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# Planetary Health Report Card (Medicine): *University of Galway*

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2022-2023 Contributing Team:

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## Summary of Findings

Overall	C
<u>Curriculum</u>	D
<ul style="list-style-type: none"> <li>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.</li> <li>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.</li> <li><b>Recommendations:</b> 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.</li> </ul>	
<u>Interdisciplinary Research</u>	B
<ul style="list-style-type: none"> <li>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.</li> <li><b>Recommendations:</b> 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.</li> </ul>	
<u>Community Outreach and Advocacy</u>	F
<ul style="list-style-type: none"> <li>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.</li> <li><b>Recommendations:</b> 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.</li> </ul>	
<u>Support for Student-Led Initiatives</u>	B
<ul style="list-style-type: none"> <li>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.</li> <li><b>Recommendations:</b> 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.</li> </ul>	
<u>Campus Sustainability</u>	C+
<ul style="list-style-type: none"> <li>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.</li> <li><b>Recommendations:</b> 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.</li> </ul>	

# Statement of Purpose

*Planetary health is human health.*

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

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

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

# Definitions & Other Considerations

## Definitions:

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

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

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

**Other considerations:**

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

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

# Planetary Health Curriculum

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

## Curriculum: General

1. Did your <u>medical school</u> offer elective courses (student selected modules) to engage students in Education for Sustainable Healthcare or Planetary Health in the last year?	
3	Yes, the medical school has offered <b>more than one</b> elective whose primary focus is ESH/planetary health in the past year.
2	Yes, the medical school has offered <b>one</b> elective whose primary focus is ESH/planetary health in the past year.
1	The medical school does <b>not</b> have any electives whose primary focus is ESH/planetary health, but there are one or more electives that include a <b>lecture</b> on planetary health.
0	No, the medical school has <b>not</b> offered any electives on planetary health or electives that include ESH/planetary health topics in the past year.
<b>Score explanation:</b> Electives offered at the University of Galway are solely of a clinical nature, with no lecture or assignment based electives.	

## Curriculum: Health Effects of Climate Change

2. Does your <u>medical school</u> curriculum address the relationship between extreme heat, health risks, and climate change?	
3	This topic was explored <b>in depth</b> by the <b>core</b> curriculum.
2	This topic was <b>briefly</b> covered in the <b>core</b> curriculum.
1	This topic was covered in <b>elective</b> coursework.
0	This topic was <b>not</b> covered.
<b>Score explanation:</b> This topic is not covered in the University of Galway medical school curriculum.	

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

3	This topic was explored <b>in depth</b> by the <b>core</b> curriculum.
2	This topic was <b>briefly</b> covered in the <b>core</b> curriculum.
1	This topic was covered in <b>elective</b> coursework.
0	This topic was <b>not</b> covered.

***Score explanation:** The Global Health and Development module, undertaken by 3rd year students at the University of Galway, includes a lecture on water, sanitation, and hygiene (WASH) which also touches on the effects of extreme weather events such as droughts, flooding etc. on human health.*

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

3	This topic was explored <b>in depth</b> by the <b>core</b> curriculum.
2	This topic was <b>briefly</b> covered in the <b>core</b> curriculum.
1	This topic was covered in <b>elective</b> coursework.
0	This topic was <b>not</b> covered.

***Score explanation:** The increasing range of the aedes albopictus mosquito vector, as a result of climate factors, is mentioned in a lecture entitled 'red cell parasites' in the module Health and Disease II, undertaken by 3rd year students. The learning outcomes 'Demonstrate an awareness of the epidemiology of various diseases in different geographical regions of the world' and 'convey a basic understanding of the scope and impact of vector-borne diseases and neglected tropical diseases' are both learning objectives of the Global Health and Development module; however the impact of climate change is not included in lectures and assessments relating to these learning outcomes.*

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

3	This topic was explored <b>in depth</b> by the <b>core</b> curriculum.
2	This topic was <b>briefly</b> covered in the <b>core</b> curriculum.
1	This topic was covered in <b>elective</b> coursework.
0	This topic was <b>not</b> covered.

***Score explanation:** The respiratory health effects of climate change and air pollution were discussed as part of a guest lecture on 'Planetary Health', in the Global Health and Development module. In the same module, part of the overall assessment encompasses a group scientific poster, the topics for which included 'household air pollution'. However, we awarded only 2 points as this is not a core curriculum topic and only a small number of students were assigned a project which covered this topic.*

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

3	This topic was explored <b>in depth</b> by the <b>core</b> curriculum.
2	This topic was <b>briefly</b> covered in the <b>core</b> curriculum.
1	This topic was covered in <b>elective</b> coursework.
0	This topic was <b>not</b> covered.

**Score explanation:** *This topic is not covered in the University of Galway medical school curriculum.*

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

3	This topic was explored <b>in depth</b> by the <b>core</b> curriculum.
2	This topic was <b>briefly</b> covered in the <b>core</b> curriculum.
1	This topic was covered in <b>elective</b> coursework.
0	This topic was <b>not</b> covered.

