of lectures with a better longitudinal integration, in particular at Master level, addition of topics not covered so far, and training of lecturers on how to integrate PH into their courses. On the other hand, other forms of teachings (such as elective courses, clinical communication courses and problem based learning classes) should be implemented. We see a coordinating position provided by the faculty, as it is already the case in other universities in Switzerland, as the most important point to effect these changes.

Interdisciplinary Research in Health and the Environment

C

The University of Bern has a research group with the primary focus in PH being part of the institute of social and Preventive Medicine and a subgroup of the dedicated institute called Oeschger Centre of Climate Change Research of the University of Bern.

Recommendations: There is still a lack of integration of vulnerable communities to the research, information of students and society by creating a Planetary Health website with ongoing and past research and organising conferences or symposia.

Community Outreach and Advocacy

F-

The University of Bern has no community outreach related to PH.

Recommendations: We recommend creating more communication material for the community and the medical faculty to join PH organisations such as the Planetary Health Alliance.

Support for Student-Led Initiatives

C-

There is one student group dedicated to this topic: Health for Future, where student leadership is the only driving force.

Recommendations: We recommend that the medical school offers increased support to students interested in sustainable initiatives for example via creating a website that advertises mentors or opportunities for students relating to PH and prioritises grants for related research e.g. creating an annual sustainability award.

Campus Sustainability

B

Considering the university hospital and the university facilities as the medical campus, the University of Bern has made good progress to become a more sustainable campus, including fossil fuel divestments and using fully renewable energy on site, to setting achievable goals for carbon neutrality in the future.

Recommendations: We recommend to continue efforts and try to also focus on making lab spaces more sustainable and introducing sustainable guidelines for events and procurement and a public compost system.



2022-2023 Summary Report Switzerland

University of Fribourg

Overall

D+

Planetary Health Curriculum

C

The Medical Faculty (MFac) of the University of Fribourg includes some global health concepts in its curriculum, but lacks longitudinal integration. There are only a few classes specifically dedicated to Planetary Health (PH), and only at the Master's level. There is a group working on a longitudinal course on this subject, but the process is slow.

Recommendations: The MFac could address more topics concerning regional environmental threats caused by humans; these local topics could make the concept more tangible for students and illustrate their importance in the clinic. Their introduction in the bachelor level could initiate an early reflection. PH could be taught from the theoretical basics (e.g. planetary boundaries) to possibilities for transformative actions, or included in already existing lectures (cardiology, pneumology,...). The clinical aspect could be enhanced by introducing usual questions to ask to our patients to look for specific pathologies.

Interdisciplinary Research in Health and the Environment

D

The University of Fribourg hosted a few conferences on topics related to PH and the interdisciplinary research happening is a good start but it lacks a specific group or department on PH, as part of the MFac.

Recommendations: The University could give incentive to professors to initiate research in PH, to offer master/doctoral thesis. The MFac could also join the Planetary Health Alliance and the Global Consortium on Climate and Health Education.

Community Outreach and Advocacy

F-

The University of Fribourg has no community outreach or partnership concerning PH. The affiliated hospital offers very few educational materials accessible for patients and almost no postgraduate training.

Recommendations: The University could initiate community outreach and education on the health impact of the climate crisis by making the already existing conferences more visible or understandable for a less educated audience. Community partnerships could be established by providing the public with accessible and informative resources. The hospital should integrate postgraduate education on PH.

Support for Student-Led Initiatives

C-

The University of Fribourg offers general support to student-led initiatives and associations, with funds easily granted for projects. There is no student-led initiative in PH in the MFac.

Recommendations: We recommend that the MFac offers increased support to students interested in sustainable initiatives (e.g. adding a website that advertises mentors or opportunities for students relating to PH or ESH) and prioritizes grants for related research. A contact person for students could be appointed for the PH question. The students could also create a local group of the association Health for Future.

Campus Sustainability

C

The MFac has made good progress in becoming a more sustainable campus in collaboration with the whole university, to raise awareness of these issues, including initiatives that are accessible to students.

Recommendations: There is still much room for improvement in terms of campus sustainability. Targets and plans are already in place at the MFac, particularly in the area of procurement and construction, but we also recommend focusing on laboratory space and improving sustainable guidelines for events and purchasing. In the area of recycling, it would make sense to install a glass recycling programme.



2022-2023 Summary Report Switzerland

University of Geneva

Overall

C

Planetary Health Curriculum

C+

The Medical Faculty of Geneva (MFac) is providing the basis for a Planetary Health (PH) curriculum, particularly through the implementation by the dedicated working group since 2021. Some topics are still to be integrated, like the clinical management of different environmental diseases and concrete examples to reduce its environmental impact in practice.

Recommendations: We recommend to continue the longitudinal integration of new learning objectives and courses, in particular at Master level. Other forms of teaching could also be implemented in the future like workshops or group work. In order to facilitate the coordination of the working group, a position provided by the faculty would be of great help. We also advise to increase coordination with other faculties to provide students with sustainability education that meets the challenges.

Interdisciplinary Research in Health and the Environment

C+

The Institute of Global Health carries out a lot of research and specialised teaching on subjects related to PH. However, this knowledge is not easily accessible to medical students because of the distance separating the two campuses.

Recommendations: The links between the Medical Faculty and the Institute of Global Health could be strengthened to allow for the diffusion of knowledge.

Community Outreach and Advocacy

D+

MFac has organised several conferences on PH in 2022, which is a step forward. More progress needs to be made to share the knowledge more widely with the community.

Recommendations: Communication materials for the community could be developed. Geneva Medical School could also join PH organisations such as the Planetary Health Alliance.

Support for Student-Led Initiatives

B

MFac supports student groups dedicated to PH, like Health for Future Switzerland. Student leadership is however still needed for PH projects to be implemented.

Recommendations: We recommend that the Medical School creates a page "Health and Environment" on its website which would explain its commitment to this topic and bring together the teaching and research in progress at UNIGE to allow cross-faculty dissemination. An annual grant could also be

Campus Sustainability

D+

University of Geneva makes an effort to have a more sustainable campus. However, aiming at carbon neutrality by 2050 is insufficient by itself, while having no public and transparent plan of action can only undermine trust on what will really be done. Overall, the university's environmental transition is largely insufficient in both its goal and its pathway.

Recommendations: We recommend that the call for tender for the campus cafeterias be conditional on a much more extensive vegetarian and vegan offering than is currently available. We also call for more transparency from the university on its greenhouse gas emissions and the development, in collaboration with the student community, of a concrete plan to break the dependence on fossil fuels. In this sense, the action of the SDG Council could be strengthened.



2022-2023 Summary Report

Switzerland

University of Lausanne

Overall

C

Planetary Health Curriculum

C+

The Medical Faculty (MFac) of University of Lausanne's core and optional curriculum introduces planetary health (PH) concepts. However, there is a limited amount of time devoted to the topic, with the same few lectures repeatedly cited throughout the report card and brief mentions in other core curriculum lectures. PH is best explored in one dedicated elective course available for 3rd year students. The faculty intends to make major improvements to the curriculum with efforts undertaken by the platform for health and sustainability launched in 2022.

Recommendations: Lectures and small group sessions should be introduced longitudinally to cover the following topics: strategies on how to have conversations with patients about climate change and health, how one's clinical practice will have to be adapted (in specialties and general medicine) and the components of sustainable clinical practice. Further recommendations on insufficiently incorporated topics are included in question 21. The 3rd year elective course could be made available to other year groups and other health care students (to foster interprofessional exchanges on PH) or adapted into a one week summer/winter school.

Interdisciplinary Research in Health and the Environment

B

The MFac has held a few conferences/symposiums on planetary health, mainly directed towards health professionals and researchers. Research is being conducted on PH.

Recommendations: More funding could go into PH research, notably by creating a dedicated department or institute. Further PH research opportunities could be offered by tutors to medical students at the master and doctoral level, ranging from public health to clinical research. We encourage the development of panels and speaker series, by expanding the intended audience to medical students and the wider university community.

Community Outreach and Advocacy

F

The University of Lausanne has little community outreach relating to PH. The CHUV does not have accessible educational material for patients on environment and health.

Recommendations: Community partnerships with social, cultural, and sports organizations could be developed to address planetary health, providing the public with accessible and informative resources in the form of pamphlets, courses, and workshops (e.g., cooking skills, exercise plan, lifestyle choices, etc.). Community-level immersion programs for medical students could be developed.

Support for Student-Led Initiatives

B-

The platform for health and sustainability collaborates with Health for future Lausanne, a student-led association dedicated to health and sustainability which receives funding from the Lausanne medical students' association.

Recommendations: The school could create a formal student liaison position representing sustainability interests, serving on the medical school's decision-making council.

Campus Sustainability

B

The University of Lausanne as a whole has made substantial progress in sustainability and in communicating its goals towards carbon neutrality. Still, improvements are to be made by the MFac in itself (which is mostly spread throughout multiple sites that are separate from the main university campus), specifically in identifying its own carbon emissions contributions and how to reduce them.

Recommendations: Research should focus on how to make lab spaces more sustainable and on transport options students/staff use to access classes as well as their internships in remote areas/peripheral hospitals. Sustainability guidelines should be drawn up for supply procurement and events hosted at the medical school.



2022-2023 Summary Report

Switzerland

University of Zurich

Overall

D

Planetary Health Curriculum

D

The University of Zurich (UZH) Medical School (MeF) partially covers aspects of Planetary Health (PH) in the curriculum in a stand-alone lecture in the third year during the thematic block (TB) Public and Global Health. However, it lacks the horizontal and longitudinal integration in the curriculum.

Recommendations: PH could be taught from the theoretical basics (planetary boundaries, health co-benefits etc.) to possibilities for transformative actions in the core curriculum (longitudinal integration). It could be linked to existing learning content across TBs (horizontal integration). Apart from frontal lectures, seminar and group sessions/project work would be valuable. Introducing conversations about PH into conversations with patients could be introduced in clinical skills in 3rd-5th year. Interactive elective courses should be made available. The MeF could join existing initiatives such as the Planetary Health Academy and the Global Consortium on Climate and Health Education.

Interdisciplinary Research in Health and the Environment

D+

The UZH launched in 2022 the Institute for One Health Research (IOHR), that focuses on zoonoses, drug resistance and integrated approaches to metabolic disease research in humans and animals. However, there is no research on other PH aspects, such as the impact of climate change and ecological destruction (e.g. loss of biodiversity) on human health.

Recommendations: The MeF could launch interdisciplinary research projects on planetary health, offer master/doctoral thesis on the topic and join the Planetary Health Alliance.

Community Outreach and Advocacy

F

Both UZH and MeF have little community outreach relating to PH. The University Hospital Zurich (USZ) doesn't provide any information material for patients.

Recommendations: The MeF could contribute to educating the public around the health impacts of the climate crisis through the UZH's communication channels. They could organise a conference directly related to PH. More community partnerships relating to PH could be established.

Support for Student-Led Initiatives

D-

There is one student group (Health For Future Zurich) dedicated to the topic who work with faculty members and the students' council. The UZH supports student groups dedicated to sustainability, however there is no financial support from the MeF for planetary health initiatives.

Recommendations: The MeF could define an official contact person for PH education in the faculty with sufficient capacity to closely collaborate with students and faculty members on the topic. The MeF could create a webpage on the MeF-page dedicated to PH, highlighting possible mentors, grants and opportunities for related research for students.

Campus Sustainability

C

The MeF has not developed a strategy for achieving carbon neutrality until 2030. There are no guidelines for sustainable healthcare or sustainable research at the MeF. The UZH has made progress towards becoming a more sustainable campus, such as increasing the portion of renewable energy on site.

Recommendations: The MeF could create a sustainability commission with the aim of developing a strategy for climate neutrality of the faculty, including affiliated research (lab spaces etc.), in accordance with the UZH's goal by 2030. The MeF could advocate for sustainable healthcare towards its teaching hospitals and for healthy and sustainable diets in the cafeterias and catering of both UZH and USZ.



2022-2023 Summary Report

UK

Barts and the London School of Medicine and Dentistry

Overall

B

Planetary Health Curriculum

A-

The medical school embeds planetary health into the curriculum well in both core and elective modules. This year there has been greater focus on climate change and healthcare sustainability in year three.

Recommendations: The curriculum would benefit from more teaching on planetary health, healthcare sustainability and climate change in first and second year. This could be achieved by integrating this into lectures, or by introducing public/global health modules similar to those running in third and fourth year.

Interdisciplinary Research in Health and the Environment

B-

The medical school has the Wolfson Institute of Population Health that has faculty members whose research focuses on planetary health. The medical school has partook and hosted many conferences about planetary health and has big plans for future events.

Recommendations: The medical school should create a website that is focussed on planetary health and show updated ongoing research that is being completed by the university and around the world. The medical school should aim to join the Planetary Health Alliance

Community Outreach and Advocacy

B

The medical school partners with community organisations to promote planetary and environmental health, conducting research and drawing attention to the health impacts of climate change for those in the local area. Hospitals within the Barts trust have made important steps towards having opportunities for education on sustainable healthcare and planetary health available for employees.

Recommendations: More opportunities should be made available for students to be directly involved in working with communities for planetary health initiatives. The medical school and its affiliated hospitals should ensure accessible materials on climate change and health impacts are in place for patients.

Support for Student-Led Initiatives

B

Sustain@BL is the primary student-led initiative at Barts and the London. It receives good support and can liaise with faculty members in order to promote events as desired. However, it has not been a very active society this year, running only two main events so far. Various activities were run during Sustainability Week, including a Decarbonise the NHS talk on BL campus. BL students are also invited to join Queen Mary sustainability society events on the Mile End campus. There are very limited research and project opportunities for students in the medical school to get involved in planetary health and sustainable healthcare. While there is a sustainability board, the BL sustainability representative position remains vacant.

Recommendations: Increased programs to empower students to engage in projects related to sustainability. More support, funding and encouragement for sustainability in healthcare focussed events.

Campus Sustainability

C

QMUL has placed goals to achieve a more sustainable campus, with initiatives to encourage plant based food choices, as well as sustainable forms of transport. There is little specific to the medical school.

Recommendations: Work towards divestment in fossil fuels and creating an achievable net zero goal. It is necessary for BL to have its own Sustainability representative to coordinate with the wider University.



2022-2023 Summary Report

UK

Brighton and Sussex Medical School

Overall

B+

Planetary Health Curriculum

A-

Throughout the curriculum, Planetary health and sustainable healthcare is covered in varying degrees of detail. Core content in years 1 and 4 is notable for its breadth and depth of coverage, with multiple sessions in these years that are dedicated to learning about planetary health, climate change and its intersection with healthcare.

Recommendations: It should be noted that the bulk of the points scored can be attributed to a small number of core sessions. Our recommendation, like last year's report, would be to focus on incorporation of planetary health more longitudinally. The obvious targets for this would be years 3 and 5 where there is a relative lack of planetary health content.

Interdisciplinary Research in Health and the Environment

A+

BSMS continues to score excellently for research. This is primarily thanks to its sustainable healthcare group, annual conference and dedicated webpage. BSMS has a dedicated Sustainable Healthcare Group and the group's academic contacts and research activities are centralised 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

B-

There has been some recent improvement in community outreach at BSMS. Specifically, regarding widening participation and the affiliated hospital trust "Environment week".

Recommendations: BSMS should carry this momentum forwards to foster partnerships with community organisations, and advocate for creation of educational resources for patients regarding environmental health exposure and the health impacts of the climate crisis.

Support for Student-Led Initiatives

A

Overall, there is good support for student-led initiatives at BSMS and the wider institution. Student Sustainability Representatives are present to ensure sustainability can be incorporated into various aspects of the course.

Recommendations: BSMS offer increased support to students, for example by establishing dedicated funding for relevant student-led research.

Campus 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, utilising sustainable building practices, and incorporating sustainability criteria into their supply procurement. However, such changes are still greatly limited.

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. Establishing a clear programme and/or initiative in lab sustainability would also improve this criteria for BSMS.



2022-2023 Summary Report UK

Imperial College London

Overall

C+

Planetary Health Curriculum

C-

Imperial College London offers some planetary health teaching in elective courses, such as the Global Health iBSc, and the new Lifestyle Medicine and Prevention module for early years.

Recommendation: Imperial College London should increase the amount of planetary health teaching within the core curriculum and implement it longitudinally throughout the program to ensure students have a comprehensive understanding of planetary health and its importance.

Interdisciplinary Research in Health and the Environment

B

Imperial College London has dedicated researchers, affiliations with The Grantham Institute, and online resources for Planetary Health.

Recommendation: To enhance interdisciplinary research, Imperial College London should consider joining the Planetary Health Alliance or the Global Consortium on Climate and Health Education. Additionally, the College could host a conference to bring together experts and researchers from various fields to discuss Planetary Health.

Community Outreach and Advocacy

B-

Imperial College School of Medicine prioritises education on Planetary Health within its iBSc course, hosts a sustainability week for all students and staff, and offers lectures on Planetary Health for post-graduate students. The Imperial College Healthcare Trust provides online resources on the relationship between air pollution and poor health outcomes.

Recommendation: To increase community outreach and advocacy, it is recommended that Imperial College London should make more resources available online through the Imperial College Healthcare Trust. These resources should educate patients on the link between climate change and health effects, helping to raise awareness about Planetary Health and encouraging individuals to take action to reduce their impact on the environment.

Support for Student-Led Initiatives

C

Imperial College London provides numerous opportunities for students to pitch ideas and receive funding for their environmental projects. This includes, but is not limited to, The Enterprise Labs, The Venture Catalyst Challenge and the Undergraduate Research Opportunities Programme.

Recommendations: The need for a centralised web page where medical students can find mentors, current events and advice on how to get started with research into this field.

Campus Sustainability

B-

Imperial College School of Medicine, along with the wider College, has made excellent progress in becoming a more sustainable campus. This includes the introduction of multiple sustainability campaigns, reducing the use of fossil fuels, and employing staff dedicated to sustainability. The College has shown a particular commitment to food and catering sustainability.

Recommendation: While there is some room for improvement in campus sustainability, it may be challenging given the quantity of energy-exhaustive research that takes place in the medical school. Imperial College London has campaigns in place to encourage environmentally friendly travel, but further emphasis is recommended.



2022-2023 Summary Report

UK

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.

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 teaching. There is also no discussion of the impact of surgery on the environment.

