



Planetary Health Report Card:

Swansea University



2021-2022 Contributing Team:

- Students: Charlotte Nicholls (1900231@swansea.ac.uk), Tanvi Thomas (2001490@swansea.ac.uk)
- Faculty Mentors: Prof Kamila Hawthorne, Suzanne Edwards, Prof Gareth Jenkins, Victoria Lewis, Estates Swansea University
- *Primary Contact: Charlotte Nicholls, 1900231@swansea.ac.uk

Summary of Findings

Overall	C
<u>Curriculum</u>	B-
<ul style="list-style-type: none"> • Within the curriculum there are lots of changes on-going due to the curriculum review. This has involved many new additions within planetary health. • The addition of the Future Medics fortnight has allowed the medical school to deliver more teaching in planetary health within the past year, as well as provide lectures on topics that they have struggled to fit into the condensed 4 year course. 	
<u>Interdisciplinary Research</u>	F+
<ul style="list-style-type: none"> • Unfortunately research has not improved based on last year. • There is no dedicated department or group focused solely on planetary health. However, if students want to get involved there are opportunities within their own time or within set blocks called Learning Opportunities within the Research Setting (LORS). 	
<u>Community Outreach and Advocacy</u>	D
<ul style="list-style-type: none"> • This is another area that has not been improved upon when compared to last year. • There is very little outreach or advocacy within the institution. This could be due to lack of interest. • There is the opportunity to increase this even if it is just regularly publicising a newsletter highlighting how students and faculty could get involved. 	
<u>Support for Student-Led Initiatives</u>	D+
<ul style="list-style-type: none"> • The medical school encourages societies and student-led initiatives that focus on sustainable healthcare, however there needs to be more financial and faculty support to enhance student interest. • This however, has improved from last year with faculty members being employed in planetary health and more faculty involvement in societies. 	
<u>Campus Sustainability</u>	A
<ul style="list-style-type: none"> • Overall campus sustainability is excellent both within the school of medicine and as a whole. The university is very keen on making this even better with new guidance coming out regularly. The university is entirely divested from fossil fuels and tries hard to create their own renewable energy where possible. • The hospitals in the area are also working to become more sustainable with a solar plant being constructed on site of Morriston hospital. 	

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, urbanisation, 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 practises 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 colour, 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 centred on environmental health impacts 5) medical school campus sustainability.

Definitions & Other Considerations

Definitions:

- **Planetary Health:** is described by the *Planetary Health Alliance* 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.” 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.
- **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 (for example, undergraduate departments (USA), other related departments eg 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 elicit 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 mould 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. Paediatrics, 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 example).

Added to our resources this 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 medical school offer elective courses (student selected modules) to engage students in Education for Sustainable Healthcare or Planetary Health in the last year?	
3	Yes, the medical school has offered more than one elective whose primary focus is ESH/planetary health in the past year.
2	Yes, the medical school has offered one elective whose primary focus is ESH/planetary health in the past year.
1	The medical school does not have any electives whose primary focus is ESH/planetary health, but there are one or more electives that include a lecture on planetary health.
0	No, the medical school has not offered any electives on planetary health or electives that include ESH/planetary health topics in the past year.
<p><i>Electives are offered to final year medical students, where they are able to choose their own location and specialty, including sustainable/planetary healthcare. There is also a society within the Medical School which is run by students and staff and aims to provide teaching to hospitals in Gambia and allow Gambian medical students to come over to learn skills taught within UK medical schools. This process is fundraised entirely by Swansea students to bring over the Gambians and also be able to visit themselves for a 2 week placement to experience a different healthcare system.</i></p> <p><i>There are also pieces of coursework offered in student selected components where students can choose topics in planetary health such as a literature review completed in first year and third year or a Development Project Portfolio (DPP) in third year.</i></p> <p><i>The Students for Global Health Swansea society has recently gained funding for a faculty development event with sustainable healthcare. This is a great stepping stone to train staff in the importance of teaching planetary health and will hopefully be the first of many events to come. The society has also set up a few DPPs which is a piece of coursework conducted in 3rd and 4th year. These DPPs will have a special interest in green health.</i></p> <p><i>Within the future medics fortnight, which is a timetabled fortnight of lectures within the final year to help better prepare fourth years for work as a Foundation Year doctor. Dr Richard Thomas presents a series of talks on green health and is looking to expand this further into the curriculum within lower years. There are also many other talks during Future Medics week looking at planetary health and</i></p>	

sustainability given by Professor Martin Clift who is a respiratory research physiologist and Dr Tom Downs talks about research he conducted in sustainability during his FYI year.

Curriculum: Health Effects of Climate Change

2. Does your medical school curriculum address the relationship between extreme heat, health risks, and climate change?

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

If a student were passionate in this area, they can choose to do elective coursework within it. This elective coursework is either within year 1, 2 or 3. The coursework is entirely self selected and it is possible to complete it on any topic the student finds interesting.