**Score explanation:** *This topic is not covered in the University of Galway medical school curriculum.*

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

3	This topic was explored <b>in depth</b> by the <b>core</b> curriculum.
2	This topic was <b>briefly</b> covered in the <b>core</b> curriculum.
1	This topic was covered in <b>elective</b> coursework.
0	This topic was <b>not</b> covered.

**Score explanation:** *There are 2 separate lectures in the Global Health and Development module, entitled 'One Health' and 'Planetary Health' respectively. 'Summarise key concepts in relation to one health and planetary health' is also a curriculum learning objective for this module. These lectures were delivered as guest lectures for this year, and as such may not be repeated in the future.*



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

3	This topic was explored <b>in depth</b> by the <b>core</b> curriculum.
2	This topic was <b>briefly</b> covered in the <b>core</b> curriculum.
1	This topic was covered in <b>elective</b> coursework.
0	This topic was <b>not</b> covered.

***Score explanation:** This topic is touched upon across many of the learning objectives of the Global Health and Development module: ‘Demonstrate an insight into the social, economic, political, environmental, and gender determinants of health disparities’, ‘Show an awareness of challenges faced by health systems in resource poor settings’, ‘Appreciate the unique health care needs of migrant populations, including refugees and asylum seekers’, and ‘Summarise key aspects in relation to One Health and Planetary Health’. However, the links between climate change, environmental determinants and marginalised populations are not addressed sufficiently to award a 3.*

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

3	This topic was explored <b>in depth</b> by the <b>core</b> curriculum.
2	This topic was <b>briefly</b> covered in the <b>core</b> curriculum.
1	This topic was covered in <b>elective</b> coursework.
0	This topic was <b>not</b> covered.

***Score explanation:** Humanitarian crises and refugees are both lectures in the Global Health and Development module that touch on the unequal access to health; however there is no emphasis on the role of climate change in exacerbating unequal regional health impacts.*

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

**11. Does your medical school curriculum address the reproductive health effects of industry-related environmental toxins (e.g. air pollution, pesticides)?**

3	This topic was explored <b>in depth</b> by the <b>core</b> curriculum.
2	This topic was <b>briefly</b> covered in the <b>core</b> curriculum.
1	This topic was covered in <b>elective</b> coursework.
0	This topic was <b>not</b> covered.

***Score explanation:** This topic is not covered in the University of Galway medical school curriculum.*

**12. Does your medical school curriculum address important human-caused environmental threats that are relevant to the university's surrounding community?**

3	This topic was explored <b>in depth</b> by the <b>core</b> curriculum.
2	This topic was <b>briefly</b> covered in the <b>core</b> curriculum.
1	This topic was covered in <b>elective</b> coursework.
0	This topic was <b>not</b> covered.

*Score explanation: This topic is not covered in the University of Galway medical school curriculum.*

**13. To what extent does your medical school emphasize the importance of Indigenous knowledge and value systems as essential components of planetary health solutions?**

3	Indigenous knowledge and value systems are <b>integrated throughout</b> the medical school's planetary health education
2	Indigenous knowledge and value systems as essential components of planetary health solutions are included <b>briefly</b> in the core curriculum.
1	Indigenous knowledge and value systems as essential components of planetary health solutions are included in <b>elective</b> coursework.
0	This topic was <b>not</b> covered.

*Score explanation: The medical school does not emphasize the importance of Indigenous knowledge and value systems as essential components of planetary health solutions.*

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

3	This topic was explored <b>in depth</b> by the <b>core</b> curriculum.
2	This topic was <b>briefly</b> covered in the <b>core</b> curriculum.
1	This topic was covered in <b>elective</b> coursework.
0	This topic was <b>not</b> covered.

*Score explanation: The medical school curriculum does not address the outsized impact of anthropogenic environmental toxins on marginalized populations.*

*Curriculum: Sustainability*

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

3	This topic was explored <b>in depth</b> by the <b>core</b> curriculum.
2	This topic was <b>briefly</b> covered in the <b>core</b> curriculum.
1	This topic was covered in <b>elective</b> coursework.
0	This topic was <b>not</b> covered.

***Score explanation:** A plant-based diet is briefly mentioned in the “Metabolism, Nutrition and Health” module. However, the specific environmental and health co-benefits of a plant-based diet are not directly addressed in this module or the medical school curriculum. The focus is on nutritional deficiencies associated with a plant-based diet.*

16. Does your <u>medical school</u> curriculum address the carbon footprint of healthcare systems?	
3	This topic was explored <b>in depth</b> by the <b>core</b> curriculum
2	This topic was <b>briefly</b> covered in the <b>core</b> curriculum.
1	This topic was covered in <b>elective</b> coursework.
0	This topic was <b>not</b> covered.