Interdisciplinary Research in Health and the Environment

A-

Keele 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.

Recommendations: The research undertaken at Keele 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

A

Keele 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. Since the last report card, the hospital trusts have developed resources on patient exposures.

Recommendations: A community facing event regarding planetary health run by the medical school would be a great addition to the medical school's research focused events. Whilst community facing events regarding sustainability and planetary health are run by the university, the medical school is not involved in the planning or running of these.

Support for Student-Led Initiatives

A-

Funding is available for student projects throughout Keele University, which medical students are eligible to apply. Since the 2020/21 report, the medical school has developed a sustainability focused webpage.

Recommendations: A student-led planetary health group should be formed. This is being set up for 2023/24.

Campus Sustainability

A+

At Keele University, 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.

Recommendations: Whilst there are Green Event Guidelines, these could be enforced for student led events.



2022-2023 Summary Report

UK

Lancaster University Medical School

Overall

C

Planetary Health Curriculum

B

Strengths: Planetary health is well integrated longitudinally into the curriculum through workshops and lectures. Elective courses in the form of Study Skills Modules (SSMs) encourage students to engage with the topic.

Recommendations:

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

Interdisciplinary Research in Health and the Environment

C

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

Recommendation:

Initiate collaboration between LEC and the medical school to focus on interdisciplinary planetary health research. Work with the university and the local community to generate interest and communication around research.

Community Outreach and Advocacy

D+

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

Recommendations:

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

Support for Student-Led Initiatives

C

Strengths: SSMs offer research opportunities into planetary health for students. The University continues to promote climate awareness through student-led initiatives.

Recommendations:

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

Campus Sustainability

C

Strengths: Lancaster University continues to demonstrate a positive commitment to sustainability, with extensive information on their plans available on their website. They have declared a climate emergency and have taken steps to increase the contribution of renewable energy to their energy mix.

Recommendations: Our recommendations for the University remain the same from our 2021 Report.



2022-2023 Summary Report

UK

Newcastle University Medicine Malaysia

Overall

C

Planetary Health Curriculum

B

NUMed does include planetary health in the curriculum, but it lacks integration longitudinally. In second and fifth year, various aspects of planetary health are discussed in lectures and in seminar work (ILAs).

Recommendations: There is a lack of teaching about introducing the effects of anthropogenic toxins on human health. This could be explored in lectures and seminars.

Interdisciplinary Research in Health and the Environment

C-

NUMed has a dedicated team focused on planetary health and sustainable healthcare who are involved in organising events regarding planetary health. Research opportunities are also made available to the students, however, these opportunities are largely dependent on the students' individual initiatives.

Recommendations: It will be highly beneficial for NUMed to dedicate grants and specified support and/or facilities for researches in planetary health on campus. Such support should be promoted to the students at the beginning, or earlier, of the academic year, to increase participation.

Community Outreach and Advocacy

C-

NUMed has a dedicated team focused on planetary health and sustainable healthcare who are involved in organising events regarding planetary health. Research opportunities are also made available to the students, however, these opportunities are largely dependent on the students' individual initiatives.

Recommendations: It will be highly beneficial for NUMed to dedicate grants and specified support and/or facilities for researches in planetary health on campus. Such support should be promoted to the students at the beginning, or earlier, of the academic year, to increase participation.

Support for Student-Led Initiatives

C

NUMed supports student groups dedicated towards planetary health, namely through encouraging student participation in research, supporting events dedicated towards planetary health, or through funding the Planetary Health Society. The students in the Planetary Health Society also work closely with faculty mentors to raise awareness on the topic within the university.

Recommendations: Encouragement and support from NUMed in annual co-curricular activities where students can gain experience towards sustainable agriculture, wilderness or outdoor programs, local volunteer opportunities to build community resilience to the effects of climate change, and many more, will greatly increase its reach and impact in the university community, while also ensuring the continuity of such experiences in the future.

Campus Sustainability

D

NUMed has made progress in becoming a more sustainable campus. A student-staff team called the Environment and Sustainability Campus Committee (ESCC) has been set up to advocate for sustainable policies and implement green practices. They've made good progress by opening an Eco Lounge, organising waste recycling workshops, and by implementing campaigns to reduce single-use packaging waste.

Recommendations: We recommend sourcing a part of our campus' energy from renewable energy sources. It is best to establish a plan for a stated goal in reducing the institution's CO2 emissions, and to have a designated staff member whose primary role is to oversee future sustainability interventions.



2022-2023 Summary Report

UK

Newcastle University

Overall

B-

Planetary Health Curriculum

B

Newcastle University has a considerable amount of coverage and integration of planetary health concepts throughout both the core and elective curriculum. A substantial amount of teaching is dedicated to planetary health and integrated throughout all years via a spiral curriculum.

Recommendations: The inclusion of specific planetary health topics, such as over-prescribing as a cause of climate health harm, to be included by expanding on existing teaching.

Interdisciplinary Research in Health and the Environment

B

Newcastle University has both dedicated faculty members who have their primary research focus in planetary health, and a dedicated department for interdisciplinary research aiming to increase sustainability, One Planet.

Recommendations: One Planet could potentially be better utilised by the medical school in terms of sustainable healthcare. Newcastle Medical School could also consider organising a conference directly related to this, or set up a specific newsletter or dedicated webpage for planetary health news.

Community Outreach and Advocacy

D

Newcastle University has numerous links to community outreach projects through the Students Union, including many environmental projects, although the medical school is not involved in these and there are none that directly relate to health.

Recommendations: Members of the medical school could utilise these links with community outreach projects to focus on developing community outreach projects relating to planetary health.

Support for Student-Led Initiatives

B

Newcastle University has various opportunities for medical students to do research related to planetary health, and a compulsory sustainability QI project for final years. There are also various student-led societies relating to planetary health and sustainability, such as Students for Global Health, which have faculty support.

Recommendations: The medical school could develop a specific webpage or newsletter for PH to make this information more easily accessible and easier to locate.

Campus Sustainability

B

Newcastle University has ambitious sustainability plans, with a dedicated Office of Sustainability, with a plan to achieve carbon neutrality by 2030.

Recommendations: There potentially need to be clearer plans for the Medical School specifically in terms of focusing on lab sustainability and the energy efficiency of the building itself. The institution could also introduce sustainable guidelines for events hosted across the university.



2022-2023 Summary Report

Oxford University Medical School

Overall

B-

Planetary Health Curriculum

B

The curriculum score has continued to increase from last year, reflecting further integration of planetary health themes throughout the preclinical and clinical courses. Thanks to persistent effort from students and preclinical lecturers, the standard-entry medicine (SEM) score has been brought in line with the graduate-entry (GEM) score this year. We would like to particularly thank the ESH lead Dr SanYuMay Tun for her work in this area, with her new sessions on Planetary Health boosting this score area.

Recommendations: We recommend that the Primary Care department, which has inherited lots of the teaching time from the Public Health course in 5th year, ensures that ESH is well-integrated to prevent a drop in score next year. The psychiatry course in 5th year should also work to address the mental health effects of climate change in their teaching.

Interdisciplinary Research in Health and the Environment

B

There remains a disconnect between Planetary Health (PH) researchers and the student body. Students are often unaware that PH research options are available (eg. for Final Honour Schools projects).

Recommendations: We recommend that the medical school creates a centralised website for PH to help link students to PH researchers within the division and advertise funding opportunities. We also recommend the medical school joins the Planetary Health Alliance to encourage interorganisational research.

Community Outreach and Advocacy

D

There has been interest from several local community groups in joining teaching sessions for the medical school. In addition, individual doctors and medical professionals within the trust are working to deliver post-graduate teaching on planetary health topics.

Recommendations: We recommend that community groups, including local environmental groups, are invited to help deliver a workshop on how charities and community organisations can promote public health. This could be integrated into the Community Medicine rotation or Patient-Doctor course.

Support for Student-Led Initiatives

B-

There has been little improvement in this section from last year. Opportunities could include teaching on or funding support for Sustainability QI projects.

Recommendations: As for Interdisciplinary Research, we recommend the creation of a centralised webpage for planetary health within Oxford University Medical School.

Campus Sustainability

B

In November 2021 the Medical Sciences Division 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.

Recommendations: We recommend that the medical school requires all events to abide by sustainability criteria, and would like to encourage the medical school to actively promote and take part in sustainability initiatives adopted by the central University of Oxford.



2022-2023 Summary Report

UK

Peninsula Medical School

Overall	B
Planetary Health Curriculum	B
<p>Peninsula Medical School's curriculum covers many metrics in depth in the core curriculum. However, some topics are covered in one session across the course or not at all e.g., reproductive health effects of environmental toxins, importance of Indigenous knowledge, and benefits of a plant-based diet.</p> <p>Recommendations: Peninsula Medical School has a spiral curriculum and therefore we recommend that these topics are incorporated into existing sessions across all year groups</p>	
Interdisciplinary Research in Health and the Environment	A
<p>Within Peninsula Medical School, the Sustainable Earth Institute and Global Health Collaborative run many projects relating to planetary health. The medical school is a member of the Global Consortium on Climate and Health Education but not of the Planetary Health Alliance.</p> <p>Recommendations: Peninsula Medical School could organise a conference directly related to Planetary Health. They could also join the Planetary Health Alliance.</p>	
Community Outreach and Advocacy	D+
<p>Peninsula Medical School's student newsletter sometimes contains planetary health and sustainable healthcare topics, and the University of Plymouth's internal communications often includes these topics too.</p> <p>Recommendations: Peninsula Medical School could offer community-facing courses or events relating to planetary health, and more community partnerships relating to planetary health in student selected units. They could also collaborate with affiliated hospitals to provide post-graduate teaching on planetary health and educational materials for patients.</p>	
Support for Student-Led Initiatives	A-
<p>There has been little improvement in this section from last year. Opportunities could include teaching on or funding support for Sustainability QI projects.</p> <p>Recommendations: As for Interdisciplinary Research, we recommend the creation of a centralised webpage for planetary health within Oxford University Medical School.</p>	
Campus Sustainability	A-
<p>Peninsula Medical School recognises sustainability as a key principle in decisions about procurement of supplies and campus food and beverage selections, with investment in making lab spaces more resource conserving. They also aim for further improvement with an approved plan for carbon neutrality by 2030 and steps are being taken to implement a sustainable investment platform for organisation of medical school events.</p> <p>Recommendations: Improvements can be made by moving completely away from investing in fossil fuel companies and guaranteeing onward investments into renewable energy companies and campus initiatives. Peninsula Medical School could also set guidelines and policies for events hosted by the medical school to adhere to sustainability criteria.</p>	



2022-2023 Summary Report

UK

Queen's University Belfast

Overall

B+

Planetary Health Curriculum

B+

Queen's University Belfast focuses on planetary health content in its new C25 curriculum, integrating longitudinally into core lectures, tutorials and case-based discussion.

Recommendations: Continue to integrate planetary health and climate change into the core C25 curriculum through lectures, tutorials and cases. Content could be covered in greater depth in lectures and we recommend that the university ensures that projects such as the mandatory SusQI SSC and Carbon Literacy programme are brought to fruition.

Interdisciplinary Research in Health and the Environment

B+

Queen's University Belfast has a large number of researchers engaged with research into planetary health research and healthcare sustainability, some through SECA. The university has also hosted a number of planetary health events in the last year.

Recommendations: The university should continue to support faculty members who have a primary research focus on planetary health, and should try to involve members of the community when making decisions on research agendas.

Community Outreach and Advocacy

B

Queen's University Belfast has improved their score in this metric from last year, and continues to partner with community organisations to provide planetary health-related events.

Recommendations: The medical school would benefit from ongoing integration with community organisations and working with local hospital trusts to provide more information for patients on environmental health exposures and the effects of climate change on health.

Support for Student-Led Initiatives

A

Queen's University Belfast offers a large array of opportunities for student-led initiatives in planetary health and environmentalism, and provides a great deal of support for students wishing to get involved.

Recommendations: The medical school is slowly directing more resources towards support for student-led initiatives, and we encourage them to update their website to include information on planetary health initiatives and prioritise grants for planetary health-related research.

Campus 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 lacking in terms of its commitment to carbon reduction and neutrality, renewable energy and divestment from fossil fuels. We hope that the new Net Zero strategy will tackle these issues and improve transparency and publicly-available information.



2022-2023 Summary Report

UK

St George's, University of London

Overall

C-

Planetary Health Curriculum

C+

St George's, University of London (SGUL) has good coverage of planetary health topics in the curriculum, but these are specific sessions with titles referencing climate change which may deter students from attending if they feel it is not relevant to their learning. The University is making institutional changes with student partnerships and actively hiring roles to tackle the climate crisis.

Recommendations: Integrate planetary health themes longitudinally using the spiral curriculum and scope of PPS (Patients, Populations and Society) by creating learning objectives and encouraging lecturers to briefly comment on the climate crisis in the context of their taught material. It would be wonderful to see earlier years' students timetabled sessions to work with Environmental Health MOOCs delivered by experts in the field. However, the intersection of marginalized groups and their disproportionate harm due to the climate crisis must specifically be covered, to score higher in future assessments.

Interdisciplinary Research

D-

There are faculty members at St George's with a primary or secondary focus on planetary health. Research focused primarily on outdoor air and noise pollution in London, Europe and Sub-Saharan Africa

Recommendations: Join an international planetary health organisation such as the Planetary Health Alliance and/or the Global Consortium on Climate and Health Education. Turn the 'Environment and Sustainability' webpage into a central hub for highlighting planetary health research at SGUL.

Community Outreach and Advocacy

D-

St George's University of London is trying to reduce their own impact on the environment as an institution and focusing on in-curriculum before expanding their efforts out into the community.

Recommendations: Introduce a dedicated section of the student/staff newsletter to planetary health issues.

Support for Student-Led Initiatives

C-

SGUL has many active student groups; Ethical & Environmental Union Officers and societies such as EcoSoc, Vegan Society and Students for Global Health who are dedicated to various aspects of planetary health. 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.

Campus Sustainability

C+

St George's Medical School has maintained an admirable effort towards campus sustainability, especially in the provision of sustainable options for students with regards to waste disposal and transport. Attributions released committing to further campus sustainability and carbon neutrality are an encouraging indication to future developments.

Recommendations: The provision of guidelines for medical school events and food and beverages is a key milestone for future improvement. Furthermore, introduction of compost bins would be a welcome development of the current waste disposal system. Continuing forward with the recruitment for an associate dean for sustainability and the aims of its 'Strategic Vision for 2030' will also see St George's improve.



2022-2023 Summary Report

Swansea University

Overall

C

Planetary Health Curriculum

B+

Within the curriculum there are lots of on-going changes due to the curriculum review. This has involved many new additions within planetary health, especially in the Integrated Clinical Method (ICM) sessions. The addition of the future medics fortnight has allowed the medical school to deliver more teaching in planetary health as well as provide lectures on topics that they have struggled to fit into the condensed 4 year course.

Recommendations: There is a lack of teaching about how marginalised groups are most affected by climate change. This could be discussed in ICM and on placement, especially during our Community Based Learning (CBL) teaching sessions.

Interdisciplinary Research in Health and the Environment

F+

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-

There is very little outreach or advocacy within the institution.

There is opportunity to increase this even if it was just publishing a newsletter highlighting how students and faculty could get involved.

Support for Student-Led Initiatives

C-

The medical school encourages societies and student-led initiatives that focus on sustainable healthcare, however there needs to be more financial support to support student interest. This however, has improved from last year with faculty members being employed in planetary health and more faculty involvement in societies. A full-time employed sustainability lead in the medical school has significantly affected the progress of sustainable teaching and practices on the course.

Campus 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.



2022-2023 Summary Report

UK

The University of Glasgow School of Medicine, Dentistry and Nursing

Overall

C+

Planetary Health Curriculum

C+

Since the appointment of a "Global and Planetary Health" Vertical Theme lead, education on PH has greatly improved at the University of Glasgow over the last year, with the addition of several lectures on the topic. It would nonetheless benefit from being integrated more longitudinally.

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, introduce teaching on how to have conversations with patients around PH.

Interdisciplinary Research in Health and the Environment

B

The Centre for Sustainable Solutions continues its commendable work as a research hub for resources and partnerships for staff and students to implement sustainable solutions. The medical school also have several members with research interests in planetary health and healthcare sustainability.

Recommendations: The medical school can become more engaged with creating dialogues with communities affected by climate change that can inform future planetary health research. To improve this relationship we would like to see events organized by the medical school to encourage public discourse surrounding planetary health and the research that is undertaken.

Community Outreach and Advocacy

D+

The university has fostered an innovative partnership with the Glasgow City Council which has led to the launch of GALLANT to produce sustainable solutions in Glasgow that will improve public health. There are continuing professional development courses available on planetary and occupational health topics.

Recommendations: Although we appreciate that the University has continued its efforts to engage with the public, the medical school has not used this momentum to pioneer its own connections with patients and the community. Next year this can be achieved through organising regular events on the topic and creating easily accessible patient resources at affiliated teaching hospitals about PH.

Support for Student-Led Initiatives

A-

The University of Glasgow's student body are greatly involved in sustainability, with many intersectional and interdisciplinary events being hosted throughout all domains, from the arts to the sciences. Amongst these, while planetary health may not always be the main focus, it is nonetheless included. The University is largely supportive of these initiatives, yet efforts remain predominately "bottom-up".

Recommendations: Support for student-led initiatives mostly comes from the wider University rather than the Medical School specifically. We recommend the Medical School to develop a website that centralises information around PH or ESH, including opportunities and mentors.

Campus Sustainability

C+

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.



2022-2023 Summary Report

UK

University College London

Overall

A-

Planetary Health Curriculum

B+

While the level of longitudinal integration can still be improved, UCLMS is constantly striving to embed planetary health teaching widely across its curriculum, with the goal of exploring topics in depth in the relevant lectures. While the majority of planetary health learning is found in pre-clinical years through for example the Year 1 Citizenship Toolkit module, there is an overarching Intended Learning Outcome for every year of the MBBS stating "Appreciate the impact of climate change and sustainability in healthcare".