Dr Martin Clifts who is a GP with a special interest in Green Health runs a seminar in year 2 and a lecture series in year 4 covering these topics.

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

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

If a student were passionate in this area, they can choose to do elective coursework within it. This elective coursework is either within year 1, 2, or 3. The coursework is entirely self selected and it is possible to complete it on any topic the student finds interesting.

This topic has also been covered by students during their elective placement components. Some have chosen to go to remote areas and have experienced firsthand the issue extreme weather events can cause such as the volcanic ash cloud or earthquakes.

The topic is also briefly covered in the emergency medicine public health series in year 2.

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

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

Briefly covered in a Global health week at the beginning of year 2 in relation to the spread of malaria. Also covered within public health lectures looking at pandemics (on the increase due to covid). It is mentioned in the public health series with regards to communicable diseases lectures looking at the impact of climate change.

Within the future medics fortnight, Dr Kathrin Thomas talks about her involvement in the Wales4Africa involvement and the issues climate change has posed.

It is sometimes covered within elective placements when people choose to go to more rural areas.

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

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

This topic is briefly covered in COPD week in one slide on air pollution causing COPD in the case presentation.

It is also covered in depth within the Future Medics fortnight by a range of speakers from public health consultants to respiratory research physiologists.

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

3	This topic was explored in depth by the core curriculum.
2	This topic was briefly covered in the core curriculum.
1	This topic was covered in elective coursework.

0	This topic was not covered.
<i>This topic is not covered.</i>	

7. Does your medical school curriculum address the mental health and neuropsychological effects of environmental degradation and climate change?	
3	This topic was explored in depth by the core curriculum.
2	This topic was briefly covered in the core curriculum.
1	This topic was covered in elective coursework.
0	This topic was not covered.
<i>This topic is not covered.</i>	

8. Does your medical school curriculum address the relationships between health, individual patient food and water security, ecosystem health, and climate change?	
3	This topic was explored in depth by the core curriculum.
2	This topic was briefly covered in the core curriculum.
1	This topic was covered in elective coursework.
0	This topic was not covered.
<i>This topic is covered in a public health lecture in first year which looked into the effects of water security with relation to cholera.</i>	
<i>It is also covered in the Future Medics fortnight conducted in 4th year by Professor Steve Palmer who looked at the effects of food security and ecosystem health.</i>	

9. Does your medical school curriculum address the outsized impact of climate change on marginalised populations such as those with low SES, women, communities of colour, Indigenous communities, children, homeless populations, and older adults?	
3	This topic was explored in depth by the core curriculum.
2	This topic was briefly covered in the core curriculum.
1	This topic was covered in elective coursework.
0	This topic was not covered.

This topic is not covered.

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

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

This is covered in a lecture called 'Malnutrition and Diarrhoeal Diseases in Children in the Developing World' in global health week in Year 2 and also within year 4 in a fortnight called Future Medics.

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

This topic is covered in a lecture within the Future Medics fortnight called One Health by Steven Palmer. There is also a lecture within 1st year by London's Women's Clinic that talks about technology and subfertility.

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

This is covered in small portions in different weeks such as COPD (air pollution), Asthma, and reducing speed limits in MHS.

Within the Future Medics fortnight, Steven Palmer's One Health talk looks at the effects of mining and slag heaps on health and other topical issues within Wales.

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

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

There are lecture series on the population of Wales and health inequalities faced within the local population but not on indigenous people and their cultures and customs.

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

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

This topic is not covered.

Curriculum: Sustainability

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

3	This topic was explored in depth by the core curriculum.
2	This topic was briefly covered in the core curriculum.
1	This topic was covered in elective coursework.

0	This topic was not covered.
<i>This topic is not covered.</i>	

16. Does your medical school curriculum address the carbon footprint of healthcare systems?	
3	This topic was explored in depth by the core curriculum
2	This topic was briefly covered in the core curriculum.
1	This topic was covered in elective coursework.
0	This topic was not covered.
<i>This is covered in conversations during ICM, placement and LOCS, but it is not covered in detail or is in specific lectures.</i>	
<i>There is a quality improvement project in the pilot stage about tools to use for decreasing carbon footprint and there are DPP projects running covering this topic. At the moment this project is formative, but they are looking at making it compulsory within the next few years. There is also a green health session within the Future Medics week that addresses this topic.</i>	

17. Does your medical school curriculum cover these components of sustainable clinical practice in the <u>core</u> curriculum? (1 point each)	
1	Waste production within the healthcare system and strategies for reducing waste in clinical activities, such as in the operating room
1	The impact of inhalers on the healthcare carbon footprint and the environmental benefit of dry powdered inhalers over metered dose inhalers.
1	The impact of anaesthetic gases on the healthcare carbon footprint and ways to reduce anaesthesia environmental impacts, such as total intravenous anaesthesia or choosing less environmentally anaesthetic gas options with reduced greenhouse gas emissions
1	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 fulfil this metric.
1	The health and environmental co-benefits of non-pharmaceutical management of conditions where appropriate such as exercise or yoga classes for type 2 diabetes; social group activities such as gardening for mental health conditions; active transport such as bicycle schemes for obesity. This is commonly known as social prescribing in the UK.
1	The health and environmental co-benefits of avoiding over-medicalisation, over-investigation and/or over-treatment

Many topics covered within future medics fortnight in 4th year. Topics also covered within ICM lectures in 1st and 2nd year.