***Score explanation:** The medical school curriculum does not address the carbon footprint of healthcare systems.*

17. Does your <u>medical school</u> curriculum cover these components of sustainable clinical practice in the <u>core</u> curriculum? (points for each)	
2	The health <b>and</b> environmental <b>co-benefits</b> of <b>avoiding</b> over-medicalisation, over-investigation and/or over-treatment
2	The environmental impact of <b>pharmaceuticals</b> and over-prescribing as a cause of climate health harm. Alternatively teaching on <b>deprescribing</b> where possible and its environmental and health co-benefits would fulfil this metric.
1	The health <b>and</b> environmental <b>co-benefits</b> of <b>non-pharmaceutical management</b> of conditions where appropriate such as exercise or yoga classes for type 2 diabetes; social group activities such as gardening for mental health conditions; active transport such as bicycle schemes. This is commonly known as social prescribing in the UK.
1	Environmental impact of <b>surgical</b> healthcare on planetary health and the climate crisis, and how can it be mitigated
1	The impact of <b>anaesthetic</b> gases on the healthcare carbon footprint and ways to reduce anaesthesia environmental impacts, such as total intravenous anaesthesia or choosing less environmentally harmful anaesthetic gas options with reduced greenhouse gas emissions
1	The impact of <b>inhalers</b> on the healthcare carbon footprint and the environmental benefit of dry powdered inhalers over metered dose inhalers.

1	<b>Waste production</b> within healthcare <b>clinics</b> and strategies for reducing waste in clinical activities (e.g. single use items in the inpatient or outpatient setting)
	<p><b>Score explanation:</b>  <i>In the Bacteriology section of the "Health &amp; Disease II" module, the health and environmental co-benefits of avoiding over-medicalisation, over-investigation and/or over-treatment are mentioned in multiple lectures with a focus on antimicrobial stewardship and safe prescribing. However, it is important to note that students are not explicitly taught not to over-prescribe specifically for environmental effects.</i></p> <p><i>In the Bacteriology section of the "Health &amp; Disease II" module, de-prescribing where possible and its environmental and health co-benefits are mentioned in multiple lectures in terms of antimicrobial resistance, antimicrobial stewardship, and the impact of these on the surrounding environment.</i></p> <p><i>Health and environmental co-benefits of non-pharmaceutical management of conditions (e.g. social prescribing) is mentioned in many lectures in the Public Health and Health Promotion section of the "Health &amp; Disease I" and "Health &amp; Disease II" modules. Examples of these lectures include those on Health Promotion Models &amp; Approaches, Obesity, Mental Health, and Non-Communicable Disease Control.</i></p>

**Curriculum: Clinical Applications**

<b>18. In training for patient encounters, does your <u>medical school's</u> curriculum introduce strategies to have conversations with patients about the health effects of climate change?</b>	
2	Yes, there are strategies introduced for having conversations with patients about climate change in the <b>core</b> curriculum.
1	Yes, there are strategies introduced for having conversations with patients about climate change in <b>elective</b> coursework.
0	No, there are <b>not</b> strategies introduced for having conversations with patients about climate change
<b>Score explanation:</b> <i>The medical school's curriculum does not introduce strategies to students to have conversations with patients about the health effects of climate change.</i>	

<b>19. In training for patient encounters, does your <u>medical school's</u> curriculum introduce strategies for taking an environmental history or exposure history?</b>	
2	Yes, the <b>core</b> curriculum includes strategies for taking an environmental history.
1	Only <b>elective</b> coursework includes strategies for taking an environmental history.
0	No, the curriculum does <b>not</b> include strategies for taking an environmental history.
<b>Score explanation:</b> <i>Strategies for taking an environmental history or exposure history are covered in the core curriculum. Students are trained to ask patients about their social history, which includes</i>	

questions regarding the patient's occupational history, living conditions, and exposure to potentially harmful materials in the environment.

**Curriculum: Administrative Support for Planetary Health**

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

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

***Score explanation:** The School of Medicine is currently reviewing and developing a new medical curriculum. Students from the PHRC group at University of Galway were invited to be represented and there is support in principle for a more planetary health/sustainable focus in the curriculum, but the support is not always translated into specific learning outcomes or commitments. The review process is planned to end in 2024; we hope to see major improvements by then, but at this stage the tangible commitment to planetary health and sustainability is not there yet.*

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

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

***Score explanation:** The sustainability of healthcare and some planetary health topics (eg. pollution, clean water accessibility) are the focus of certain lectures in the "Global Health & Development" module. The social determinants of health are well integrated longitudinally into the curriculum, but there is little mention or discussion of the impact of climate change in this context.*

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

1	<b>Yes</b> , the <b>medical school</b> has a specific faculty/staff member responsible for overseeing curricular integration of planetary health and sustainable healthcare
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0	<b>No, the medical school does not</b> have a specific faculty/staff member responsible for overseeing curricular integration of planetary health and sustainable healthcare.
<i><b>Score explanation:</b> The medical school does not <u>employ</u> 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. The SOM did originally appoint a member of staff to communicate with us on planetary health matters, but we have been unable to receive a response from this individual.</i>	

<b>Section Total (22 out of 72)</b>	<b>31%</b>
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# Interdisciplinary Research