Interdisciplinary Research in Health and the Environment

B

While the level of longitudinal integration can still be improved, UCLMS is constantly striving to embed planetary health teaching widely across its curriculum, with the goal of exploring topics in depth in the relevant lectures. While the majority of planetary health learning is found in pre-clinical years through for example the Year 1 Citizenship Toolkit module, there is an overarching Intended Learning Outcome for every year of the MBBS stating "Appreciate the impact of climate change and sustainability in healthcare".

Community Outreach and Advocacy

B

Since last year, community outreach by the FMS has improved in two main ways, namely the introduction of further opportunities for continuing professional development with regards to planetary health, and in improving communications with students about climate and sustainability news. In order to improve further, the FMS could look into helping its partnered hospitals reach their goals of increased community engagement by working on the provision of planetary health educational materials.

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. A wide range of different event types are present for UCL members to develop their understanding of planetary health and sustainability, and it is clear by the support given from UCL Careers through 'Careers in Sustainability' workshops, that the institution is keen on supporting and preparing students for integrating sustainability in their lives beyond UCL. A focus for future years would be to provide paid research opportunities for planetary health/sustainable healthcare projects.

Campus Sustainability

A+

Year on year UCL has been continually improving the sustainability of its campus, taking on projects and initiatives that show UCL is trying to lead the way in reducing an institution's environmental impact. They have achieved ISO14001 certification in recognition of this commitment, and they appear on their way to achieving net zero carbon buildings by 2024. One main area for improvement though, would be to introduce compulsory, rather than recommended, guidelines for making events more sustainable.



2022-2023 Summary Report

UK

University of Aberdeen

Overall

B-

Planetary Health Curriculum

C

Planetary Health topics are gradually being implemented more into the curriculum. However, the current detail is quite brief and is only explored further in some Student Selected Components.

Recommendations: Include more teaching on sustainability in the curriculum. Even one lecture slide in some relevant lectures to introduce it as a theme throughout.

Interdisciplinary Research in Health and the Environment

B

At the University there is research being done in different areas of planetary health and healthcare sustainability with clinicians who have a focus on planetary health. However, there is no specific institute for interdisciplinary planetary health research. The medical school now has a sustainability steering group which was created in January 2023. The University of Aberdeen has set out its long term strategy (for 2040) which places Sustainability and Interdisciplinary at the centre of its research priorities. It has established Health, Nutrition and Wellbeing as one of five key Interdisciplinary Research Challenges and appointed a Dean (a professor from the School of Medicine, Medical Sciences and Nutrition (SMMSN)) to lead this.

Recommendations: Give students more information about different research opportunities available for them to do with sustainability.

Community Outreach and Advocacy

B

The medical school has multiple societies that promote planetary health through events. Some societies that relate to planetary health are Students for Global Health, MedAid Society and the Sustainable Medicine society. There is a large amount of outreach work done by the Rowett Institute. They undertake a lot of community events in the city and across Scotland and publish material to promote a better understanding of the research they undertake and its influence on policy.

Recommendations: Create more community based events and have more café med and sci events focused on planetary health and sustainable medicine. Also, there could be more educational material accessible for patients on environmental health topics.

Support for Student-led Initiatives

B

The medical school offers students grants to support students interested in sustainability initiatives and has research opportunities for students if the students seek out these opportunities.

Recommendations: It would be good if there could be more information for students on how to do a sustainable QI and a webpage to centralise information on planetary health. Also, the University could help facilitate connections between research mentors and students who have interest in Planetary Health.

Campus Sustainability

B+

The main medical school campus building has achieved the BREEAM 'Excellent' rating and draws its heat and electricity from Combined Heat and Power Station operated by the NHS. Aberdeen University has a committed steering group that focuses on campus sustainability and is working towards net zero emissions by 2040.

Recommendations: Improve transport links with more frequent buses and buses to the other hospitals used by the medical schools



2022-2023 Summary Report

UK

University of Birmingham

Overall

C-

Planetary Health Curriculum

D

The University of Birmingham (UoB) Medical School's core curriculum has limited coverage of the relationship between health, the changing climate and sustainable healthcare. There is no member of faculty specifically responsible for overseeing the incorporation of planetary health and sustainable healthcare as a theme throughout the course.

Recommendations: UoB Medical School should consider additional integration of planetary health and sustainable healthcare themes into its curriculum, increasing both lectures & small group teaching..

Interdisciplinary Research in Health and the Environment

B-

UoB Medical School hosts conferences and symposiums, promoting collaboration. It lacks a process for climate change/environmental injustice input from the wider community and has no website to centralise existing/past research on health & the environment.

Recommendations: The University should create an accessible website to centralise planetary health research, as well as a process for community input or decision-making on the research agenda..

Community Outreach and Advocacy

D

UoB Medical School partners with organisations on sustainability and hosts events/workshops on planetary health. The University Hospitals Birmingham Trust is developing an e-learning course on climate change. The Integrated Care Board website offers info/resources on environment/sustainability in the NHS.

Recommendations: The university should join a planetary health or education for sustainable healthcare organisation, expand the range of planetary health events, and increase access to educational materials on environmental health exposures, climate change and health impacts.

Support for Student-Led Initiatives

B-

The University of Birmingham provides numerous ways for students to participate in sustainability. Its website is dedicated to these opportunities, and the Guild of Students has an Ethical and Environmental Officer. Medical students can join the Earth Resus Team, part of MedSoc, and there are research projects and placements available.

Recommendations: The university could improve by providing further grants for sustainability initiatives and increasing the promotion for talks and events, exhibitions, and student-led green initiatives such as the "Grow with Joe" community compost project and the Wayfarers Hiking Society.

Campus Sustainability

C

UoB has committed to multiple initiatives to promote sustainability on campus, including dedicated staff, a Sustainability Steering Group, and a Committee. It has also joined the UN Race to Zero to reach net zero Carbon for Scopes 1 & 2 by 2035, and Scope 3 by 2045.

Recommendations: The university can improve by providing more eco-friendly transport options for placement, retrofit structures to be energy efficient, and increase engagement with sustainable food policy.



2022-2023 Summary Report

UK

University of Bristol

Overall	C+
Planetary Health Curriculum University of Bristol includes planetary health in the core curriculum appropriately. In the first and second years of the medical curriculum, various aspects of planetary health are discussed in standalone lectures. Elective student choice projects which focus on key aspects of planetary health are also offered and funded by the medical school. Recommendations: Creation of a lecture focusing on the cardiorespiratory effects of pollution discussing the most polluted points in Bristol. The effect of planetary health on marginalised populations could also be further emphasised in the course. Furthermore, material regarding how to have conversations about planetary health and the co-benefits with patients could be integrated.	B
Interdisciplinary Research in Health and the Environment The Elizabeth Blackwell Institute and the Cabot Institute conducts research related to Planetary Health within the University of Bristol. The University of Bristol also holds multiple symposiums and conferences related to planetary health. Recommendations: Bristol Medical school could gear their research agenda more towards Planetary Health as it is not currently the main focus. The Bristol Medical School should consider PHA or GCCHE membership	B
Community Outreach and Advocacy The University of Bristol engages well with the community but could do more to help educate patients about more sustainable healthcare practices and the health effects of climate change. Recommendations: To partner with more community organisations. To include opt-in regular planetary health related articles within the bulletins (medical student society and medical school) and to create planetary healthcare and sustainable healthcare educational materials for patients.	D+
Support for Student-Led Initiatives Support for student-led initiatives from Bristol Medical School is strong and they are actively trying to improve ESH in the curriculum. These efforts are propelled by Prof. Thompson and Prof. Tilling, whom act as the Sustainability Co-leads for the Medical School. The Medical School has also opted to fund a student-led sustainability champion role. Recommendations: Support for student-led activity is plenty. However, collaboration with the Galenicals (the medical student society) to create a sub society of medical students passionate about sustainable healthcare and planetary health could prove advantageous.	C-
Campus Sustainability The University of Bristol puts substantial effort in trying to make the campus more sustainable such as divesting from fossil fuels, photovoltaic panels, waste management programs and more. Recommendations: The University of Bristol could set more stringent sustainability guidelines for procurement and events. They have begun retrofitting buildings and should continue this practice..	B+



2022-2023 Summary Report

UK

University of Buckingham

Overall

D+

Planetary Health Curriculum

C

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, gastrointestinal system, CSFC and in the health, psychology and diversity module in phase I. PH is incorporated in the perioperative block in phase II. In addition, PH has been incorporated in the Global Health student selected component (SSC) in phase II.

There needs to be efforts of incorporating PH in the cardiovascular and reproductive health modules in phase I.

Interdisciplinary Research in Health and the Environment

D

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. 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. UBMS has developed a patient involvement forum, where planetary health is an item on the agenda. MKUH had a conference focusing on planetary health, students were welcome to attend.

Community Outreach and Advocacy

C

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 (e.g MKUH) and GP practices for patients, as well as students to access. Students are required to complete online hospital e-learning modules that include sustainability within healthcare.

Support for Student-Led Initiatives

C-

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. There are currently two students representing planetary health at UBMS and there are efforts put in place to grow the number of representatives.

Campus 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.



2022-2023 Summary Report

UK

University of Cambridge

Overall

C

Planetary Health Curriculum

B+

The University of Cambridge includes teaching on planetary health and sustainable healthcare, but these are focused in standalone lectures within the clinical curriculum, with only a single lecture in Year 1 outside of this.

Recommendations: Further integration into both the clinical and preclinical course content where relevant would take pressure off existing lectures to cover a diverse range of topics, especially with the anticipated challenges to health the climate crisis poses. These are most relevant in preclinical courses covering pathology, homeostasis and biochemistry and within clinical communication teaching.

Interdisciplinary Research in Health and the Environment

C-

Whilst the School of Clinical Medicine has a few individuals working on related research, neither the clinical school nor institution have dedicated research groups or departments. Many of the criteria were met instead by university societies.

Recommendations: There is opportunity for a planetary health research position or group, possibly working in collaboration with Cambridge Zero to continue symposia and develop a website to centralise research. Efforts should be made to create a process for impacted community members to advise or make decisions on the research agenda. The clinical school should also look to engage researchers in healthcare sustainability research.

Community Outreach and Advocacy

F

The School of Clinical Medicine has no communications team to engage with local organisations. While there are events planned to engage with planetary health, these are primarily academic-facing.

Recommendations: Existing organisations involving clinical students (CUSPE, Healthy Planet, SfGH) already act with local organisations - the School of Clinical Medicine could partner with these organisations and continue to promote them. Developing community links is also recommended.

Support for Student-Led Initiatives

C

The School of Clinical Medicine has a student representative on its Climate Change and Sustainability Working Group, but there is generally not much energy dedicated towards supporting student projects. Student projects can be conducted as part of the Living Lab, although there appears not to be many medical students involved with this.

Recommendations: To promote initiatives in sustainability and quality improvement, the medical school could collaborate with research groups from various University departments to publicise student-selected projects in this area. In addition, promotion of existing SSCs in this area should continue.

Campus Sustainability

B+

The School of Clinical Medicine has put good measures in place to ensure the teaching facilities and general medical school campus reach high standards regarding sustainability.

Recommendations: Continue sustainability working group meetings to discuss suitable swaps and new initiatives as well as pursuing fossil fuel divestment. Liaising with site-technicians can coordinate technology and infrastructure upgrades and to promote greater use of recycling facilities. The School can encourage students to make use of public transport through provision of financial support.



2022-2023 Summary Report

UK

University of Leicester

Overall

C

Planetary Health Curriculum

C+

University of Leicester includes various aspects of Sustainable healthcare into the new, reformed curriculum featuring specific LOs about sustainability/planetary health. They also offer elective opportunities to develop this understanding as SSCs.

Recommendations: The evaluated topics are often only briefly discussed so could be covered in more detail.

Interdisciplinary Research in Health and the Environment

C

The University of Leicester has webpages and resources to guide students into researching sustainability, however these are not med school specific.

Recommendations: Leicester Medical School could build their own resources to aid students in researching sustainability. They could also join the Planetary Health Alliance and the Global Consortium on Climate and Health Education.

Community Outreach and Advocacy

F

University of Leicester Medical School has little community outreach relating to planetary health. Leicester Teaching Hospitals does have some accessible educational materials for patients.

Recommendations: More community partnerships relating to planetary health. 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 has one student group dedicated to planetary health- The Sustainable Medicine society. This is supported well by the student union and faculty within the medical school. In addition the University has opportunities for students to participate in co-curricular planetary health programs through various societies (Sustainable Medicine, Go Green, Nutritank, Hiking, Planet Change, 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.

Campus Sustainability

C+

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.



2022-2023 Summary Report

UK

University of Liverpool

Overall	C+
Planetary Health Curriculum	B
<p>University of Liverpool does include planetary health(PH) in the curriculum and incorporates it longitudinally, but it lacks in depth lectures and specific content regarding PH and sustainability.</p> <p>Recommendations: There is a lack of student-selected courses in ESH or PH, nor is there content regarding a few different areas including mental health, impacts on marginalised communities (e.g. homeless, BAME communities). The depth of other areas is also a significant area for improvement.</p>	
Interdisciplinary Research in Health and the Environment	C
<p>UoL Medical School faculty has made an active effort in increasing awareness and research in PH, by hiring more staff, student surveys on transport and creating their own webpage on PH. However there is disjointedness with the medical student community and the LUHFT Sustainability Team.</p> <p>Recommendations: University of Liverpool Medical School could organise a conference directly related to Planetary Health, with help from affiliated departments in the University. They could also join the Planetary Health Alliance and the Global Consortium on Climate and Health Education.</p>	
Community Outreach and Advocacy	C
<p>The university's affiliated hospitals provide accessible educational materials for patients regarding environmental exposures although information about climate change and its impacts is limited. A wide range of post graduate courses, though this could be increased. However, the medical school itself does not actively promote planetary health and organise community-facing events/courses or regularly provide updates regarding planetary health in university communications.</p> <p>Recommendations: More community partnerships relating to planetary health in SSCs, increased promotion of PH and active consideration into information provision to communities.</p>	
Support for Student-Led Initiatives	B-
<p>The support from the University is encouraging, with a plethora of sustainability focused events being held throughout the year for all students. Since the last report, the medical school has initiated creating a sustainability webpage and has worked to facilitate student participation in sustainability projects and although these efforts can be improved.</p> <p>Recommendations: Recommendations include offering financial support and awards for work in sustainability (essays/research/QIP projects), initiating a specific research program dedicated to planetary health, alongside relaunching the student-staff focus groups within the medical school, and advocating for the presence of a student liaison for sustainability.</p>	
Campus Sustainability	C
<p>There is an overarching theme within the campus sustainability findings that the medical school has insufficient published information and or action plans for multiple realms of sustainability measures. They have however made progress appointing a new sustainability officer who is undertaking a dedicated project to address the carbon footprint of placement transport.</p> <p>Recommendations: The medical school should publish their own specific plan to reduce their carbon footprint in alignment with the central university, with a Net Zero plan and target included in this. They should also consider creating eco-friendly guidelines for events or spaces shared with other departments.</p>	



2022-2023 Summary Report

UK

University of Manchester

Overall

C

Planetary Health Curriculum

D

The University of Manchester MBChB curriculum offers a small amount of formal teaching that covers some aspects of planetary health and ESH, however, this is spread sporadically throughout the years and lacks meaningful structure. There have, however, been some improvements, with students now having the opportunity to study planetary health and ESH topics as part of the Personal Excellence Pathway. .

Recommendations: Planetary health and ESH could be introduced as part of Personal Professional Development, encouraging students to consider their own environmental impact as well as the role of doctors in planetary health and ESH.

Interdisciplinary Research in Health and the Environment

B

There are several researchers within the Faculty of Biology, Medicine and Health (FBMH) carrying out research with respect to climate change and health, with university-wide collaborations overseen by the Manchester Environmental Research Institute.

Recommendations: The University of Manchester medical school could join a national or international planetary health or ESH organization, such as the Planetary Health Alliance or Global Consortium on Climate and Health Education. Although the university has a comprehensive Environmental Sustainability website, it could be improved for ease of use. The medical school or FBMH could also create a more detailed webpage, perhaps detailing improvements and opportunities for students within the faculty.

Community Outreach and Advocacy

D-

Although the University of Manchester has a strong reputation for engaging the public, there is very little evidence that the medical school is involved in these partnerships.

Recommendations: Involvement of the medical school in creating and running community partnerships relating to planetary health.

Support for Student-Led Initiatives

B-

The University of Manchester has several student-orientated pathways that promote research into planetary health. The medical school has vastly improved support for student-led planetary health initiatives, with students from a number of societies (e.g. Students for Global Health) taking an active role in committees that are discussing how planetary health and ESH can be incorporated into the MBChB curriculum.

Recommendations: The MBChB programme could collaborate with other university departments (e.g. MERI), facilitating connections between research mentors and students that have an interest in planetary health. These opportunities could be publicised to students via a faculty webpage or in email news bulletins.

Campus Sustainability

A-

The University of Manchester Environmental Sustainability Team is well-organised and has far-reaching influence in all aspects of campus life, including carbon neutrality, renewables utilisation, transportation, recycling, campus events, procurement, and divestment.

Recommendations: The medical school could benefit from designating a specific person who would be responsible for improving and monitoring sustainability within the medical school, in collaboration with the wider Environmental Sustainability Team. Currently, there is a staff member within the medical school who has voluntarily set up a climate committee, but this is not part of their official job role.



2022-2023 Summary Report

UK

University of Sheffield

Overall

B-

Planetary Health Curriculum

B

The University of Sheffield includes Planetary Health (PH) topics throughout the curriculum. Public health teaching in particular includes brief mentions of many of the key PH topics.

Recommendations: Further integration of PH topics into the curriculum may be beneficial, including discussing environmental impacts of doctors' actions outside of lectures dedicated specifically to the topic.

Interdisciplinary Research in Health and the Environment

B-

PH research is taking place within the medical school via the School of Health and Related Research (SchARR), which has links to other centres conducting sustainable research such as the Institute of Sustainable Food.

Recommendations: The medical school could consider how to involve communities who are being disproportionately affected by climate change into decisions about the research agenda, and they could set up a website for planetary health news..

Community Outreach and Advocacy

C

The medical school has some community outreach relating to PH, with SSC options in phase 2b and 3a enabling students to work with community organisations, though beyond this there is not much community outreach.

Recommendations: The medical school could host community-facing events about planetary health, especially topics which may be relevant to the local community. There could also be engagement in professional education activities for graduates to ensure their planetary health knowledge remains up to date.