Curriculum: Clinical Applications

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

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

This is currently not covered.

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

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

This topic is briefly covered with regards to asking about exposure during certain history taking stations. Due to the area having a big steel mining and mining population, questions are asked about sound exposure, chemicals, etc. and for how long. This is covered both in lectures and in ICM.

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

There is a curriculum review currently being carried out by Dr Edwards and Dr Rees, looking to include more sessions on global health. Within 4th year, there is a new lecture on sustainability and there is also the new fortnight called Future Medic which discusses a lot of issues within climate change and global health.

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

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

Planetary Health is discussed in some lectures in certain weeks, but is normally not more than a few slides and more given in terms of background context not examinable knowledge. However, the medical school are forward thinkers and are very interested in bringing about more change to integrate it further within the curriculum over the next few years. So far, they have done this with regards to learning about trans health and also Big Pharmas. Within the last year a Future Medics fortnight was started which has a big focus on planetary health and health inequalities.

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

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

Richard Thomas is now employed full time by the med school to look at planetary health. Within the faculty there are also people who take an interest within this area such as Suzanne Edwards who is also in charge of the curriculum review.

Section Total (43 out of 69)	43
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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 emphasised.

1. Are there researchers engaged in planetary health research and healthcare sustainability research at your medical school?	
3	Yes, there are faculty members at the School of Medicine who have a primary research focus in planetary health or healthcare sustainability.
2	Yes, there are individual faculty members at the School of Medicine who are conducting research related to planetary health or healthcare sustainability, but it is not their primary research focus.
1	There are planetary health and/or healthcare sustainability researchers at the institution, but none associated with the medical school.
0	No, there are no planetary health and/or healthcare sustainability researchers at the institution or medical school at this time.
<i>We have academics in SUMS whose research investigates the impact of climate change (indirectly), by working with colleagues in LMIC countries. This includes anthropogenic effects (deforestation, pollution, food security etc.) and healthcare pressures (population growth etc.).</i>	

2. Is there a dedicated department or institute for interdisciplinary planetary health research at your institution?	
3	There is at least one dedicated department or institute for interdisciplinary planetary health research.
2	There is not currently a department or institute for interdisciplinary planetary health research, but there are plans to open one in the next 3 years.
1	There is an Occupational and Environmental Health department, but no interdisciplinary department or institute for planetary health research.
0	There is no dedicated department or institute.
<i>There are pockets of research activity around global health and the impact of climate change – no dedicated department though.</i>	

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

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

There is currently no such process in which communities disproportionately impacted by climate change and environmental injustice can give input or make decisions regarding research agenda.

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

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

The office of sustainability website contains some information on planetary health projects but there is no dedicated website for planetary health.

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

4	Yes, the medical school has hosted at least one conference or symposium on topics related to planetary health in the past year.
3	Yes, the institution has hosted at least one conference or symposium on topics related to planetary health in the past year.

2	Yes, the institution has hosted a conference on topics related to planetary health in the past three years.
1	The institution has not hosted any conferences directly, but they have provided financial support for a local planetary health event.
0	No, the institution has not hosted a conference on topics related to planetary health in the past three years.
<i>No conference has been hosted due in part to COVID-19. There are plans to host one within this area.</i>	

6. Is your medical school a member of a national or international planetary health or ESH organisation?	
1	Yes, the medical school is a member of a national or international planetary health or ESH organisation
0	No, the medical school is not a member of such an organisation
<i>Not at the moment but we are investigating joining one.</i>	

Section Total (3 out of 17)	3
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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 colour. Institutions should partner with local communities affected by climate change and pollution to share information about environmental health threats, advocate together for change, and provide opportunities for students to be a part of this work.*

1. Does your medical school partner with community organisations to promote planetary and environmental health?	
3	Yes, the medical school meaningfully partners with multiple community organisations to promote planetary and environmental health.
2	Yes, the medical school meaningfully partners with one community organisation to promote planetary and environmental health.
1	The institution partners with community organisations, but the medical school is not part of that partnership.
0	No, there is no such meaningful community partnership.
<i>There is no meaningful partnership as of yet.</i>	

2. Does your medical school offer community-facing courses or events regarding planetary health?	
3	The medical school offers community-facing courses or events at least once every year.
2	The medical school offers courses or events open to the community at least once per year, but they are not primarily created for a community audience.
1	The institution has offered community-facing courses or events, but the medical school was not involved in planning those courses or events.
0	The medical school has not offered such community-facing courses or events.
<i>The Students for Global Health Swansea society has put on events for faculty members and students and is looking at increasing these as well as getting faculty involvement. These events have the full support of the university and help from faculty members to facilitate.</i>	

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

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

There are no regular communications.