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

1. Are there researchers engaged in planetary health research and healthcare sustainability research at your <u>medical school</u> ?	
3	Yes, there are faculty members at the <b>medical school</b> who have a <b>primary</b> research focus in planetary health <b>or</b> healthcare sustainability.
2	Yes, there are individual faculty members at the <b>medical school</b> who are conducting research <b>related</b> to planetary health or healthcare sustainability, but it is not their primary research focus.
1	There are planetary health and/or healthcare sustainability researchers at the <b>institution</b> , but none associated with the medical school.
0	No, there are <b>no</b> planetary health and/or healthcare sustainability researchers at the <b>institution</b> or <b>medical school</b> at this time.
<p><b>Score explanation:</b></p> <p>The <a href="#">Centre for One Health at The University of Galway</a> has several researchers involved with the School of Medicine. Their research topics include but are not limited to:</p> <ul style="list-style-type: none"> <li>• Antimicrobial resistance</li> <li>• Bacterial virulence, host-pathogen interactions</li> <li>• Emerging infectious diseases, diagnostics, surveillance, technologies, and pandemic preparedness</li> <li>• Humanitarian emergencies and health security</li> <li>• Social marketing, social change, systems dynamics, health &amp; the environment, stakeholder engagement</li> <li>• Marine biodiscovery</li> <li>• Environmental microbiology</li> <li>• Foodborne infections &amp; pathogens, stress responses, sigma factors, gene regulation</li> </ul>	

2. Is there a dedicated department or institute for interdisciplinary planetary health research at your <u>institution</u> ?	
3	There is <b>at least one</b> dedicated department or institute for interdisciplinary planetary health research.

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

**Score explanation:** *The Centre for One Health (COH), a trans-disciplinary research centre, is an integral part of the [Ryan Institute](#) at University of Galway and brings together experts in human health, animal health, microbiology, infectious diseases, agriculture, environmental policy, social marketing and behavioural change from within and outside University of Galway. The COH places sustaining human health, animal health and environmental health at the centre of public policy through teaching, research and advocacy. The COH hosts several small events each year and an annual conference.*

<b>3. Is there a process by which communities disproportionately impacted by climate change and environmental injustice give input or make decisions about the research agenda at your <u>medical school</u>?</b>	
3	Yes, there is a process in which community members impacted by climate and environmental injustice have <b>decision-making power</b> in the climate + environmental research agenda.
2	Yes, there is a process in which community members impacted by climate and environmental injustice <b>advise</b> the climate + environmental research agenda.
1	<b>No</b> , but there are <b>current efforts</b> to establish a process for community members to advise or make decisions on the research agenda.
0	There is <b>no</b> process, and <b>no</b> efforts to create such a process.

**Score explanation:** *There is no such process or efforts to create one.*

<b>4. Does your <u>institution</u> have a planetary health website that centralizes ongoing and past research related to health and the environment?</b>	
3	There is an <b>easy-to-use, adequately comprehensive</b> website that <b>centralizes</b> various campus resources related to health and the environment including all of the following: upcoming events, leaders in planetary health at your institution, and relevant funding opportunities.
2	There is a website that <b>attempts to centralize</b> various campus resources related to health and the environment, but it is hard-to-use, not updated, or not adequately comprehensive.
1	The <b>institution</b> has an <b>Office of Sustainability website</b> that includes <b>some</b> resources related to health and the environment.
0	There is <b>no</b> website.

**Score explanation:** *<http://www.nuigalway.ie/sustainability/> is the most comprehensive sustainability website of the University of Galway. There are many good resources and information on the page, but it inadequately covers the topics of planetary health and effects of climate change on human health. There is no information on planetary health leaders, little information of events and no collaboration*



with the School of Medicine. <https://www.nuigalway.ie/ryaninstitute/researchcentresandclusters/coh/> is the One Health website of the University of Galway. It outlines the various research opportunities related to planetary health members of staff are undertaking, and ways for students to get involved, hence it attempts to centralise campus resources related to health and the environment.. However, it is not easily accessible to students and lacks comprehensiveness regarding direct links between health and climate change.

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

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

**Score explanation:** University of Galway hosted the 26th Annual Health Promotion Conference online on 16th June 2022. The theme was 'Health Inequity: Action for change'. The conference was hosted by the Health Promotion Research Centre at University of Galway in collaboration with the Department of Health; the Health Service Executive; the Association for Health Promotion Ireland, and the Institute of Public Health. The virtual and live conference aimed to provide a platform to highlight cutting-edge research and innovative initiatives in regards to the theme, as well as to expand links between knowledge and action, and to broaden connections among a diversity of researchers, policymakers and practitioners. The Centre for One Health hosted their annual conference from November 3rd to November 4th 2022, with speakers Dr. Kasthuri Venkateswaran, Dr. Anthony O'Donoghue, Dr. Nitin Kumar Singh, Dr. Liam Morrison, Dr. Alexandre De Menezes, Dr. Sinéad Duane and student representatives Darragh Harrington and Esmerelda Cecilie Pérez speaking about relevant research/topics. These annual conferences and spotlight series are aimed not only at the academic community but also students and the general public and highlight One Health Challenges.