Support for Student-Led Initiatives

B

There are multiple student-led groups which are supported by the university to engage in PH activities, such as Healthy Planet Society and Students for Global Health. Furthermore, multiple societies in the wider university work on sustainability issues or engagement with nature.

Recommendations: Further support could be put in place for students interested in conducting PH-related research, including providing information about available opportunities and mentors and providing grants to conduct such research.

Campus Sustainability

C+

The university and the medical school have both made some progress towards campus sustainability, including significant action on utilising renewable energy and divesting from fossil fuels. However, despite promising targets being set across more sectors, including waste, transportation and food, there is significant work to be done to meet these.

Recommendations: Targets to improve sustainability in areas such as transportation and waste need to be met. Examples could include introducing more sustainable travel options for students going on placements, introducing food waste recycling, and enforcing stronger sustainability guidelines for food, procurement, and events.



2022-2023 Summary Report

UK

University of Southampton

Overall	B-
Planetary Health Curriculum University of Southampton 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 and in seminar work (ILAs). Recommendations: There is a lack of teaching about introducing conversations about planetary health into conversations with patients. This could be introduced in clinical skills, or early years GP teaching.	A
Interdisciplinary Research in Health and the Environment The University of Southampton does have staff whose primary research in on planetary health, although the institution lacks a coordinated way in which this research is disseminated to students. Recommendations: The University of Southampton could create a webpage to centralise planetary health research and to coordinate more communication between research teams.	C
Community Outreach and Advocacy University of Southampton Medical School has little community outreach relating to planetary health. There are opportunities to take part in the Social Impact scheme, however there seems to be no scheme dedicated entirely to planetary health. Conferences have been run, but these were aimed mostly at prospective students, and not the wider public. Recommendations: More community partnerships relating to planetary health in SSCs.	D+
Support for Student-Led Initiatives The University of Southampton Medical School supports students with planetary health initiatives. There is the student led Sustainable Medicine Society that focuses on planetary health that is supported by the university. There is also a planetary health group that actively works with the medical school staff on numerous projects, including developing education material for other students. Recommendations: Support for student-led initiatives is generally good.	C
Campus Sustainability The University of Southampton Medical School has made good progress in becoming a more sustainable campus. In particular initiatives to make food and beverage more sustainable, sustainable travel options and a recycling and compost system. Recommendations: We suggest that the University publish more accessible energy usage figures on their public facing web pages, as well as what measure are in place to make old buildings more sustainable and energy efficient.	B+



2022-2023 Summary Report

UK

University of Warwick

Overall

C+

Planetary Health Curriculum

C+

Summary: Warwick Medical School (WMS) currently offers an optional module on planetary health, and planetary health can be integrated into elective placements. The impacts of climate change on health and healthcare systems, and exploring environmental exposures within a patient's history are integrated into the curriculum, however there is currently no strategic oversight.

Recommendations: We recommend integration of planetary health themes into the curriculum. We hope to identify a member of staff to lead on curricular integration and badging of teaching related to planetary health. Their first task will be to review our curriculum against the ESHC framework and make recommendations for additional integrated teaching.

Interdisciplinary Research in Health and the Environment

B

Summary: The University offers a broad range of interdisciplinary research opportunities, however there are limited interactions with WMS. There is a lack of participatory research opportunities for individuals most affected by climate change to shape the research agenda within the university or WMS.

Recommendations: We recommend developing programmes for greater collaboration between the Global Sustainable Development faculty and WMS to facilitate future interdisciplinary research.

Community Outreach and Advocacy

D-

Summary: The University conducts significant community outreach work however, this has not yet been mirrored by WMS. All WMS hospital's have published an up to date Green Plan, but none offer patient education regarding planetary health or have any commitments in place to improve patient education.

Recommendations: We recommend that WMS-specific outreach projects are developed. Furthermore, research could be undertaken to highlight areas for improvement in each of the associated hospitals' Green Plans.

Support for Student-Led Initiatives

B

Summary: Support for student-led initiatives mostly comes from University rather than WMS. However, there are a number of student groups within WMS who champion sustainability and outdoor adventures. Medical student advocacy for sustainability is supported through collaborative decision-making forums.

Recommendations: Students are setting up a sustainability society to create a hub for student sustainability within WMS. We recommend that there is a sustainability student representative appointed to the SSLC. Finally, a WMS specific webpage dedicated to sustainability research would encourage more student involvement in planetary health.

Campus Sustainability

B+

Summary: The University has an active Energy and Sustainability Team whilst WMS currently has a small staff-led 'Green Team', an extensive recycling program, and some labs within the school are involved in a lab sustainability program. However, specific sustainability guidelines and efforts to increase sustainable transport options within WMS have not yet been developed.

Recommendations: We recommend WMS develops school-specific sustainability guidelines and requirements for events. WMS could engage further in efforts to make sustainable food available. Finally, we recommend that WMS implements strategies to encourage sustainable transport options.



2022-2023 Summary Report

US - Midwest

University of Cincinnati College of Medicine

Overall

D

Planetary Health Curriculum

D

UCCOM is beginning to include planetary health education in fourth-year elective coursework, but as of now there is little to no integration of this information into the core curriculum.

Recommendations: Planetary health should be a part of the core curriculum across the preclinical years, in addition to clinical elective work. As a first step, lectures and panel discussions could be added to the Physician and Society courses in the M1 and M2 years, with eventual integration of environmental health topics into relevant organ system blocks.

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 or specifically highlighted for addressing the adverse health impacts of climate change.

Recommendations: UCCOM could 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. We would also recommend adding a health and sustainability focused organization into the possible community partners for the M1 Service-Learning project.

Community Outreach and Advocacy

D-

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 directly 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. Medical students occasionally receive information on topics related to sustainability, and this liaison could help provide our student body with more frequent updates.

Support for Student-Led Initiatives

D

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: Support for student-led initiatives mostly comes from the wider University rather than the medical school. We recommend that the medical school offers increased support to students interested in sustainability initiatives. One option would be to create a website that advertises mentors or opportunities for students relating to PH or ESH and prioritizes grants for related research.

Campus 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.



2022-2023 Summary Report

US - Midwest

Creighton University School of Medicine

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. There have only been two lectures presented in this discipline.

Creighton SOM briefly covers the effects of climate change and health epidemiology in a few of the M1 and M2 system-based blocks. However, this could be covered in greater depth and extended to all blocks.

Recommendations: The SOM can improve by ensuring that PH topics are integrated into all curricular tracks as well as clerkship years. Specifically, there are opportune Case Based Learning sessions that could incorporate PH-related issues and sustainable treatment options. These efforts will promote longitudinal learning and awareness of the pathophysiology as well as social processes implicated in PH.

Interdisciplinary Research in Health and the Environment

B

The SOM has connections to interdisciplinary planetary health research through Creighton's Masters of Public Health. However, it is not clear how many faculty members research planetary health issues and students' knowledge of this potential collaboration is limited. Creighton SOM is supportive of and helps sponsor the Global Health Conference Midwest, a key platform for PH education and research advancement.

Recommendations: With the addition of the Research Chair position in the SOM's Student Government this year, there is opportunity to establish a stronger relationship with faculty in the MPH program.

Community Outreach and Advocacy

C-

Students in the SOM volunteer at a variety of community organizations that promote planetary and environmental health, however, the school is not in a formal partnership with these organizations.

Recommendations: 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. A particular opportunity for this would be during the Magis Free Clinic for patients without insurance. Formal partnerships with community organizations focused on planetary health would be beneficial for students and the community.

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 limit sustainability initiatives.

Recommendations: Institutional attention on PH and online publication of efforts would help engagement.

Campus Sustainability

D+

Creighton's Office of Sustainability is leading a slow but deliberate movement toward Creighton's sustainability goals. It plans to reduce carbon emissions by 50% by 2028 and reach carbon neutrality by 2050. We encourage the school to reset its carbon neutrality goal to sooner than 2050.

There is a need for more sustainable building practices, particularly in the new medical school building.

Recommendations: The SOM lacks sustainability practices seen around Creighton, such as composting. The SOM should reconcile these differences and develop its own rigorous sustainability standards.



2022-2023 Summary Report

US - Midwest

Creighton University SOM- Phoenix Regional Campus

Overall	C
Planetary Health Curriculum <p>Creighton University School of Medicine Phoenix Regional Campus (SOM PRC) does include planetary health in the curriculum. The majority of planetary health topics are discussed within the gold track curriculum lectures of components I and II, including one student interest selective. There is room for improvement in this area as the majority of planetary health information came from two lectures and one selective during component II only.</p> <p>Recommendations: Currently, a majority of the planetary health related topics have been briefly addressed in a single gold track curriculum lecture. We recommend a more longitudinal integration of these topics as well as an increase in lectures covering these topics more in depth. Specifically, case based learning could include questions related to planetary health and indigenous populations. A lecture in each organ system that outlines the effects of climate on health outcomes specific to that system would be beneficial.</p>	C-
Interdisciplinary Research in Health and the Environment <p>Creighton University SOM PRC does have current efforts to expand research in the realm of planetary health and is part of the Global Consortium on Climate and Health Education.</p> <p>Recommendations: Identify and engage with faculty who are able to mentor students in planetary health research. It would be useful to host a local conference within the institution specific to planetary health. Additional involvement of community members with input on research topics is needed.</p>	C
Community Outreach and Advocacy <p>Creighton University SOM PRC has little community outreach and engagement relating to planetary health. Creighton clinical affiliates do not offer accessible and meaningful information on the health impacts of climate change and environmental exposures. The university has a strong focus on community engagement, however this does not include a current focus on climate health. The expansion of relationships with the community is needed.</p>	D+
Support for Student-Led Initiatives <p>Creighton University SOM PRC has a student founded and led Planetary Health and Sustainability Task Force, as well as Sustainability Chair positions on class student government. Each of these were initiated and carried out by students.</p> <p>There are ample opportunities for student initiatives and funding for academic projects and research within the medical school. The awareness and ease of use and collaboration with faculty members are limiting factors to expansion in sustainability initiatives.</p>	B-
Campus Sustainability <p>Creighton University as an institution has seen improvement towards sustainability goals. There is a dedicated Office of Sustainability, however these initiatives are not housed on the Phoenix campus and this improvement is not reflected on the Phoenix Campus.</p> <p>Recommendations: Incorporate renewable energy and composting in the health science building. We also encourage more in depth partnership with the Office of Sustainability and a clear outlining of sustainability goals for the Phoenix campus.</p>	D+



2022-2023 Summary Report

US - Midwest

Indiana University School of Medicine

Overall

C

Planetary Health Curriculum

C-

IUSM integrates social determinants of health into its core curriculum. Students gain an understanding that environmental exposures have a disproportionate impact on marginalized communities.

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 throughout the curriculum and include that material in learning objectives and test questions for each course.

Interdisciplinary Research in Health and the Environment

C

IUSM is a member of Global Consortium on Climate and Health Education and of the Association for the Advancement of Sustainability in Higher Education.

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 and could start by offering planetary health research projects through their summer research program [Indiana University Medical Student Program for Research and Scholarship (IMPRS)].

Community Outreach and Advocacy

D+

Indiana University 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. The institution collaborates with local governments and organizations, but the medical school is not directly involved in these interactions nor facilitates collaborations by itself.

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 medical students to be a part of this work.

Support for Student-led Initiatives

B

IUSM has a local chapter of Medical Students for a Sustainable Future supported by faculty.

Recommendations: It would be beneficial for IUSM to have a student liaison representing sustainability interests who serves on a decision-making council.

Campus Sustainability

C

IU has implemented robust strategies to encourage and provide environmentally-friendly transportation options for students and to reduce the environmental impact of commuting. IU has a dedicated Office of Sustainability and a Climate Action Planning Committee, but has yet to divest from fossil fuels or to release a formal plan for carbon neutrality.

Recommendations: IUSM has many opportunities to improve its sustainability practices: divest from fossil fuels, re-implement composting, use renewable energy for campus buildings, and implement programs to make labs more environmentally sustainable.



2022-2023 Summary Report

US - Midwest

Loyola University Chicago Stritch School of Medicine

Overall

C

Planetary Health Curriculum

C

LUC Stritch School of Medicine (SSOM) continued to improve the for-credit elective CCGH-250 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 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

C

Loyola SSOM is involved with very few community-focused environmental justice programs and opportunities for community engagement.

Recommendations: Opportunities exist for interdisciplinary collaboration 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

C-

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 by providing 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.

Campus Sustainability

B

In 2022, 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 with the SSOM 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.



2022-2023 Summary Report

US - Midwest

Mayo Clinic Alix School of Medicine

Overall

C-

Planetary Health Curriculum

C-

The effects of climate change on health are briefly mentioned throughout the curriculum, which is where many of the points for this section were gained. However, in depth coverage of these issues is not provided, and the inclusion of climate change material would be much more effective if distributed throughout the organ blocks rather than in the longitudinal FRAMES curriculum.

Recommendations: We recommend adding additional depth to the curriculum to expand on the effects of climate change on human health, and incorporating this content into specific organ blocks..

Interdisciplinary Research in Health and the Environment

C-

Mayo Clinic has engaged in some research activities pertaining to planetary health and hosted a conference that included discussion of the subject in 2020. However, there is not a clearly sustained focus on planetary health research.

Recommendations: Mayo Clinic Alix School of Medicine 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.

Community Outreach and Advocacy

B-

Mayo Clinic Alix School of Medicine has negligible community outreach relating to planetary health. As an institution, Mayo Clinic has organized a handful of community-facing events about environmentalism, and there are some patient education handouts that are marginally related to this topic.

Recommendations: Include more community partnerships related to planetary health, specifically at the medical school level.

Support for Student-Led Initiatives

C

The Mayo Clinic Alix School of Medicine itself provides very little support for student-led sustainability related initiatives. On the institutional level, there are programs such as the Green Advocate program that allow employees of the Mayo Clinic to become involved in sustainability efforts around the clinic; however, these are poorly publicized.

Recommendations: MCASOM could distribute an email at the beginning of the academic year informing new and current students about the Green Advocate program. Additionally, the school could include links to Mayo's sustainability efforts and research opportunities directly on the medical school webpage.

Campus Sustainability

D

The Mayo Clinic institution has adopted several initiatives for improved campus sustainability, primarily focused around reducing energy consumption and unnecessary waste. However, there is limited investment in renewable energy and no current plans for carbon neutrality. No staff represent the medical school specifically in the area of sustainability.

Recommendations: Mayo Clinic Alix School of Medicine could appoint a sustainability representative within the medical school and establish medical school specific sustainability guidelines for events and procurement. We recommend that the Mayo Clinic institution adopt more aggressive climate goals, including goals for carbon neutrality and encourage advocacy and movement toward oil and gas divestiture.



2022-2023 Summary Report

US - Midwest

University of Minnesota Medical School

Overall

C

Planetary Health Curriculum

C

The University of Minnesota does include planetary health (PH) in the curriculum, but it lacks integration longitudinally. PH is not a learning objective in any core curriculum and is often covered at a surface level. **Recommendations:** Considering the curriculum updates in 2023, we recommend the medical school begins incorporating The Climate Change and Health curriculum that was created by climate champions at UMN. We also encourage them to use this report to assess the progress of their curriculum changes and involve students, such as MS4SF, to ensure the new curriculum is addressing the health impacts of climate change.

Interdisciplinary Research in Health and the Environment

C

Since our last report, the medical school has joined the GCCHE and increased institutional support for planetary health conferences. This is exciting progress. **Recommendations:** There is a lack of faculty within the medical school doing research at the intersection of climate, sustainability, and health despite the existence of such projects in the past. We recommend increased efforts to recruit faculty within this field and collaboration across disciplines.

Community Outreach and Advocacy

B-

The UMN incorporates community engagement into their climate health programming, particularly through the Institute on the Environment (IonE). The School of Nursing offers many climate learning opportunities for providers. The Medical School is increasing community engagement through educational opportunities for staff, students, and patients. **Recommendations:** Continue expanding opportunities for community engagement and interdisciplinary collaboration. Increase community-facing programs and educational materials using examples detailed throughout this document regarding the health impacts of climate change. Center community perspectives in the development of these programs and materials.

Support for Student-Led Initiatives

B

There is a lot of momentum among UMN students with student-led PH initiatives, which do have some support from the UMN. However, within the medical school, the students generally lack institutional assistance to propel these initiatives forward and often have to go to great lengths to seek out support. **Recommendations:** We recommend strengthening support and availability for student-led PH initiatives, which could include a centralized PH webpage/tab that students can access for information about activities and potential mentors. We encourage a greater focus on developing co-curricular or interdisciplinary PH programs and events to promote exposure to PH specifically within the medical school.

Campus Sustainability

C

The UMN has stated its commitment to sustainability in the MPact 2025 Systemwide Strategic Plan and is creating a new 2023 Climate Action Plan. However, there is a lack of medical school-specific policies and guidelines, which is a missed opportunity to support the University's overall sustainability goals. **Recommendations:** We recommend that the medical school align itself better with the broader University's sustainability goals in the pending Climate Action Plan. The medical school can work closely with the Office of Sustainability to provide specific implementation and education about these plans to medical students, staff, and faculty, as well as to oversee specific sustainability goals for the medical school.



2022-2023 Summary Report

US - Midwest

University of Missouri-Columbia School of Medicine

Overall

D+

Planetary Health Curriculum

F

The University of Missouri-Columbia School of Medicine has one lecture that includes planetary health during the Child Health Core Rotation on the Columbia campus. There are also required learning objectives from which students may elect to explore the effects of environmental factors on disease, but the lack of specific direction to address these topics leaves planetary health as an elective component of the curriculum.

Recommendations: Explicitly include environmental risk factors in learning objectives and lectures.

Interdisciplinary Research in Health and the Environment

D+

The University of Missouri-Columbia has several avenues for faculty and students to get involved with interdisciplinary planetary health research, but the School of Medicine is largely excluded. Moreover, this interdisciplinary research is not highlighted with conferences or seminars focused on planetary health.

Recommendations: Join a planetary health alliance. Host guest lectures and events so more students are exposed to planetary health research. Encourage collaborations between School of Medicine faculty and interdisciplinary groups focused on planetary health research. Encourage medical students to conduct their own planetary health research with physicians and present it at a dedicated planetary health conference.

Community Outreach and Advocacy

D

The University of Missouri-Columbia School of Medicine and MU Health do not have community-facing events and do not offer educational materials on planetary health for CME or to inform patients. With the School of Medicine's support, Medical Students for a Sustainable Future (MS4SF) sends out regular communications related to planetary health and partners with the City of Columbia's Sustainability Office.

Recommendations: Create educational pamphlets for patients about environmental exposure and climate change health impacts that can be made available on the MU School of Medicine website and affiliated MU Health online resources. Consider making local MS4SF events open to the public.

Support for Student-Led Initiatives

A-

The University of Missouri-Columbia has research opportunities available for students interested in planetary health, but it does not provide grants or fellowships specific to sustainability initiatives. The university is supportive of student sustainability groups and hosts a variety of co-curricular planetary health events, but the medical school curriculum board lacks members who represent sustainability interests.

Recommendations: Offer funding specifically for student-led planetary health initiatives. Appoint a student to the curriculum board who can ensure that planetary health and sustainability concepts are incorporated.

Campus Sustainability

C+

The University of Missouri-Columbia's primary medical education building received Platinum LEED certification and prioritized the use of locally sourced materials in its construction. The university has explicit goals for carbon neutrality detailed in the Office of Sustainability's Climate Action Plan.

Recommendations: Establish sustainability guidelines for medical school events and for the procurement of food and drink at MU Health cafeterias. Advocate for the divestment of fossil fuel industries from the University of Missouri-Columbia's endowment portfolio and for increased utilization of renewable energy.



2022-2023 Summary Report

US - Midwest

Northwestern University-Feinberg School of Medicine

Overall	C+
Planetary Health Curriculum <p>Strengths: Feinberg promotes understanding of planetary health as an important determinant of individual and community health. Feinberg is also willing to translate student feedback into action at the curricular level.</p> <p>Recommendations: There are opportunities to 1) distribute and more evenly integrate environmental health content across all the phases of the curriculum 2) add more planetary health-related topics to the curriculum (e.g. the effect of extreme heat on cardiovascular outcomes, the neuropsychological effects of environmental degradation) 3) design and offer elective courses on planetary and environmental health for interested students</p>	B-
Interdisciplinary Research in Health and the Environment <p>Strengths: Northwestern University's Institute for Sustainability & Energy is an excellent hub for interdisciplinary research and education on environmental health with an accessible and open platform, conducive to collaboration.</p> <p>Recommendations: There are opportunities to promote interdisciplinary research collaboration between ISEN and the Feinberg School of Medicine on planetary and environmental health topics</p>	A-
Community Outreach and Advocacy <p>Recommendations: There is currently little community engagement on topics relating to planetary health. There are opportunities to 1) partner with local Chicago organizations on planetary health initiatives 2) offer public talks and events related to planetary health 3) create CME courses related to planetary health</p>	D
Support for Student-Led Initiatives <p>Strengths: The Feinberg School of Medicine has a student group (Climate Action Group) dedicated to community engagement and discussing the health effects of climate change. The Resnick Family Social Impact Program funds student sustainability-related initiatives, though this is not targeted toward medical students.</p> <p>Recommendations: There are opportunities to get medical students involved with sustainability-related initiatives. There are opportunities to 1) provide medical students with funding to carry out QI projects on sustainability 2) create a more specific and up-to-date web page that features opportunities for students to get involved with planetary health initiatives/research at the medical school</p>	C
Campus Sustainability <p>Strengths: Northwestern University has the explicit goal of net zero emissions by 2050. Sustainable building practices are utilized for new buildings on the medical school campus, and the majority of old buildings on the medical school campus have been retrofitted to be more sustainable.</p> <p>Recommendations: There is still much to improve with Feinberg campus sustainability. There are opportunities to 1) provide receptacles for composting in medical school buildings 2) create strong sustainability guidelines for Feinberg events, which should include robust guidelines for food and beverage selections, including reducing meat and decreasing plastic packaging</p>	C



2022-2023 Summary Report

US - Midwest

The Ohio State University College of Medicine

Overall

B

Planetary Health Curriculum

B-

The Ohio State University College of Medicine (OSUCOM) currently has some planetary health-focused curriculum, but is working with students on major curriculum changes. There are many existing lectures that allow for seamless integration of climate health and social determinants of health materials.

Recommendations: Planetary health can be further integrated into M1-M2 through lectures, e-modules, and Community service projects. In M3-M4, it can be included in case based small group discussions.

Interdisciplinary Research in Health and the Environment

A-

OSUCOM has several faculty researchers in climate health and the Byrd Polar and Climate Research Center but lacks a centralized department forming interdisciplinary projects or a partnership with the Byrd Center. Our CCTS Community Engagement Program allows a forum for community member advocacy.

Recommendations: OSUCOM could work to make climate focused research 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 annually.

Community Outreach and Advocacy

B-

OSUCOM offered the Climate Change and Health: Implications for Clinical Practice conference as available to the public. OSUWMC website offers articles about climate health that are free to patients.

Recommendations: OSUCOM could establish partnerships with community organizations focused on planetary health. OSUCOM should include climate focused information in regular communications to faculty and students and create internal Planetary health courses for CME credits.

Support for Student-Led Initiatives

A

OSUCOM supports student groups dedicated to planetary health, particularly the registered student group, Sustainability in Medicine (SiM). SiM works closely with faculty to expand student engagement in sustainability and is a registered affiliate with Medical Students for a Sustainable Future. At OSUWMC, students can join the Green Team, the Interprofessional Council, and the President & Provosts Council on Sustainability.

Recommendations: OSUCOM should continue to work closely with Sustainability in Medicine. We also recommend that SiM continues to build partnerships with other student organizations to ensure maximum participation by students. OSUCOM should create a website to promote ongoing programs, including, but not limited to, one-off volunteer opportunities, planetary health events, wilderness outings, etc.

Campus Sustainability

C

OSUWMC aligns with university goals and has a dedicated sustainability program including: full-time Sustainability Program Manager, a Commodity Manager, and an energy engineer. Highlights in the 2022 fiscal year include: 4.7% reduction in energy usage in OSUWMC and OSUCOM buildings, 29% of the electricity supplied to the medical center at main campus and off-site medical center locations was carbon neutral, 37% waste diversion, and expansion of our Green Team.

Recommendations: Sustainability needs to be embedded into the core of operational decision-making in order to accomplish carbon neutrality by 2050, and can't just be for a few people to accomplish.



2022-2023 Summary Report

US - Midwest

University of Oklahoma College of Medicine

Overall

D

Planetary Health Curriculum

F

The University of Oklahoma College of Medicine (OUCOM) does not significantly include planetary health in the curriculum. The OU-Tulsa School of Community Medicine does include some planetary health topics in one course.

Recommendations: There is a lack of planetary health content throughout the core and elective curriculum. During the upcoming curriculum reform, the medical school should formalize planetary health as a component of its educational program and learning objectives.

Interdisciplinary Research in Health and the Environment

C

OU houses many researchers from different fields interested in planetary health and sustainable healthcare; however, there is a lack of centralized organization for this interest and interdisciplinary opportunity.

Recommendations: There is great opportunity for OUCOM and its students to work more closely with the College of Public Health and the Norman Undergraduate Campus in the research of sustainability within healthcare. Additionally, Oklahoma provides an ample environment to learn more about sustainability, planetary health, and environmental justice from communities outside of our academic institution.

Community Outreach and Advocacy

C-

OUCOM provides support and opportunity for various community outreach projects through the Environmental and Sustainable Health Interest Group (ESHIG), a MS4SF Affiliate organization, and campus wide events such as the annual Big Event, supporting environmental projects such as Closer to Earth and OKC Beautiful. However, there is much room for improvement outside of the efforts of ESHIG.

Recommendations: Optional CME courses for sustainable healthcare, campuswide communications on environmentalism efforts, online patient-centered resources on the health impacts of climate change

Support for Student-Led Initiatives

C

OUCOM supports ESHIG monetarily and through faculty mentorship. Additionally, OUCOM has supported students devoting time towards Quality Improvement projects involving healthcare sustainability.

Recommendations: Opportunities for research and QI projects involving planetary health and sustainability within healthcare could be made more accessible to medical students earlier on in their education. Students interested in applying for funding for sustainability research should look into collaborating with other departments within the institution of OU, as there seems to be potential for grants and other monetary support from OU Health and OU's undergraduate programs.

Campus Sustainability

D

OUCOM is supportive of efforts towards increased campus sustainability. Some programs in place such as campus recycling serve this purpose. However, there is room for improvement in multiple areas listed below.

Recommendations: More sustainable transportation services (such as bike rentals, electric vehicles, etc.), campus-wide composting program, meat-free days in the cafeteria, more transparency with supply procurement guidelines and increasing efforts towards sustainable sourcing in this area, more sustainability requirements for campus events, divestment from fossil fuels.



2022-2023 Summary Report

US - Midwest

Rosalind Franklin University of Medicine and Science

Overall

D

Planetary Health Curriculum

C-

Chicago Medical School (CMS) briefly includes planetary health in several courses in the core curriculum. CMS has made efforts to include information on pollution and environmental risk factors in several of its courses. However, there is room for improvement when it comes to connecting these topics to climate change and planetary health as a whole.

Recommendations: There are opportunities to make a direct connection between climate change, environmental risk factors, and patient outcomes in core curriculum courses. Many courses mention how environmental risk factors impact the development of certain pathologies, however these topics are rarely connected to planetary health and how these risk factors have been evolving over time. Additionally, the Essentials of Clinical Reasoning, Clinical Epidemiology, and Clinical Foundations of Medicine courses can further explore the impacts that environmental changes have on patient health.

Interdisciplinary Research in Health and the Environment

F+

Chicago Medical School does not have anyone involved in planetary health research. Rosalind Franklin University (RFU) recently opened a research department focusing on the socio-structural determinants of health and bases their research agenda on the needs of the surrounding community.

Recommendations: CMS could organize frequent Grand Round presentations or host a symposium on planetary health. They could also join the Planetary Health Alliance, the Midwest Climate Collaborative, and the Global Consortium on Climate and Health Education.

Community Outreach and Advocacy

F

CMS has conducted efforts to establish community partnerships to promote the health of the local community, but does not yet have outreach relating to planetary health.

Recommendations: Greater support of planetary health and sustainable healthcare can be completed by establishing community partnerships, school courses and events, regular coverage of planetary health and sustainable healthcare, involvement of alumni, partnerships with local healthcare facilities, and educational materials for patients with regards to climate change and health impacts.

Support for Student-Led Initiatives

D

CMS provides support for student-led initiatives as a whole through research support and student interest group support. There can be more direction specifically aimed at sustainability-focused projects and funding.

Recommendations: CMS can offer increased support to students by designing a specific website that showcases opportunities for students related to planetary health as well as by creating a student liaison position to represent sustainability interests on the student council.

Campus Sustainability

D

RFU has made good progress to become more sustainable by maintaining a conventional recycling program, procuring sustainable food and beverages, implementing sustainable building practices, and providing environmentally-friendly transportation options.

Recommendations: RFU can focus on making lab spaces more sustainable, setting achievable goals for fossil fuel divestment, and introducing sustainable guidelines for events and supply procurement.



2022-2023 Summary Report

US - Midwest

Rush Medical College

Overall

C

Planetary Health Curriculum

C+

Since last year's report, Rush Medical College (RMC) has made progress incorporating planetary health into its core curriculum. However, this improvement mostly comes from a single session in the M2 year. Designated faculty and students are now advocating for curricular change.

Recommendations: Curricular materials should be modified so that planetary health is integrated longitudinally into the preclinical and clinical curriculum. Existing relationships between Rush University and the surrounding community should be leveraged to teach these topics. Students, faculty, and staff are continuing discussions with leadership to make necessary change toward a planetary health-focused future.

Interdisciplinary Research in Health and the Environment

C

There is an informal consortium of interdisciplinary planetary health researchers associated with RMC and Rush University Medical Center (RUMC) that has grown considerably in the past year; however, they are not funded or supported directly to do this work, nor are they recognized as a true operating research team by the institution.

Recommendations: RMC and RUMC should create spaces for faculty working on planetary health research to be recognized and funded. Summer research funding for RMC students should be specifically designated for students working on planetary health projects.

Community Outreach and Advocacy

C-

RMC has multiple meaningful partnerships with community stake-holders, including student and faculty involvement in planetary health education initiatives and multiple city gardening programs. Rush has recently started utilizing Patient Pass to provide educational materials to patients with some that address environmental impacts on health, however they do not address the impact of climate change on health.

Recommendations: The medical college should work to actively encourage students to participate in planetary health related initiatives in order to maintain key relationships with community stake-holders. The institution would benefit from the addition of a centralized planetary health information page to its website with a focus on 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. The Planetary Health Club is an interdisciplinary health student organization established in 2023. Rush Students for Social Responsibility is a medical student organization established in 2020.

Recommendations: RMC could further support student initiatives via the addition of planetary health-focused awards and research opportunities for students. We additionally suggest the creation of a student liaison position to represent sustainability interests on the Rush University Student Council.

Campus Sustainability

D+

The institution's Office of Sustainability is steadily making progress towards a more sustainable campus, from establishing environmentally-friendly transportation options to the beginnings of recycling and compost programs.

Recommendations: Current goals include reducing the institution's CO2 emissions and developing sustainable food and beverage guidelines.



2022-2023 Summary Report

US - Northeast

Albert Einstein College of Medicine

Overall

C

Planetary Health Curriculum

B

Inclusion of planetary health (PH) topics in the preclinical core curriculum at Einstein was greatly increased by introducing PH-focused lectures into the Health Systems and Health Equity course, as well as by integrating climate change/health impact material into a number of foundational and organ system courses.

Recommendations: Although there was some successful integration of PH topics into lectures, these topics could be discussed in greater depth; this would require more commitment from course directors and lecturers. Einstein's Introduction to Clinical Medicine course provides an opportunity to include important topics in the core curriculum, such as environmental history taking and discussing the effects of climate change with patients.

Interdisciplinary Research in Health and the Environment

D-

Einstein is home to a handful of researchers primarily engaged in PH research. Development of a website for environmental and global health is currently underway, which will improve student access to these resources.

Recommendations: Einstein could consider holding a conference related to PH, joining a national or international PH organization, and implementing a process in which community members impacted by environmental injustice can provide input regarding the environmental research agenda. Instituting an interdisciplinary department could be a longer term goal.

Community Outreach and Advocacy

C+

The preclinical Service Learning course allows students to work with several PH-related organizations within the Bronx. Student groups partner with community organizations to promote environmental health as well. Einstein's affiliated hospitals have online educational materials about environmental health exposures.

Recommendations: Einstein or affiliated hospitals should develop educational materials about the health effects of climate change and offer them as well as already existing resources in printed form. Einstein should consider offering PH courses for post-graduate providers and regularly communicate with students about efforts and updates regarding PH and sustainable healthcare.

Support for Student-Led Initiatives

B

Einstein has several student groups dedicated to planetary health. Einstein Sustainability Club (ESC) works closely with faculty to make curriculum changes and integrate sustainability initiatives and opportunities into education and student life. In addition, Einstein offers opportunities for students to participate in co-curricular planetary health programs, such as One Health or the Global Health Fellowship.

Recommendations: There is no formal support for student-led initiatives nor any online resources dedicated to facilitating student success in PH projects. We recommend that the medical school increase support for students interested in sustainable initiatives, perhaps by creating a website that connects students with available PH mentors or opportunities, and/or prioritizing grants for related research.

Campus Sustainability

D

Einstein has an Office of Energy and Sustainability dedicated to improving the environmental impact of campus practices. Shuttle transportation and recycling services in student housing are two well-established efforts that can serve as foundations for more comprehensive sustainability programs.

Recommendations: There is still much to improve with regards campus sustainability. While there are some goals already in place, we strongly recommend introducing sustainable guidelines for events and daily campus life.



2022-2023 Summary Report

US - Northeast

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, with a focus on environmental justice. The Medical School is in the midst of transitioning to a redesigned curriculum and there are ongoing efforts to incorporate more longitudinal planetary health education into the new curriculum.

Recommendations: BUSM should continue the work of reaching out to lecturers and clinical educators about including relevant planetary health or sustainability information in their lessons. The material on environmental health could be expanded to teach more broadly about the health impacts of climate change, including information on mental health and natural disasters. Finally, the medical school could collaborate with the School of Public Health to offer relevant electives or lectures.

Interdisciplinary Research in Health and the Environment

B-

Boston University School of Public Health (BUSPH) Center for Climate and Health has a robust program focusing on interdisciplinary research in planetary health.

Recommendations: BUSM could collaborate with the Office of Sustainability and the BUSPH to centralize resources related to health and the environment in a medical school specific context. This could include information for researchers at the medical school as well as medical students interested in participating in planetary health research. 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 as a whole has connections with sustainability organizations in the community and BUSM prides itself on community outreach, but has few partnerships specifically focused on planetary health.

Recommendations: BUSM could partner with more environmental organizations in the region to offer students volunteer and activism opportunities in this arena.

Support for Student-Led Initiatives

B

The medical school is supportive of student-led initiatives 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.

Recommendations: The Medical Campus Sustainability Intern role could be expanded to encompass issues of planetary health and sustainability in the medical curriculum. Furthermore, faculty advisors could encourage student groups such as the Climate Action Group, the Wilderness Medicine Elective, and the Global Health Equity Program to host events that connect climate and health.

Campus 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 by 2040 as well as a Zero Waste Plan. Major successes have included a commitment to divest from fossil fuels and procurement guidelines that focus on sustainable purchasing.

Recommendations: The Office of Sustainability could expand its presence on the medical campus. More specifically, BUSM should continue to create, implement and enforce guidelines for sustainability for our student groups and food vendors on campus.



Warren Alpert School of Medicine at 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. This year Brown created a Planetary Health Curricular Integration Committee to promote, develop and implement Planetary Health content throughout the medical school curriculum, empowering students and faculty to act on issues pertaining to Planetary Health. This is a large first step in creating a linear and longitudinal Planetary Health core curriculum.

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. This is the second year the Ruth Sauber Medical Education Fund for Planetary Health was offered to students to pursue a year-long research project with a faculty member. 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 collaborations with the Institute at Brown for Environment & Society, the School of Public Health, and the Office of Sustainability. Furthermore, working with local k-12 schools and community centers can incorporate community input into research initiatives.