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

1	Yes, the medical school is a member of a national or international planetary health or ESH organization
0	No, the medical school is <b>not</b> a member of such an organization

**Score explanation:** The school of medicine is currently a member of the Global Consortium on Climate and Health Education (GCCHE) at Columbia University. The GCCHE aim to unite healthcare training

*institutions and organisations to create a climate ready health sector and restores the health of the planet.*

**Section Total (12 out of 17)**

**71%**

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

*CÚRAM, the SFI Research Centre for Medical Devices based at University of Galway is the first in Europe to be awarded Green Lab Certification. This is led by the Director of the Galway Neuroscience Centre at University of Galway and aims to transform practice across campus to address issues such as plastic waste, energy reduction, recycling, and water usage in labs. This certification has also been awarded to the Lambe Institute at University Hospital Galway (UHG). Certification of all laboratories on campus as 'green' by 2025 is part of University of Galway's sustainability strategy.*

## Community Outreach and Advocacy

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

1. Does your <u>medical school</u> partner with community organisations to promote planetary and environmental health?	
3	Yes, the <b>medical school</b> meaningfully partners with <b>multiple</b> community organizations to promote planetary and environmental health.
2	Yes, the <b>medical school</b> meaningfully partners with <b>one</b> community organization to promote planetary and environmental health.
1	The <b>institution</b> partners with community organisations, but the medical school is not part of that partnership.
0	No, there is <b>no</b> such meaningful community partnership.
<p><b>Score explanation:</b> <i>The partner hospital group of the medical school has previously partnered with the Smarter Travel Charter which is a voluntary programme to promote walking, cycling and car-sharing to commute to work. They also have a partnership with the National Sustainability Office to develop and maintain programmes to reduce waste, conserve water and electricity among other initiatives. The University of Galway partners with the Terryland Forest Park project. The aim is to develop Terryland Forest (Ireland's largest urban forest) into a major Outdoor Laboratory and Outdoor Classroom for the benefit of schools and third level education. However, our medical school is not involved in these partnerships. The University of Galway, Student Pantry Society started in 2022 to partner with Clonmany community centre (Donegal) and FoodCloud (National social enterprise) to redistribute leftover food from supermarkets to students on campus. Our medical school is not engaged with this. Note: Examples of such a community partnership could be medical students teaching about climate change in local schools, health professionals sharing their patient climate health stories with a local advocacy organisation to enable more effective lobbying, the School of Medicine offering credit for student work with a local community organisation.</i></p>	

2. Does your <u>medical school</u> offer community-facing courses or events regarding planetary health?	
3	The <b>medical school</b> offers community-facing courses or events at least once every year.
2	The <b>medical school</b> offers courses or events open to the community at least once per year, but they are not primarily created for a community audience.

1	The <b>institution</b> has offered community-facing courses or events, but the <b>medical school</b> was not involved in planning those courses or events.
0	The <b>institution/medical school</b> have not offered such community-facing courses or events.
<p><i><b>Score explanation:</b> There were no community focused planetary health courses or events held by the medical school or the university this year. The University of Galway's Environment Society has previously organised events (documentary showings, strikes) during Earth week and talks with the Irish Wildlife trust, but none in the past year. The Centre for One Health Research Centre at the University of Galway hosted their annual conference on 3-4th November, 2022, where themed research sessions on people, nature and the environment and emerging pollutants were discussed. A member of our committee provided a short talk explaining our working group.</i></p>	

<p><b>3. Does your <u>medical school</u> have regular coverage of issues related to planetary health and/or sustainable healthcare in university update communications?</b></p>	
2	Yes, all students <b>regularly</b> receive communication updates dedicated to planetary health and/or sustainable healthcare.
1	Yes, planetary health and/or sustainable healthcare topics are <b>sometimes</b> included in communication updates.
0	Students <b>do not</b> receive communications about planetary health or sustainable healthcare.
<p><i><b>Score explanation:</b> No planetary health/sustainable healthcare updates are provided directly by our medical school. However, there are occasional university wide notices on climate action activities which healthcare students receive via the weekly Student's Union Newsletter.</i></p>	

<p><b>5. Does your <u>medical school</u> or its <u>primary affiliated hospital</u> have accessible educational materials for patients about environmental health exposures?</b></p>	
2	Yes, <b>all</b> affiliated hospitals have accessible educational materials for patients.
1	<b>Some</b> affiliated hospitals have accessible educational materials for patients.
0	<b>No</b> affiliated medical centers have accessible educational materials for patients.
<p><i><b>Score explanation:</b> No easily accessible educational materials are available to patients on the topic.</i></p>	

<p><b>6. Does your <u>medical school</u> or its <u>primary affiliated hospital</u> have accessible educational materials for patients about climate change and health impacts?</b></p>	
2	Yes, <b>all</b> affiliated hospitals have accessible educational materials for patients.
1	<b>Some</b> affiliated hospitals have accessible educational materials for patients.
0	<b>No</b> affiliated hospitals have accessible educational materials for patients.
<p><i><b>Score explanation:</b> No easily accessible materials available.</i></p>	

Section Total (2 out of 14)	14%
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*Are there additional community engagement and advocacy resources offered at your medical school or institution not yet asked about that you would like to describe? If so, please do so below.*

# Support for Student-Led Planetary Health Initiatives

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

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

**Score explanation:** *Students can apply for the Student Sustainability Leadership Award, which is given to two students each summer. The award consists of an 8-week scholarship (June-August) with the NUI Galway Community and University Sustainability Partnership (CUSP) team. The goal of the award is to help implement the NUI Galway Sustainability Strategy on campus and to develop student leaders on sustainability. The award is open to all students at NUI Galway, including medical students.*