Community Outreach and Advocacy

D

AMS has made only slight progress in planetary health community outreach and advocacy this year, such as the tree-planting event with the Providence Neighborhood Planting Program. This event only happened one time per semester and did not facilitate longitudinal relationships between students and the organization.

Recommendations: The AMS ECo club should try to strengthen its partnership with Providence Neighborhood Planting Program and also engage in other meaningful partnerships with RI organizations, such as Sunrise Providence, to provide more student service opportunities. AMS should also consider working with student organizations at the Brown University campus, such as the radio show "Possibly," to maximize community impact. Furthermore, AMS and its hospital affiliate Lifespan should consider distributing Rhode Island Department of Health resources on climate change so patients have access to information regarding planetary health.

Support for Student-Led Initiatives

B-

Support for student-led initiatives, such as the AMS ECo club and the Planetary Health Curricular Integration Committee, is strong at AMS. However, there is not a central platform or website for students to easily find information on planetary health activities or resources.

Recommendations: Opportunities for funding and planetary health events should be better advertised to get more students to be involved.

Campus Sustainability

C

Brown University continues to progress towards its goal of carbon neutrality by 2040. A notable development this year includes the recent Rhode Island-based solar farm opening in late 2022. AMS remains disconnected from the Office of Sustainability.

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 improving/introducing sustainable guidelines for events and procurement.



2022-2023 Summary Report

US - Northeast

Columbia University VP&S

Overall

C

Planetary Health Curriculum

C-

Integration of planetary health topics into the medical school core curriculum is limited, but continues to expand. The main sources of information are through several lectures in the Introduction to Global and Population Health elective course open to first-year medical students, through one module in "Environmental Health" in the Internal Medicine section of the Public Health Commute (a series of modules meant to be completed during the Major Clinical Year) and finally through brief, passing mentions in lecture slides. Case based learning slide decks that incorporate climate health have been created to be implemented in the upcoming year.

Recommendations: The Vagelos College of Physicians and Surgeons (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, The Body: In Health and Disease course, and M&P week.

Interdisciplinary Research in Health and the Environment

A

Columbia University has several strong interdisciplinary research efforts, including the Earth Institute and the 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 environmental health research opportunities and outlines the ways in which medical students could get involved. Also, community involvement in the environmental research conducted by the university should be prioritized.

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 as a requirement given the immense environmental determinants in the Washington Heights community.

Support for Student-Led Initiatives

B-

The administration is supportive of and enthusiastic about student efforts, however this enthusiasm is general and not focused on planetary health initiatives. Recent improvements include a centralized list for potential collaborators in planetary health and a new student chapter of Health Students for a Sustainable Future.

Recommendations: A specific research or outreach program should be developed for students interested in leading planetary health initiatives with funding.

Campus 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 continue to develop its composting plan with and declare a start date for its availability to students. Furthermore, recycling bins should be required at all school events, and student organization should be incentivized to have 0 waste events.



2022-2023 Summary Report

US - Northeast

Geisel School of Medicine at Dartmouth

Overall

C+

Planetary Health Curriculum

C

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. Ways that climate change is impacting specific health outcomes is where Geisel has focused its curricular attention, but the overall environmental impact of the healthcare system itself and aspects of sustainable clinical practice require incorporation.

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

B-

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

C

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 hosted a public Earth Day celebration to bridge the gap between climate change and health in our community in April 2022. Several Grand Rounds speakers at DHMC also focused on PH topics in 2022.

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

A-

Dartmouth College has a number of established resources available to undergraduates and medical students, including funding for projects and sustainability initiatives. Most medical students are unaware of these opportunities, however, and Geisel does not have active relationships with departments hosting these grants.

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.

Campus 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.

Icahn School of Medicine at Mount Sinai

Overall

B-

Planetary Health Curriculum

C

The Icahn School of Medicine at Mount Sinai does include some climate curriculum in the pre-clinical years. A large portion of the climate curriculum was included within several stand-alone lectures. Longitudinal climate curriculum was sporadically present. There is a lack of comprehensive coverage of climate-related topics.

Recommendations: There is a lack of clinical opportunities for students to practice discussing/engaging with climate health topics. There is also no discussion regarding sustainable clinical practices. This could be introduced in the clinical years or by furthering partnerships with community organizations. Better visibility of climate change topics is necessary; this could be achieved by incorporating climate topics into assessment materials and clinical vignettes.

Interdisciplinary Research

A

The Icahn School of Medicine is a member of the Global Consortium on Climate and Health Education, and is home to multiple hubs and departments dedicated to interdisciplinary planetary health research. It organizes this research and associated conferences in a centralized website.

Recommendations: While the Icahn School of Medicine has relationships with Community Based Organizations in East Harlem, community members can be given increased agency and decision-making power in the institution's ongoing research and projects relating to the environment.

Community Outreach and Advocacy

B

The Icahn School of Medicine Mount Sinai has made good progress in community outreach relating to planetary health. NYCSCHECK and PEHSU at ISMMS have promoted planetary health to New Yorkers through public-facing brochures on several environmental health and climate change topics (Prescriptions for Prevention). During InFocus courses during the first year of medical school and clinical electives, students are able to work directly with community partners on environmental justice crisis issues, such as asthma, air pollution, and mold exposures. Since 2019, the Mount Sinai Institute for Exposomic Research has hosted the Clinical Climate Change Conference, an annual continuing medical education conference that focuses on the latest planetary health-related research and ways to advance patient health and education.

Recommendations: ISMMS should continue to integrate more community partnerships relating to planetary health. There is room for improvement in hosting events or courses related to planetary health for medical education and student training. In addition, ISMMS should consider sending out more communication regarding planetary health to trainees, faculty, and other members of the school/hospital.

Support for Student-Led Initiatives

C

The Icahn School of Medicine has several student groups relating to planetary health, sustainability, and/or wilderness appreciation: the Greening/Sustainability Committee of Student Council; WildMed; the One Health and Emerging Pathogens Interest Group; and our chapter of MS4SF. Students can attend planetary health-related events, such as the annual Climate Change Conference. Sinai has relevant web pages about planetary health research and programs, which medical students can pursue; however, dedicated programming and funding for medical student research and projects on planetary health appear to be lacking.

Recommendations: More funding and programming for medical student research and projects on planetary health is needed. Sinai could also benefit from more opportunities relating to food systems, environmental justice, art events about environmentalism, and environmental volunteering.

Campus Sustainability

B

The Icahn School of Medicine has implemented many initiatives to improve supply procurement, conserve energy in existing buildings, and reduce waste in clinical and laboratory settings. The institution has taken steps toward further systemic changes by divesting from fossil-fuel investments and setting goals for carbon neutrality.

Recommendations: Areas needing the most improvement include increased usage of renewable energy throughout the healthcare system as well as further implementation of composting within the hospital and cafeteria. Further, we suggest that the medical school create sustainability guidelines relating to purchases for its catered events.



Johns Hopkins School of Medicine

Overall

C

Planetary Health Curriculum

D

The Johns Hopkins University School of Medicine (JHSOM) M.D. curriculum currently lacks integration of planetary health and climate change material into its core curriculum. However, there are relevant learning objectives during short elective courses such as the Disaster Medicine 3-day elective. There is also a selective course within the Foundations of Public Health course led by students that primarily focuses on planetary health. Currently, the EM department is working on incorporating planetary health into pre-clinical and clerkship activities.

Recommendations: Course directors for various course blocks could integrate case studies featuring environmental hazards into their lectures or small group sessions. There is also a lack of emphasis on introducing planetary health into conversations with patients, such as taking an environmental health exposure history. This could be introduced in clinical skills courses, such as Clinical Foundations of Medicine or the Longitudinal Ambulatory Clerkship.

Interdisciplinary Research in Health and the Environment

B+

JHSOM does not have departments dedicated to research in planetary health, but the institution as a whole does. However, there are individual faculty who do research related to this field that students can find via a directory search.

Recommendations: The Johns Hopkins School of Medicine could partner directly with the already established centers within the entire institution to work on research and initiatives that focus on planetary health. JHSOM can also establish a central database to find research dedicated to relevant research topics.

Community Outreach and Advocacy

C

JHSOM has multiple community partners with an environmental health focus and a moderate degree of student engagement with these partners. The medical school does not host planetary health-related events or courses for the community. No planetary health-related CME courses are hosted for healthcare providers. JHSOM has several accessible educational materials online for patients.

Recommendations: There is a need for more community-facing events and CME courses relating to planetary health, especially given the prevalence of environmental justice issues in the surrounding city.

Support for Student-Led Initiatives

B

JHSOM provide some financial support and mentorship to students interested in planetary health. The Planetary Health Alliance, a student organisation dedicated to this topic, receives funding from the Medical Student Senate and has a faculty mentor. In addition, the University offers several opportunities for students to participate in co-curricular planetary health programs through SOURCE, the School of Public Health, and TIME courses.

Recommendations: Co-curricular opportunities mostly come from the wider university rather than the Medical School. We recommend that the medical school offer increased support to students interested in sustainable initiatives. For example, the school could create a website that advertises mentors or opportunities for students relating to planetary health or education for sustainable healthcare and prioritises grants for related research.

Campus Sustainability

C

JHSOM does not have readily available information regarding its own sustainability and has not taken many steps to improve its carbon footprint. However, the JHSOM has recently hired a sustainability project manager. Some of the steps the school has taken include composting and recycling programs, initiatives to make lab spaces more environmentally sustainable, and partial divestment from fossil fuels.

Recommendations: The JHSOM sustainability project manager should improve campus sustainability and make this information publicly available. The 2030 JHU Sustainability Plan should explicitly state a goal to reduce the institution's carbon footprint as well as the medical school's, and take actions to work towards that goal.



2022-2023 Summary Report

US - Northeast

Rutgers Robert Wood Johnson Medical School

Overall

C

Planetary Health Curriculum

D

Robert Wood Johnson Medical School 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.

Recommendations: While student-initiatives are underway to incorporate planetary health concepts into the necessary sections of the curriculum, there is a lack of direct clinical teaching. For example, how students may discuss climate-related topics with their patients. This could be introduced during an OSCE (Objective Structured Clinical Exam).

Interdisciplinary Research in Health and the Environment

A

Rutgers University has had several climate-related symposiums and showcases in the past year. However, they were not directly aimed at medical students therefore engagement was limited.

Recommendations: Robert Wood Johnson Medical School could organise a conference or showcase directly related to Planetary Health. We also encourage RWJMS to join the Planetary Health Alliance.

Community Outreach and Advocacy

D-

Robert Wood Johnson Medical School's community outreach and advocacy relating to planetary health has been limited in a direct capacity. However, there are programs and groups at the institution that work with community organisations in assessing and building resilience to the impacts of climate change.

Recommendations: We recommend the medical school develop direct outreach to the local community as well as partner with organisations that are already connected to the community.

Support for Student-Led Initiatives

B

Robert Wood Johnson Medical School has a funded student interest group dedicated to the topic of planetary health or climate change related health outcomes called Medical Students for a Sustainable Future. The school has supported students directly adding to the core curriculum through this organisation.

Recommendations: We recommend that planetary health options be incorporated into the experiential learning portion of the core curriculum to help provide opportunities for students to engage in environmental justice and learn about sustainable healthcare.

Campus Sustainability

C-

Campus sustainability is incorporated via the University-wide climate action plan to become carbon neutral by 2040.

Recommendations: We recommend efforts to incorporate the Robert Wood Johnson University Hospital into the Climate Action Plan set forth by Rutgers University. At the medical school level, we recommend developing sustainability guidelines for events and begin efforts to make lab spaces and supply procurement more sustainable.



2022-2023 Summary Report

US - Northeast

Tufts University School of Medicine

Overall

C

Planetary Health Curriculum

C-

In the preclinical 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. Additionally, an entire lecture on Climate Health is included in the Threads course.

Recommendations: . In the appropriate organ blocks, a slide or two should be prioritized to explore how the systems will be treated in our changing world. 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 (TUSM) Maine track has some faculty who focus on these issues, but the Boston campus lacks opportunities dedicated to medical students.

Recommendations: The comprehensive offerings at the undergraduate institution could make an effort to better highlight sustainability research in the medical school, raising the profile of this research and hopefully making it more accessible to medical school students.

Community Outreach and Advocacy

D

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 an opportunity 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 unofficial 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 the 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.

Campus Sustainability

D

Tufts University broadly has made great strides in progressing towards a more sustainable campus. New construction is thoughtful, they have partially divested from fossil fuels, Tufts University School of Medical has made good progress to become a more sustainable campus in conjunction with the wider University, including fossil fuel divestment and using fully renewable energy on site, to setting achievable goals for carbon neutrality in the future.

Recommendations: We hope to continue focusing on making lab spaces more sustainable and improve/introduce sustainable guidelines for events and procurement.



2022-2023 Summary Report

US - Northeast

University of Connecticut School of Medicine

Overall

C-

Planetary Health Curriculum

B-

The University of Connecticut School of Medicine (UConn SOM) does include planetary health in the curriculum and is actively working on ways to integrate more planetary health topics into the curriculum longitudinally. There are students and faculty currently working on integrating these important topics further into two of the first and second year courses, Case Oriented Essentials (CORe) and Vertically Integrated Teams Aligned in Learning (VITAL).

Recommendations: Continue to work planetary health topics into the curriculum longitudinally in addition to incorporating sustainable clinical practices into the core curriculum and increase administrative support for its integration.

Interdisciplinary Research in Health and the Environment

C-

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 medical 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) 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. However, these opportunities must be explicitly sought out by students and there is no central website to find information relating to planetary health opportunities for medical students.

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.

Campus Sustainability

D+

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. The potential for composting in the cafeteria has been discussed as a possibility in the future, but this does not appear to be actively pursued at this time. 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.



2022-2023 Summary Report

US - Northeast

University of Maryland School of Medicine

Overall

D

Planetary Health Curriculum

C-

The University of Maryland SoM has improved on the longitudinal integration of planetary health content in the core curriculum, at the expense of a critical broad-stroke lecture on climate change and human health previously delivered to second-year medical students. Pre-clerkship electives this past year have covered climate change to a much greater degree than the previous year, and promisingly, these electives have prioritized exploring the intersectionality of climate change with other social justice topics.

Recommendations: Prioritize longitudinal integration of planetary health into the pre-clerkship curriculum through methodical inclusion of bite-sized planetary health content into every relevant course block. Strategic action is needed to fill the gap left by the redacted climate & health standalone lecture. Continue weaving planetary health into existing pre-clerkship electives. Consider establishing a standalone climate change & health elective if sufficient momentum exists.

Interdisciplinary Research in Health and the Environment

D

The University of Maryland SoM lacks significant planetary health research, has zero institutional research grant support, and has no dedicated planetary health research department or website. The SoM does not collaborate with either environmental justice groups or local communities to set an environmental health research agenda.

Recommendations: Join the Global Consortium on Climate and Health Education and create a dedicated planetary health webpage collating relevant faculty researchers and intramural environmental health publications. 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-

The University of Maryland SoM currently maintains no partnerships with organizations whose primary concern is planetary health and education. Notably, the institution has plans to incorporate environmental service learning opportunities in the future to the Practice of Medicine service learning requirement - however, no opportunities currently exist. There is currently no easily accessible resource provided by the School of Medicine to its students and the general public regarding climate, environmental health, environmental exposures.

Recommendations: Continue to build out preliminary planetary health service learning options through the Practice of Medicine course. Local organizations such as the Baltimore Tree Trust, Friends of Great Kids Farms, 4MyCiTy, and South Baltimore Land Trust can provide educational space and communication for the local community to learn more about planetary health and climate change.

Support for Student-Led Initiatives

C

The University of Maryland SoM does not actively promote environmental health research or offer funding specifically for sustainability-focused projects. While student-led groups exist, such as Medical Students for a Sustainable Future and the Wilderness Medicine Interest Group, there is no SoM-led initiative or centralized resource dedicated to promoting planetary health.

Recommendations: Host an Environmental Health Research roundtable through the Office of Student Research. Expand funding and opportunities for students to create and implement sustainability QA/QC efforts in the campus community. Create a centralized resource/database/website for students interested in pursuing planetary health-focused projects and initiatives.

Campus Sustainability

C-

The UMB Office of Sustainability has collated existing sustainability projects on campus and has made great strides to align UMB with new statewide guidance for higher education institutions and improve campus commitment to energy efficiency and waste reduction. Still, the University System of Maryland has not fully divested from fossil fuels and institutional investment in climate change resilience and mitigation needs improvement.

Recommendation: Scale up fossil fuel divestment and explore strategic investment in institutional waste reduction strategies. Collaborate with the Baltimore Office of Sustainability to explore equitable strategies to improve low-emission infrastructure in and around campus. Continued funding towards the UMB Office of Sustainability is critical to ensure momentum on campus-wide sustainability efforts.



2022-2023 Summary Report

US - Northeast

University of Massachusetts

Overall

C

Planetary Health Curriculum

C

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 topics. Implementation of planetary health content has been largely student driven.

Recommendations: UMass Chan should update its website to allow students to join existing curricular projects and explore the current state of climate and health curriculum integration at UMass Chan. UMass Chan should prioritize the integration of the impact of climate change on marginalized and indigenous communities, global climate, and health inequities. They should recruit and assign faculty specifically to oversee the creation and implementation of planetary health into the core curriculum.

Interdisciplinary Research in Health and the Environment

C-

UMass Chan Medical School has continued partnerships with Practice Greenhealth and the Global Consortium on Climate Change and Health Education. The school encourages students to participate in research, 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

B-

UMass Chan meaningfully partnered with ReGreen Springfield and Elders Climate Action MA during the population health clerkships allowing students to develop 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

B+

UMass Chan has a funded student and faculty supported organization, UMMS Coalition for Climate Action. They also have invited students to join a curricular Climate Change Taskforce. UMass also supports a thriving, student-run community garden and a student-run elective focused on Climate Action.

Recommendations: The UMass Chan Student Body Committee should develop a student sustainability liaison position on their governing body.

Campus Sustainability

C

The Office of Sustainability at UMass Chan Medical School works to support student-led initiatives around climate and health, increasing the number of electric vehicle charging stations 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. The school should implement a sustainable event guide for events held on campus.



2022-2023 Summary Report

US - Northeast

University of Pittsburgh

Overall

C

Planetary Health Curriculum

D

Pitt Med does include planetary health in the curriculum, especially through a Climate Change elective course. This course covers many major planetary health topics (air pollution, healthcare carbon footprint, local environment, and mental health). The core curriculum also covers discussion of some fundamental topics including non-pharmaceutical health management and the impact of the environment on marginalized communities.

Recommendations: Introduce a thread of planetary health themes through problem-based learning scenarios, history taking (environmental exposure), patient and community panels through Social Medicine, and in-clerkship didactics.

Interdisciplinary Research

D+

Pitt Med is a member of the Global Consortium on Climate and Health Education. We also have individual faculty members at the medical school exclusively doing research related to planetary health and have many scientists across the public health department doing the same.

Recommendations: Organize a planetary healthcare conference that includes community voices to allow them to engage with designing research projects and developing plans that maximize community benefit.

Community Outreach and Advocacy

B

Students attend neighborhood tours in areas experiencing climate injustice and meet community leaders of local nonprofits, including community gardens. Pitt Students for One Health is a student organization that partners with Tree Pittsburgh, Repair the World Pittsburgh, City of Pittsburgh Volunteer Clean Up, and the Pittsburgh East End Cooperative Garden.

Recommendations: Grow these community partnerships to include staff and faculty across the UPMC hospitals and increase availability of educational seminars within the medical school on how to best serve our communities through the lens of planetary health.

Support for Student-Led Initiatives

B

The institution offers numerous grants in sustainability projects for individual students, student groups, building innovations, and events. There are also student organizations that cover the topics of planetary health engagement, scholarship, and advocacy including Pitt Students for One Health, Global Health and Underserved Populations Group, and the Social Medicine Fellows Program.

Recommendations: We recommend the medical school offer increased support to students interested in sustainable initiatives by creating a subsection of the Pitt Sustainability website that advertises mentors or opportunities for students and prioritizes grants for planetary health research.

Campus Sustainability

B-

The Pitt Office of Sustainability has a wealth of resources available for the medical school to utilize to inform sustainable practices. The medical school building has had updates with these guidelines in mind and the new West Wing building under construction has LEED certification.

Recommendations: Recruit faculty and students from the medical school who can directly implement the Pitt Sustainability Plan, Pitt Green Host program, establish a composting program, and encourage participation in the Pitt Green Labs Program.



2022-2023 Summary Report

US - Northeast

University of Rochester

Overall

C

Planetary Health Curriculum

B

University of Rochester includes planetary health in the curriculum, but it lacks integration longitudinally.

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 ICM/FBP teaching. Also, integration of planetary health should be included in more aspects of pre-clinicals

Interdisciplinary Research in Health and the Environment

D+

There are individuals whose research is focused on healthcare sustainability or PH, but there is no overarching department they are housed under to direct overall research goals, funding, or directions. Though there is a process for community members to advise climate research, the medical school should create a process that allows them to directly vote on research to improve engagement. While there are seminars on subjects related to planetary health, there should be further effort on creating formal research conferences that allow for project submissions and student presentations.

Community Outreach and Advocacy

D+

URSMD faculty are involved in community outreach and advocacy, however, this involvement is primarily limited to 2-3 clinicians who are connected to several broader medical centres and community groups in Rochester to promote PH engagement and education.

Besides these 2-3 incredible faculty members, medical school administration, faculty, and staff are largely uninvolved in community outreach efforts related to PH.

Medical students at URSMD, unless connected to the above 2-3 clinicians, have few opportunities to engage in community outreach and advocacy initiatives related to PH.

Support for Student-Led Initiatives

B

URSMD funds and supports a student interest group focused on PH. However, there are no students representing sustainability interests on an institutional decision-making council.

PH research projects are able to be funded through broader research support initiatives.

However, there are not any funding opportunities that specifically promote PH research.

Various events, projects, and programs organised by students, faculty, and community members have covered a range of PH topics. No medical-school specific webpage exists to display PH activities or mentors.

Campus Sustainability

D+

URSMD has made some progress towards more sustainable practices. However, many of these changes have been implemented sporadically, and more universal application of sustainable practices is needed.

Both the University of Rochester and URSMD have robust programs available to individual students and faculty such as carpooling, biking, and recycling. Several of the Medical Center dining locations incorporate some sustainability criteria into their food and beverage selections as well.

URSMD lacks an Office of Sustainability and has not made a formal commitment to carbon neutrality.

Recommendations: There is significant work to do to improve sustainability at URSMD. Goals and plans should include collaboration with the undergraduate campus to create a broad-reaching sustainability movement and have maximal impact. Most staffing and programming relating to sustainability is recommended to help the student body increase their awareness about the importance of improving sustainable practices at the school. With a larger population in support of these changes, the school has a strong chance at improving sustainability on an institutional level.



2022-2023 Summary Report

US - Southeast

University of Arkansas for Medical Sciences

Overall

C

Planetary Health Curriculum

C+

UAMS faculty has incorporated several topics discussing planetary health in relation to medicine throughout the first and second year curriculum. There has also been recent approval for a fourth year Climate Change and Health elective that will be available for students in the upcoming year.

Recommendations: There is a lack of teaching about introducing conversations about planetary health into conversations with patients as well as sustainable clinical practice, indigenous knowledge, and the carbon footprint in the healthcare system. These topics could be integrated into the third year curriculum as students become more exposed to the healthcare environment.

Interdisciplinary Research in Health and the Environment

D+

Although it is not the primary focus of his research, there have been multiple publications by Dr. Manish Joshi over the effects of climate change on respiratory health.

Recommendations: UAMS could offer more opportunity for community involvement in deciding new research topics, as well as hosting a Planetary Health symposium or the College of Medicine becoming a member of an international planetary health organization.

Community Outreach and Advocacy

B-

The University of Arkansas for Medical Sciences provides several educational resources to its patients and the surrounding community on climate change and health; however, the College of Medicine could be more involved in these efforts.

Recommendations: The College of Medicine could be a member of a community organization and provide events or courses geared toward educating the community to promote planetary health.

Support for Student-Led Initiatives

B

The University of Arkansas for Medical Sciences encourages students to become involved in planetary health. The student-led "Climate Health Interest Group" organizes several opportunities for students to become involved in, such as educational lecture series and volunteer opportunities at the local gardens, ect.

Recommendations: The Climate Health Interest Group could work to provide cultural events related to planetary health to students for the College of Medicine. The COM administration could provide a position for a student-liaison to be able to advocate for planetary health integration into the curriculum when decision-making for curriculum changes occurs.

Campus Sustainability

D

The University of Arkansas for Medical Sciences has made great progress recently in sustainability efforts with a new \$150 million energy project that will significantly reduce energy use and the carbon footprint as well as provide more sustainable infrastructure throughout the campus, but it does not include renewable energy use.

Recommendations: There is still room to improve with the campus sustainability, such as providing sustainability guidelines with the food and beverages provided at UAMS, supply procurement, events hosted by the College of Medicine, and lab spaces. There could also be more transparency with UAMS fossil-fuel investment companies and efforts to divest.



2022-2023 Summary Report

US - Southeast

Emory University School of Medicine

Overall

A

Planetary Health Curriculum

A

Emory University School of Medicine is in its third year of implementing a faculty and student co-created climate change & environmental health pre-clinical curriculum, with learning points disseminated across lectures and small group sessions. This is the first year of implementation of a longitudinal “Thread” that spans all 4 years. Emory continues to expand the scope of the curriculum through emphasis on practical applications across topics/specialties, including exposure history workshops and small group teaching.

Recommendations: The curricular focus is shifting from specific topic areas to teaching modalities and assessment strategies as identified [here](#). Nevertheless, content regarding climate and mental health and the importance of Indigenous knowledge and value systems can be enhanced in the coming years.

Interdisciplinary Research in Health and the Environment

A+

Interdisciplinary collaboration remains central to Emory University's vision. This year, Emory University's Provost launched the school-wide Emory Climate Research Initiative (ECRI) to advance climate change research and teaching and to support Emory's interdisciplinary response to the global crisis.

Recommendations: The School of Medicine could consider a centralized platform for those interested in engaging in sustainability and planetary health efforts and research.

Community Outreach and Advocacy

A

Emory has continued to bolster its community-facing courses through the installment of a new series, “Community Conversations: Emory Talks Climate Action,” in addition to its pre-existing “Climate Talks” series and the podcast, “AmpliFIRE: Raising Voices Against Rising Temperatures.”

Recommendations: Students and faculty should work to identify or create locally-relevant planetary health educational materials for distribution to patients across Emory-affiliated hospitals and clinics.

Support for Student-Led Initiatives

A

Students interested in promoting and engaging in planetary health initiatives are well-supported at Emory. A number of mechanisms are in place to support funding for student-led projects, access to mentors and research opportunities, involvement in co-curricular student organizations, and participation in campus advocacy and curricular reform.

Recommendations: Renewed focus on student engagement in the broader (local, state, global) community (e.g. through volunteer opportunities, networking with local leaders, and community engagement) as well as hospital and healthcare sustainability initiatives will maximize the reach and impact of student efforts.

Campus Sustainability

B

Emory has cultivated widespread acceptance of sustainability on campus, including at the medical school. Emory ranked #4 for top green colleges in 2023 according to the Princeton Review, and is aiming for a 50% energy reduction per square foot for Emory College and 25% for Emory Healthcare by 2025. Since November 2021, the School of Medicine Anatomy Lab has been recognized as a Bronze Level Green Lab.

Recommendations: Notably absent from the White House/HHS Health Sector Climate Pledge, Emory and Emory Healthcare should sign the pledge and ensure sufficient dedicated resources to bolster sustainability and resilience across its immense healthcare operations, elevating sustainability as a leadership priority.



2022-2023 Summary Report

US - Southeast

George Washington School of Medicine and Health Sciences

Overall

C

Planetary Health Curriculum

C-

The George Washington University School of Medicine and Health Sciences recently approved to integrate a "Climate Change and Human Health" curriculum theme that will be dispersed longitudinally throughout the 4 years of training.

Recommendations: GW will continue to work on Implementation Strategy planning to launch this theme starting in the fall of 2023.

Interdisciplinary Research in Health and the Environment

B

In 2022, The George Washington University launched the Climate and Health Institute which seeks to promote cross-disciplinary research and collaboration to better equip current and future public health professionals to navigate the population level impacts of climate change.

Recommendations: The Climate and Health Institute can better include diverse student voices in their work as they seek to strengthen to future public health workforce

Community Outreach and Advocacy

C-

The GW Climate and Health Institute conducts community-based research to better understand the disparate impacts of climate change on vulnerable populations

Recommendations: We recommend GW to expand its profile of community partners, emphasizing under resourced areas or areas disproportionately impacted by climate change to ensure every voice is heard.

Support for Student-Led Initiatives

B

With the approval of the Climate Change and Human Health Curriculum theme, GW has demonstrated its support and endorsement of student-led initiatives. We are encouraged that with this recognition, student-led initiatives will be both readily supported and provided with a framework for feasible implementation.

Recommendations: This newly approved theme can serve as a catalyst and platform for ease of new student-led initiatives.

Campus Sustainability

D+

The George Washington School of Medicine and Health Sciences has made good progress to become a more sustainable campus in conjunction with the wider University. Efforts span from fossil fuel divestment and using fully renewable energy on site to setting achievable goals for carbon neutrality in the future.

Recommendations: There is still much to improve with the campus sustainability. Goals include expanding the promotion of university wide opportunities and initiatives to include the medical school.



2022-2023 Summary Report

US - Southeast

University of North Carolina

Overall

C

Planetary Health Curriculum

C

Strengths: The University of North Carolina School of Medicine (UNC SOM) includes planetary health in each preclinical block, as well as elective courses, but lacks specific topics and depth of materials.

Recommendations: UNC SOM could include planetary health in its core competencies and offer planetary health-specific electives. Education could include the significant health-care associated carbon footprint, waste production, and over-prescribing of pharmaceuticals.

Interdisciplinary Research in Health and the Environment

B+

Strengths: UNC SOM and other departments have researchers engaged in planetary health and it impacts human disease and health.

Recommendations: UNC SOM, which is closely linked to UNC Health, could encourage research on healthcare sustainability and UNC's carbon footprint, perhaps by increasing funding opportunities. In solidarity with institutions committing to prioritize planetary health, UNC SOM could join the Global Consortium on Climate and Health Education. UNC SOM could also include community member feedback to guide research decisions regarding planetary health and sustainability.

Community Outreach and Advocacy

D+

Strengths: UNC Health has a robust Environmental Health Learning Center (EHLC) as part of its online Health Library for patients.

Recommendations: UNC SOM could collaborate with Gillings School of Global Public Health and their partnered local organizations (such as CleanAIRE NC) to advocate for environmental health and to create education materials and organize events for the Triangle area community. The SOM could create a list of planetary health materials that qualify as CME credits.

Support for Student-Led Initiatives

B

Strengths: UNC's Climate Leadership and Environmental Action Network (CLEAN) has received funding from the Office of Global Health Education (OGHE). UNC Family Medicine Center worked with students to conduct a waste audit of the clinic in November 2022. Since the last report, faculty have supported three medical students in developing a Scholarly Concentration on planetary health.

Recommendations: UNC SOM could encourage clinical students to coordinate planetary health-related QI projects during their third year. Students would benefit from an organized, accessible website detailing ongoing research projects/mentors and related grant opportunities specifically addressing planetary health.

Campus Sustainability

C

Strengths: UNC's work with the Three Zeroes Initiative and Sustainable Carolina has improved its sustainability. The local public transit system is widely used and now includes electric buses. Recycling and composting bins are reasonably accessible to students. Green Labs has implemented several initiatives to reduce waste in UNC laboratories. The university has seen a 40% decrease in emissions since 2007.

Recommendations: UNC SOM could join Sustainable Carolina's council to help improve the school's sustainability. Older SOM buildings could be retrofitted to be more eco-friendly, perhaps by adding compost bins. The med school cafeteria (Beach Café) could increase the number of restaurants that source locally grown food. UNC could invest in renewable energy and divest from coal supplied by Duke Energy.



2022-2023 Summary Report

US - Southeast

Vanderbilt University School of Medicine

Overall

C

Planetary Health Curriculum

C-

The new elective course for medical students, "Ecology and Health: Climate, Food and Justice" covers a broad range of planetary health topics, and the core MD curriculum has begun to incorporate some planetary health into a few lectures. A group of students has developed and proposed a curriculum map that addresses climate change/planetary health topics where they are most relevant throughout the four-year MD curriculum

Recommendations: We have presented our climate health curriculum proposal to our medical school Deans, and we suggest working with block directors throughout the core MD curriculum to integrate our proposed lectures and content into the four years of medical school.

Interdisciplinary Research in Health and the Environment

C

Several Vanderbilt University Medical school faculty, including Dr. Eva Parker, are 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 connect with communities affected by climate change to inform research priorities.

Community Outreach and Advocacy

C

Medical students have spearheaded recent efforts to engage with the broader community on issues of planetary health, and the Ecology and Health elective requires engagement with community partners such as the Urban Green Lab and Nashville Food Project. 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 and provide regular coverage on opportunities for student involvement.

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" and has recently been supportive of incorporating suggestions from our climate health curriculum proposal into the core MD curriculum.

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.

Campus Sustainability

C

Vanderbilt University has made great progress in sustainability goals through SustainVU.

Recommendations: The medical school should implement the FutureVU Sustainability recommendations for food and beverage purchase and event planning and provide compost bins in Eskin Biomedical Library (EBL).



2022-2023 Summary Report

US - Southeast

University of Virginia School of Medicine

Overall

C+

Planetary Health Curriculum

C

A major advancement since the previous PHRC was the addition of a climate change focused lecture in the Pulmonary unit of the core curriculum titled "Climate Change and Pulmonary Disease". In addition, the required Bedside to Community course now addresses environmental justice and the impact of climate change on overall health. Despite these improvements, there is a lack of Planetary Health (PH) coverage in the majority of the pre-clinical core curriculum.

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

A-

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 continuing their efforts. In the last year, UVA has also continued to host 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 is still on hold due to COVID. 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 and re-initiate the partnership with the Charlottesville City Schoolyard Garden. 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. Last year, the Student Clinicians for Climate Action at UVA launched our website which contains contact information and details about our climate-related projects. The organization has organized a variety of events tailored to various aspects of sustainability.

Recommendations: Integrate medical school initiatives and medical student leadership with the larger university.

Campus 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 sustainability guidelines that medical school events must follow, and focus efforts to increase the percentage of utilized energy derived from renewable sources.



2022-2023 Summary Report

US - Southeast

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 mandatory or elective clinical education.

Recommendations: Continue integrating climate change into pre-clinical courses as well as honing its inclusion in the longitudinal preclinical 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 centralised database.

Community Outreach and Advocacy

F

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: We recommend that VCU introduce and implement greater 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.

Campus Sustainability

D

VCU School of Medicine offers recycling options, has 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. A simple way to start would be to implement sustainability guidelines for events.



2022-2023 Summary Report

US - Southeast

West Virginia University School of Medicine

Overall

C-

Planetary Health Curriculum

C-

The West Virginia University School of Medicine does include planetary health in its curriculum. However, holistically, greater emphasis needs to be placed on included topics and there needs to be an increased integration of planetary health topics in the core curriculum, rather than electives.

Recommendations: Lecturers that briefly mention key concepts should transition into generating testable content. Metrics that could easily be incorporated into existing lectures, such as the planetary and health co-benefits of a plant-based diet, should also be added.

Interdisciplinary Research in Health and the Environment

C

The West Virginia University School of Medicine does include planetary health in its curriculum. However, holistically, greater emphasis needs to be placed on included topics and there needs to be an increased integration of planetary health topics in the core curriculum, rather than electives.

Recommendations: Lecturers that briefly mention key concepts should transition into generating testable content. Metrics that could easily be incorporated into existing lectures, such as the planetary and health co-benefits of a plant-based diet, should also be added.

Community Outreach and Advocacy

D-

The West Virginia University School of Medicine does include planetary health in its curriculum. However, holistically, greater emphasis needs to be placed on included topics and there needs to be an increased integration of planetary health topics in the core curriculum, rather than electives.

Recommendations: Lecturers that briefly mention key concepts should transition into generating testable content. Metrics that could easily be incorporated into existing lectures, such as the planetary and health co-benefits of a plant-based diet, should also be added.