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

**Score explanation:** *The University of Galway school of medicine has an excellent summer research programme which allows students to conduct funded research in areas of their interest. To date, there has been no research projects directly linked to planetary health or the health effects of climate change, however, the school is open to facilitate research in this area as well following student demand. Outside of the research opportunities run by the school of medicine themselves, faculty has provided time, advice and support to the student initiatives in this area.*

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

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

***Score explanation:** There is no medical-school specific webpage, but there are webpages dedicated to research clusters such as the Centre for One Health (COH) and the Centre for Climate and Air Pollution Studies that can be found on the university webpage.. Professor Dearbháile Morris, who is a mentor to the NUI Galway students filling out this report card was contacted through this webpage. However, the webpage is not linked to from the medical school webpage, nor is there any information on these research centres on the medical school webpage.*

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

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

***Score explanation:** Although not registered as a student society, the NUI Galway student branch of the Irish Doctors for the Environment (IDE) is a new, active group with student members and faculty mentors from the Centre of One Health. The group was established in September 2021 and has gained support and positive feedback from faculty and administration at University of Galway. The group hosted a major event in collaboration with the Medical Society at University of Galway, which brought together students, faculty, and researchers interested in the links between climate change and health. A member of the group was invited to deliver a guest lecture on Planetary Health in the Global Health and Development module in year 3. The IDE group has also been invited to be represented on the medical Curriculum Review Steering Group, which aims to renew the entire medical curriculum at University of Galway over the next 2 years. Despite these positive events, dedicated and engaged contact with the school of medicine is lacking, and mainly based on individual lecturer interest.*

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

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

***Score explanation:** In November 2021, the school of medicine Curriculum Review Steering Group was formed, tasked with reviewing and renewing the medical curricula at NUI Galway over a 2 year process. The group includes students, faculty and administration representatives. The NUI Galway Irish Doctors for the Environment student group has joined the curriculum review process with one medical student representative.*

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

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

1. The Student Union run food pantries where students can leave in-date but unused items before travelling away, and the Environmental Society organises community gardens on campus.
2. The Centre for One Health hosted an annual conference in November 2022, with speakers from the Irish Doctors for the Environment student group and other speakers from COH.
5. Environmental Society and the Student's Union Climate Crew regularly host events aimed at educating and engaging with the local community to minimise the impact of climate change.
6. The UoG mountaineering society, open to medical students, is affiliated with mountaineering Ireland, which has a Leave-No-Trace principle. There are other clubs available as well, such as Kayaking and Scouts club which follow similar principles.

**Section Total (10 out of 15)**

**67%**

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# Campus Sustainability

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

1. Does your <u>medical school</u> and/or <u>institution</u> have an Office of Sustainability?	
3	Yes, there is an Office of Sustainability with multiple full-time staff dedicated to campus sustainability. If the Office of Sustainability serves the entire campus, there is <b>at least one designated staff member</b> for sustainability at the hospital and/or medical school.
2	There is an Office of Sustainability with one or more full-time staff dedicated to campus sustainability, but <b>no specific staff member</b> in charge of medical school and/or hospital sustainability.
1	There are <b>no salaried sustainability staff</b> , but there is a sustainability task force or committee
0	There are <b>no</b> staff members <b>or</b> task force responsible for overseeing campus sustainability
<p><b>Score explanation:</b> University of Galway has a sustainability committee that meets on a regular basis - The Community and University Sustainability Partnership (CUSP). In addition, in September 2019, the University appointed a Community and University Sustainability Officer (CUSO) who worked on a full-time basis up until 2022, however now occupies a part-time role. There is no specific staff member responsible for sustainability of the medical school. There is no staff representative from the medical school on the CUSP General Board.</p>	

2. How ambitious is your <u>institution/medical school</u> plan to reduce its own carbon footprint?	
5	The institution/medical school has a <b>written and approved plan</b> to achieve carbon neutrality by <b>2030</b>
3	The institution/medical school has a <b>written and approved plan</b> to achieve carbon neutrality by <b>2040</b>
1	The institution/medical school has a stated goal of carbon neutrality by <b>2040</b> but has <b>not created a plan</b> to reach that goal or the <b>plan is inadequate</b>
0	The institution/medical school does <b>not</b> meet any of the requirements listed above
<p><b>Score explanation:</b> The University of Galway Sustainability Strategy 2021-2025 has a stated goal of achieving carbon neutrality by 2030. The strategy outlines the following plan for achieving carbon neutrality: (1) measure and report carbon footprint by 2021 (achieved) and (2) develop a framework by 2023 for the university to move ambitiously towards carbon neutrality by 2030 (not yet achieved). There is no written and approved framework to achieve this goal. The</p>	

	<p><i>University of Galway Climate Action and Sustainability Policy states the goal to achieve net-zero greenhouse gas emissions by 2050, but again there is no written and approved plan to achieve this, The College of Medicine, Nursing and Health Sciences fall under these institutional goals. The College of Medicine, Nursing and Health Sciences have outlined their goals for improving sustainability in their new Strategic Plan 2022-2025, stating that they will “Implement the University’s Sustainability Strategy”, however no clear plan to achieve carbon neutrality is outlined.</i></p>
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**3. Do buildings/infrastructure used by the medical school for teaching (not including the hospital) utilize renewable energy?**