Support for Student-Led Initiatives

B

The West Virginia University School of Medicine does include planetary health in its curriculum. However, holistically, greater emphasis needs to be placed on included topics and there needs to be an increased integration of planetary health topics in the core curriculum, rather than electives.

Recommendations: Lecturers that briefly mention key concepts should transition into generating testable content. Metrics that could easily be incorporated into existing lectures, such as the planetary and health co-benefits of a plant-based diet, should also be added.

Campus Sustainability

D

The West Virginia University School of Medicine does include planetary health in its curriculum. However, holistically, greater emphasis needs to be placed on included topics and there needs to be an increased integration of planetary health topics in the core curriculum, rather than electives.

Recommendations: Lecturers that briefly mention key concepts should transition into generating testable content. Metrics that could easily be incorporated into existing lectures, such as the planetary and health co-benefits of a plant-based diet, should also be added.



2022-2023 Summary Report

US - West

UC Berkeley - UCSF Joint Medical Program

Overall

B+

Planetary Health Curriculum

C+

The Joint Medical Program (JMP) case-based curriculum is driven by student-inquiry and allows for the integration of many concepts of environmental health with the basic science and clinical curriculum. The JMP also offers many electives via the UC Berkeley's School of Public Health and UCSF School of Medicine whose primary focus is on sustainability and planetary health. However, the core curriculum falls short on topics related to the impact of climate change on health and healthcare systems.

Recommendations: During the summer of 2022, developments to the JMP's curriculum improvement structure, such as the PBL working committee, offered opportunities for student and faculty advocacy. We recommend continuing to use student working groups to increase coverage of planetary health concepts, especially as they pertain to environmental justice and antiracism, within the PBL course, Clinical Skills course, and Master's Seminars infrastructures. Faculty members are currently working on a longitudinal curriculum on climate change that will hopefully be implemented in the fall of 2023

Interdisciplinary Research in Health and the Environment

A+

The JMP is housed within the UC Berkeley's School of Public Health, which offers many mentorship and financial opportunities for JMP students in pursuit of their Master's Thesis.

Recommendations: We recommend the JMP faculty to continue to encourage students to pursue their research or Master's Thesis on planetary health.

Community Outreach and Advocacy

A

JMP students have many opportunities to engage in community outreach and advocacy efforts associated with environmental justice. In addition, the UC Berkeley's School of Public Health offers many community advocacy opportunities related to planetary health.

Recommendations: Environmental justice advocacy opportunities and sustainability updates should be regularly included in the weekly Berkeley Public Health Digest and JMP newsletters.

Support for Student-Led Initiatives

A-

The JMP, UC Berkeley, and UCSF community offers institutional support for student-led planetary health initiatives, including funding, fellowships, and programming. JMP students can receive funding for planetary health projects via UC Berkeley's Green Initiative Fund at UC Berkeley, UCSF's Environmental Research and Translation for Health (EaRTH), and many more.

Recommendations: We recommend a funded and faculty-mentored student organization within the JMP dedicated to planetary health and sustainability, as well as a formal JMP student liaison position dedicated to curriculum reform and sustainability best practices.

Campus Sustainability

B+

UC Berkeley and UCSF have made a pledge to emit net zero greenhouse gases from carbon emission sources by 2025. These campuses also have an Office of Sustainability focused on green energy, utilities, infrastructure, and food.

Recommendations: The Office of Sustainability at UC Berkeley and UCSF should engage in efforts to increase food and beverage sustainability. The JMP should also require sustainability measures, possibly using UC Berkeley's green event resources for events.



2022-2023 Summary Report

US - West

University of Colorado School of Medicine

Overall

B

Planetary Health Curriculum

B-

In 2021 CUSOM officially launched the new Trek Curriculum which integrated planetary health throughout the core curriculum. Both planetary health effects and clinical skills are discussed in lectures, especially in the gastrointestinal and pulmonary block. Elective coursework and enrollment at the Fort Collins branch campus, which emphasizes the concept of One Health, offer deeper dives. In the new 2022-2023 clerkship curriculum, students learn how to collect environmental exposure histories and have a team-based learning case highlighting respiratory diseases related to environmental exposures.

Recommendations: The main workshop wherein students engage directly with planetary health concepts was eliminated from the first year curriculum. This should be reimplemented in future years' curriculum.

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

B

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 is built upon the One Health concept. After publication of last year's PHRC, starting this last year, each medical school class will have two elected sustainability representatives that sit on the Medical Student Council.

Recommendations: A website for students on the topic of climate and health is in the process of being built which will help improve awareness and provide resources for students interested in the topic. CUSOM has a great opportunity to incorporate more speaker events or artistic displays that touch on the topic of climate health at the bioethics and humanities pavilion in the center of the medical campus.

Campus 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.



2022-2023 Summary Report

US - West

UC Davis School of Medicine

Overall

B

Planetary Health Curriculum

C

UC Davis School of Medicine does include planetary health in the curriculum, but it lacks integration longitudinally within the core curriculum. A majority of planetary topics are covered in a 3rd or 4th year elective.

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 in preclinical lectures.

Interdisciplinary Research in Health and the Environment

A

The UC Davis School of Medicine is a part of various initiatives to research topics regarding planetary health both within and outside of the medical campus.

Recommendations: Involve those most impacted by climate change in research design committees and allot them decision making power.

Community Outreach and Advocacy

C+

UC Davis School of Medicine engages the community in academic contexts but opportunities for medical students to directly engage with communities impacted by climate change are very limited.

Recommendations: Inclusion of regular updates regarding planetary health and sustainability initiatives, such as a newsletter, within the UC Davis Health system in which students can participate. Form connections with community leaders and organizations involved in this work and facilitate meaningful partnerships.

Support for Student-Led Initiatives

A

The UC Davis main campus offers a variety of sustainability initiatives and encourages students to engage in topics they are passionate about. However, these initiatives do not typically involve the medical school and are not advertised to medical students.

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 or creating more accessible opportunities close to the medical campus.

Campus Sustainability

B+

UC Davis Health has been recognized as a leader in striving toward sustainable healthcare in energy and sustainable food systems including the largest farm-to-fork food system in our hospital.

Recommendations: There is still much to improve with campus sustainability. Goals and plans are already in place at the Medical School to strive toward carbon neutrality, but we also recommend improving campus wide composting, recycling, and transportation programs.



2022-2023 Summary Report

US - West

UC Irvine

Overall

D+

Planetary Health Curriculum

D

Aspects of planetary health are discussed in lectures during Clinical Foundations (CF), but lacks integration longitudinally. A structured elective on climate change and health was approved by the education committee, but was not offered due to lack of student enrollment.

Recommendations: Incorporated teaching about having planetary health conversations with patients and expanding education on how climate change affects human health in all aspects the CF curriculum. UC Irvine should ensure it offers the novel climate and health elective, now planned for Spring 2024.

Interdisciplinary Research in Health and the Environment

C

UC Irvine hosted a series of webinars related to planetary health and sustainability in 2021.

Recommendations: There are interested students and faculty at UC Irvine who have become more interested in working in this space. However, many of these clinicians are not active in research. Utilizing these connections to find who is interested in this research, and how they can contribute, will be critical to amplifying UC Irvine's potential as an institution at the forefront of the climate and health space.

Community Outreach and Advocacy

F

UC Irvine School of Medicine has very limited community outreach relating to planetary health.

Recommendations: Many grassroots organizations in Orange County provide critical services to patients at UCI (i.e., [Project Kinship](#), [Latino Health Access](#), and [Hope Community Services](#)). However, many clinicians are unaware of these organizations. UC Irvine should consider building a strong planetary health presence through the student organization Medical Students for a Sustainable Future.

Support for Student-Led Initiatives

D

The UC Irvine School of Medicine has provided some administrative support for student-led initiatives in planetary health, but does not offer financial support and does not provide structured opportunities for students. Existing frameworks for planetary health at UCI School of Medicine are quite nascent, and will not only require wider student participation to effect change, but also faculty and institutional leadership.

Recommendations: Beyond building the presence of student groups like Medical Education for a Sustainable Future, UCI should consider creating a track for students interested in this work – similar to UCI's [LEAD-ABC](#) (Leadership Education to Advance Diversity - African, Black, and Caribbean), Integrative Health, or [PRIME-LC](#) (Program in Medical Education - Latino Community).

Campus Sustainability

B

UC Irvine as an institution is progress-oriented in campus sustainability, largely due to University of California's Sustainable Practices Policy and UC Irvine's Climate and Action Plan (developed in 2007). However, the medical school itself has little involvement in advancing campus sustainability.

Recommendations: Despite progress attributed to the UC Sustainable Practices Policy (SPP), there is still much to improve regarding campus sustainability at the medical center. UC Irvine should strive to achieve more by spearheading initiatives like establishing sustainability guidelines for on-campus events.



2022-2023 Summary Report

US - West

Oregon Health and Science University

Overall

C

Planetary Health Curriculum

A-

OHSU does include planetary health in the curriculum and it is becoming more integrated longitudinally. 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. Specifically, a new required lecture in the Family Medicine Core rotation gives a very thorough and in-depth discussion of many of the impacts of climate change and human health, healthcare's carbon footprint, and climate injustice. The interprofessional education elective course called Climate Change and Human Health that is available to all OHSU students covers planetary health in depth and is currently in its second year.

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 teaching.

Interdisciplinary Research in Health and the Environment

C-

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, including a few researchers who are faculty 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.

Recommendations: OHSU SOM could 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: OHSU could create grant funding for students to lead sustainability initiatives and provide support to connect students with planetary health research mentors.

Campus 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. This past fall, they publicly announced a goal of reducing carbon emissions.

Recommendations: OHSU could 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 event sustainability guidelines and recommendations for lab spaces on sustainable practices. OHSU could also establish more ambitious carbon footprint reduction goals.



2022-2023 Summary Report

US - West

University of California, San Francisco

Overall

B

Planetary Health Curriculum

B

The UCSF School of Medicine students and faculty have made admirable advancements in integrating planetary and environmental health topics into the core curriculum. This includes the new Climate Change and Health small group, which highlights the relationship between air quality and respiratory health and emphasizes how differential exposure to air pollution perpetuates health inequities.

Recommendations: Continue efforts to integrate planetary health and climate change throughout the Foundations 1 core curriculum, with special emphasis on the topics mentioned in metric #17.

Interdisciplinary Research in Health and the Environment

A+

UCSF is home to many prominent researchers in planetary health and healthcare sustainability. The EaRTH Center and the UC Center for Climate, Health and Equity provide plentiful opportunities for environmental health engagement, research, and funding, and also host annual events at the intersection of climate change and human health.

Recommendations: We encourage the School of Medicine to continue to prioritize climate health research and further amplify the voices of those disproportionately affected by climate change in symposiums and forums hosted by the SOM.

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 environment. There are currently limited opportunities in terms of community outreach and advocacy designed for medical students interested in climate change and its health impact.

Recommendations: Increase engagement in community partnerships that support planetary health initiatives and improve communication on sustainability issues to the student body. Encourage medical student participation by designing sustainable community outreach and advocacy programs for students in partnership with the aforementioned programs at UCSF.

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.

Recommendations: Introduce a position for a student liaison to represent sustainability interests on a medical school or institutional decision-making council to advocate for curriculum reform and/or sustainability best practices.

Campus Sustainability

C+

UCSF has robust waste reduction, water conservation, toxics reduction, sustainable food, green procurement, energy efficiency, green procurement, green labs, and education/engagement efforts.

Recommendations: UCSF has committed to achieve carbon neutrality by 2025. Despite this, 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.



2022-2023 Summary Report

US - West

University of Utah

Overall

C

Planetary Health Curriculum

D+

Planetary health is lacking in the Spencer Fox Eccles School of Medicine (SFESOM) core curriculum. Preclinical lectures that discuss implications of climate change on health are rare. Beyond one course on sustainability and medicine (MDID 6400), planetary health is rarely integrated into elective coursework.

Recommendations: Longitudinally incorporate planetary health content into the core curriculum, including clinical years. Integrate sustainability-related topics into existing material. Appoint faculty to implement these topics in the current comprehensive revision of the curriculum.

Interdisciplinary Research in Health and the Environment

B-

SFESOM has multiple research teams focused on air quality's effects on respiratory health, reusable medical devices, and the impact of recreational therapy on mental health. There is no department focused on planetary health, and there are no centralized locations to find sustainability-related research for the school online. No events are specifically held to showcase planetary health and sustainability research.

Recommendations: Build on existing research projects by hosting a planetary health research symposium to showcase ongoing work, recruit medical students for projects, and invite community members to share concerns about planetary health. Develop a dedicated web page for research, events, and green initiatives.

Community Outreach and Advocacy

D

SFESOM is lacking in community outreach, advocacy, and patient education on planetary health. The institution has hosted outreach events through community and campus-wide organizations. These events have been valuable to foster conversations within our institution and in the community, but these have not been hosted by SFESOM specifically, and have been almost entirely student-led.

Recommendations: Connect with community organizations focused on planetary health, as is currently being implemented with free clinics in the new curriculum. Provide education about environmental health exposures via pamphlets and community-facing publications. Support advocacy efforts with student mentorship in legislative efforts and internship opportunities.

Support for Student-Led Initiatives

B

SFESOM is supportive of student efforts for planetary health, and has instituted specific grants and hired dedicated faculty. There is a hospital committee to manage these topics with student representation. There are ample projects, presentations, organizations, and mentors that allow for student involvement.

Recommendations: Appoint a liaison from the administration to advertise and support student initiatives and provide a database of planetary health resources that students can access to find projects and mentors.

Campus Sustainability

D+

Last year, the creation of the Hospital Green Team improved sustainability efforts in the main hospital, but there are few guidelines within SFESOM. There are no guidelines for procurement of goods, foods, or lab spaces. Support for divestment and carbon neutrality goals by 2050 is less than ambitious.

Recommendations: Development of clear guidelines for sustainable procurement, increasing offerings for plant-based and locally sourced foods, and lab sustainability. Additionally, increasing accessibility of public transit and planning for the new building to be bike-friendly. We continue to recommend more ambitious carbon neutrality goals as well as a commitment to fully divest from fossil fuel corporations.



2022-2023 Summary Report

US - West

University of Washington School of Medicine

Overall

B-

Planetary Health Curriculum

C

The planetary health preclinical curriculum has made some improvements over the past year, but there is still more work that needs to be done. A major milestone this past year was forming the Planetary Health Workgroup, which is actively revising the current curriculum.

Recommendations: Moving forward, the curriculum should focus on emphasizing the respiratory, cardiovascular, and reproductive effects of climate change, including pollution, extreme heat, and industry-related toxins.

Interdisciplinary Research in Health and the Environment

A

One of the medical school's strengths is the abundance of research opportunities related to climate change health impacts. These are available through the UW Center for Health and Global Environment and the Climate Impacts Group.

Recommendations: The School of Medicine (SOM) should continue engaging with the various climate-related departments and make these experiences more easily accessible to medical students..

Community Outreach and Advocacy

C+

The SOM partners with local community organizations such as Washington Physicians for Social Responsibility and makes environmental health education available to patients.

Recommendations: Opportunities exist for the SOM to partner with the Office of Sustainability to promote community outreach and advocacy, as well as provide more regular communication to students about planetary health and sustainable healthcare.

Support for Student-Led Initiatives

C

Over the past year, there have been numerous opportunities for students to get engaged with planetary health, from attending talks with local physicians to planting trees in the local community. However, more structured and integrated support for student-led initiatives could increase engagement.

Recommendations: The SOM should provide concrete support for students to either spearhead or work with faculty on sustainability initiatives and quality improvement projects. These opportunities could be highlighted in the Triple I (Independent Investigate Inquiry) database for first-year students.

Campus Sustainability

B

The University of Washington is mindful of utilizing sustainable building practices for new projects, but retrofitting existing, older buildings continues to be a challenge. The Office of Sustainability is integral to campus and does a fantastic job of promoting sustainable practices through community events and recycling/composting.

Recommendations: The institution should create more ambitious goals to achieve carbon neutrality and promote stricter standards regarding sustainability for supply procurement and campus events.



2022-2023 Summary Report

US - West

Washington State University Elson S. Floyd College of Medicine

Overall

C

Planetary Health Curriculum

C+

The Washington State University Elson S. Floyd College of Medicine has made significant improvements to the planetary health pre-clerkship curriculum in the past year. This includes an introductory lecture, six specific topic modules, and a health systems lecture, though some have not yet been delivered. Planetary health topics are not yet integrated into the required elements of the curriculum.

Recommendations: There should be a purposeful integration of planetary health into required core curriculum instead of optional lectures. Next steps could include adding planetary health learning objectives to established threads and case-based-learning, or inclusion of planetary health history taking. Planetary health integration into the clerkship years should also be considered.

Interdisciplinary Research in Health and the Environment

C+

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 minimal planetary health research in the College of Medicine, and no process for communities affected by climate injustice to influence research.

Recommendations: The WSU College of Medicine could host a planetary health symposium, 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 planetary health impacts. There are also student groups which partner with community organizations promoting environmental health. Unfortunately, the College of Medicine itself does not have 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

A

Continuing to be 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 many events. The new Presidential Sustainability Task Force will include student input.

Recommendations: University-wide student opportunities should be more clearly advertised and accessible to students in the College of Medicine and included on the new Sustainability website.

Campus Sustainability

C-

The WSU College of Medicine has some sustainable practices, such as recycling and LEED certification. However, there are insufficient carbon reduction goals, and minimal or unpublicized guidelines for campus dining, supplies, lab spaces, or events. There are plans to start a small-scale composting option at the campus cafe. Discussions have begun around divesting from fossil fuels, but no goals have been set.

Recommendations: There should be a campus-wide composting program, and clear guidelines should be publicized and required for campus activities. The new Presidential Sustainability Task Force should prioritize updating goals for carbon neutrality. Finally, discussions around divestment should continue.

LIMITATIONS

The 2022-2023 Planetary Health Report Card is the fourth 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 metric international generalizability 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. Notably, as German universities do not have endowments, institutional divestment was deemed not applicable for some institutions and therefore one metric is not included in German report cards. 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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**The Planetary Health Alliance offered guidance regarding the criteria for this initiative. As an independent organization, the PHA is not a sponsor of how this report card is used nor the results outlined by the report.*

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