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

**Score explanation:** Solar photovoltaic (PV) panels installed on the Human Biology Building (HBB) supplies 10% of the building’s energy usage. The Sustainability Strategy for 2021-2025 has the goal that 20% of electricity will come from renewable sources by 2025. There is extensive work being done to replace fossil fuels with energy from combined heat and power plants, solar thermal and solar photovoltaic panels, air to water heat pumps, the introduction of biomass boilers and the implementation of LED high efficient lighting systems across campus. University of Galway has also managed to cut 40% of their energy usage since 2006, making it a leading institution for energy efficiency and usage in Ireland. University of Galway exceeded the Public Sector 2020 Energy Efficiency target of 33% reaching their target of 40% in 2020. For 2022, we reached a figure of 51% savings as reported through the Sustainable Energy Authority Ireland (SEAI) Monitoring & Reporting (M&R) system. During the academic year 2021/2022, University of Galway invested €2.2 million in infrastructural energy projects including energy saving equipment and technologies.

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

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

**Score explanation:** *The Human Biology Building (HBB), which was built in 2017, is the main building for medical students in their preclinical years. The building was built with sustainability and energy efficiency in mind and received a BREEAM excellence rating. The university is ISO 50001:2011 certified and committed to retrofit old buildings to become more energy efficient and sustainable. Most buildings have already undergone some form of alteration, and many more are planned. For example, increasing energy efficiency in the Old Anatomy Building. The university also states the following in the University of Galway Strategic Plan – Shared Vision, Shaped by Values (p16): “We will embrace proven new technologies to increase our buildings’ energy efficiency and Building Energy Rating, by integrating sustainability in all Buildings and Estates planning and development under the auspices of the national Climate Action Plan.”*

*Note: Although Solar PV panels have been installed on the roof of HBB, its overall energy efficiency rating remains poor (BER E2 as of June 2021). The university plans to review and upgrade the heating and cooling strategies.*

*Note: We attempted to find information about sustainability of refurbishment of the Clinical Science Institute (CSI) and medical school academies but could not find anything.*

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

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

**Score explanation:** *Most students walk, cycle or take the bus to campus (Campus community travel survey 2022 revealed only 25% of students travel to university by car). The university has a shuttle bus system for transporting students across campus, implemented secure cycling storage options, and created walking time maps that show the approximate walking time to campus from different areas in Galway City. University of Galway has a Travel Plan project (due to be updated this year) and several accessible online resources to encourage active travel and public transport use and discourage car use. Every year the Student Union and the Medical Society also arrange competitions to encourage walking to campus. The medical school has not implemented any measures to encourage environmentally friendly transport measures or reduce the environmental impact of commuting. Nothing regarding this has been mentioned in the College of Medicine, Nursing and Health Sciences Strategic Plan 2022-2025. The use of remote/blended learning has decreased dramatically in the past year since the return to campus after COVID-19. The placement of students in off-campus locations for clinical activities makes active travel and public transport use more difficult.*

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

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

***Score explanation:** Recycling bins for paper and recyclable waste are available throughout the university campus to all students and staff. Recycling stations for glass and aluminium are also available on the South Campus. Organic/compost bins are currently confined to canteen/food service outlets only. Initiatives such as “bin the bin” and “Zero Waste to Landfill” aim to increase recycling. The University aims to divert food waste into compost and increase composting opportunities for students and staff in their Sustainability Strategy 2021-2025, but it is not yet a reality. University of Galway has clear guidelines with regards to the Waste Reduction Reuse Recycling Guidelines on campus. In 2021, a monthly average of 53% of the total waste generated at University of Galway was recycled across six different waste streams (1% drop since previous year, months ranged from 37-66%).*

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

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

***Score explanation:** The University of Galway Sustainability Strategy 2021-2025 aims to “increase the availability of healthy, sustainable (for example, vegan, vegetarian, organic), locally sourced, affordable and fairly traded food options in campus outlets”, and this has already began to be implemented, with more plant-based options available across campus outlets in 2021. Campus caterers have implemented a recycling system to conserve natural resources and have placed a strong emphasis on fresh, local, organic and sustainable food offerings. There is an optional Sustainability Event Checklist which includes several points on local, climate friendly, Fairtrade, vegetarian, and seasonal food. The College of Medicine, Nursing and Health Sciences has not included any points about food sustainability in their Strategic Plan 2022-2025. University of Galway has increased the number of water fountains on campus to reduce plastic bottle waste, including a new water fountain outside the Human Biology Building.*

**8. Does the medical school or institution apply sustainability criteria when making decisions about supply procurement?**

3	Yes, the medical school has <b>adequate</b> sustainability requirements for supply procurement <b>and</b> is <b>engaged</b> in efforts to increase sustainability of procurement.
2	There are sustainability guidelines for supply procurement, but they are <b>insufficient or optional</b> . The medical school is <b>engaged</b> in efforts to increase sustainability of procurement.
1	There are sustainability guidelines for supply procurement, but they are <b>insufficient or optional</b> . The medical school is <b>not engaged</b> in efforts to increase sustainability of procurement.
0	There are <b>no</b> sustainability guidelines for supply procurement.

***Score explanation:** The University of Galway Procurement Policy states that they align with the principles of “Green Procurement” as outlined by the “Guidelines for Public Procurement” set out by the Irish Office of Government Procurement. The University of Galway Policy also states that the university “will incorporate the use of Green Procurement practices in our processes and procedures, in an effort to reduce our environmental impact in conjunction with the Community University Sustainability Programme (CUSP).” There are no concrete sustainability requirements stated in the University of Galway policy document. The University and the College of Medicine, Nursing and Health Sciences Strategic Plan 2022- 2025 states the following goal “To align investment within the College to support strategic goals and ongoing sustainability”. In the University of Galway Sustainability Strategy 2021-2025 they state the goal to achieve green lab certification for all university laboratories, however this is not yet a reality. The school of medicine laboratories have not yet received this certification.*

*Note: Unclear as to whether the school of medicine is involved in efforts to improve sustainability of procurement.*

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

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

***Score explanation:** University of Galway Sustainable Event Policy. The University of Galway Sustainable Event Checklist is the first step in the Sustainable Event Policy development process and the checklist is intended as a simplified tool to assist event organizers to organize sustainable events. This tool is available but its use is not regulated, or mandatory. It is not incentivised or strongly recommended.*

*<http://www.universityofgalway.ie/media/sustainability/Sustainable-Event-Checklist.pdf>*

10. Does your <u>medical school</u> have programs and initiatives to assist with making lab spaces more environmentally sustainable?	
2	Yes, the medical school has <b>programs</b> and <b>initiatives</b> to assist with making lab spaces more environmentally sustainable.
1	There are <b>guidelines</b> on how to make lab spaces more environmentally sustainable, but not programs or initiatives.
0	There are <b>no</b> efforts at the medical school to make lab spaces more sustainable.
<p><i><b>Score explanation:</b> CÚRAM, the SFI Research Centre for Medical Devices based at University of Galway being the first in Europe to be awarded Green Lab Certification. The University of Galway Sustainability Strategy 2021-2025 aims to have all labs on campus certified as ‘green’ by 2025 with several labs already having received ‘Green Lab Certifications’ including the Lambe institute at University Hospital Galway. Very few laboratories used by the school of medicine have received this certification.</i></p>	

11. Does your <u>institution’s</u> endowment portfolio investments include fossil-fuel companies?	
4	The institution is <b>entirely divested</b> from fossil fuels <b>and</b> has made a <b>commitment to reinvest divested funds</b> into renewable energy companies or renewable energy campus initiatives.
3	The institution is <b>entirely divested</b> from fossil fuels.
2	The institution has <b>partially divested</b> from fossil fuel companies <b>or</b> has made a <b>commitment to fully divest</b> , but <b>currently</b> still has fossil fuel investments.
1	The institution has <b>not divested</b> from fossil-fuel companies, but faculty and/or students are <b>conducting organized advocacy</b> for divestment.
0	Yes, the institution has investments with fossil-fuel companies and there have been <b>no efforts</b> to change that.
<p><i><b>Score explanation:</b> University of Galway committed to divest from fossil fuels by the end of 2017 and is now recognised as being fully divested. University of Galway is also committed to invest in renewable energy sources and reinvest energy cost savings into new sustainability technologies and engagement with building occupants as agents for making the university buildings more energy efficient, as evident by the Sustainability Strategy 2021-2025.</i></p>	

<b>Section Total (18 out of 32)</b>	<b>56%</b>
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*Are there additional sustainability resources offered at your medical school or institution not yet asked about that you would like to describe? If so, please do so below.*

- *Campus and hospital facilities will provide a discount of 50 cents if you bring in your own reusable cups/mugs.*



- *Sligo University Hospital (SUH) had a Christmas tree competition by reusing their own departments' packaging.*
- *Sligo University Hospital (SUH) awarded [An Taisce Green Flag](#).*
- *University Hospital Galway (UHG) was named the winner of ['The BIG Switch Off'](#) competition in January 2022 for their reduction in carbon footprint. Alongside seven other hospitals nationwide, “over a period of just three days, the hospitals saved enough electricity to power an average operating theatre for 184 days and more than 2,000 hospital staff signed a pledge to make an extra effort to switch off non-essential equipment, making a positive contribution in preventing wasted energy which contributes to the ongoing climate emergency.”*

# Grading

## Section Overview

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

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

## Planetary Health Grades for the University of Galway School of Medicine

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

Section	Raw Score %	Letter Grade
<b>Planetary Health Curriculum (30%)</b>	31%	D
<b>Interdisciplinary Research (17.5%)</b>	71%	B
<b>Community Outreach and Advocacy (17.5%)</b>	14%	F
<b>Support for Student-led Planetary Health Initiatives (17.5%)</b>	67%	B
<b>Campus Sustainability (17.5%)</b>	56%	C+
<b>Institutional Grade</b>	<b>46%</b>	<b>C</b>



# Report Card Trends

## Section Overview

This graph demonstrates trends in overall and section grades for the years in which University of Galway has participated in the Planetary Health Report Card initiative.