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

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

There are 2 post graduate courses offered covering these areas but not solely focused on planetary health. The first is Health Data Science and the second is Health Informatics. Both MSc programs have lectures within planetary health and sustainable healthcare

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

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

No, there are no educational materials for patients.

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

2	Yes, all affiliated hospitals have accessible educational materials for patients.
1	Some affiliated hospitals have accessible educational materials for patients.
0	No affiliated hospitals have accessible educational materials for patients.
<p><i>Within certain specialities such as respiratory, there are pamphlets available within the waiting areas looking at the effects of pollution on COPD/ asthma. This is particularly topical as a lot of the COPD patients live within Port Talbot which has high levels of pollution due to the steel works. Within GP surgeries within the area, they have some relevant pamphlets on pollution and usually the health visitors will take these with them to provide information to patients.</i></p>	

Section Total (4 out of 14)	4
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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 institution offer support for medical students interested in enacting a sustainability initiative/QI project?	
2	Yes, the institution <i>either</i> offers grants for students to enact sustainability initiatives/QI projects <i>or</i> sustainability QI projects are part of the core curriculum.
1	The medical school encourages sustainability QI projects (to fulfil clerkship or longitudinal requirements) and offers resources to help students succeed in these projects, but there is no student funding available and there is no requirement to participate.
0	No, the institution does not offer opportunities or support for sustainability initiatives or QI projects.
<i>The medical school encourages students to fulfil coursework in areas they are interested in, such as sustainability with faculty and students for global health society offering support and research opportunities. However, these are entirely optional and there is no funding available.</i>	

2. Does your institution offer opportunities for medical students to do research related to planetary health and/or sustainable healthcare?	
2	The institution has a specific research program or fellowship for students interested in doing planetary health/sustainable healthcare research.
1	There are research opportunities for students to perform research related to planetary health/sustainable healthcare but these require student initiative to seek these out and carry them out in their spare time.
0	There are no opportunities for students to engage in planetary health/sustainable healthcare research.
<i>Medical students can arrange to do research within planetary health in their own time or as part of elective clinical or research opportunities offered in 1st and 2nd year.</i>	

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	
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medical school? For example, projects achieved, current initiatives underway at the medical school and/or contact of information of potential mentors.	
2	The medical school has a web page with specific information related to planetary health or sustainable healthcare that includes up-to-date information on relevant initiatives and contact information of potential mentors.
1	There is a medical school webpage that features some information on projects and mentors within planetary health and sustainable healthcare within the medical school, but it lacks key information.
0	There is no medical-school specific webpage for locating planetary health and/or sustainable healthcare projects or mentors.
<i>The university webpage has links to planetary health/ sustainability related mentors and project opportunities but, there is no medical school specific webpage for this.</i>	

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 organisation with faculty support at my medical school dedicated to planetary health or sustainability in healthcare.
1	Yes, there is a student organisation at my medical school dedicated to planetary health or sustainability in healthcare but it lacks faculty support.
0	No, there is not a student organisation at my institution dedicated to planetary health or sustainability in healthcare.
<i>There is both the Students for Global Health, and Swansea Action for Sustainable Healthcare, but it lacks faculty support. Within the past month, faculty is being employed within planetary health and as such there will be more support for student organisations.</i>	

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 practises?	
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.
<i>There isn't a dedicated student representative with this specific remit.</i>	

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 organise hiking, backpacking, kayaking, or other outings for students)
<p><i>Students for Global Health is a student-led group that aims to tackle health inequalities. The Swansea branch has organised online events for the student community, with experts who can speak on these topics.</i></p> <p><i>The Prehospital Medicine Society organises wilderness medicine exercises involving hiking and prehospital scenarios.</i></p>	

Section Total (5 out of 15)	5
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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 endeavour, the healthcare sector is well poised to lead the world to a more sustainable future. This will involve scrutinising 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 practises, and show other sectors what is possible when it comes to minimising environmental impact.

1. Does your medical school and/or institution have an Office of Sustainability?	
3	Yes, there is an Office of Sustainability with multiple full-time staff dedicated to campus sustainability. If the Office of Sustainability serves the entire campus, there is at least one designated staff member for sustainability at the hospital and/or medical school.
2	There is an Office of Sustainability with one or more full-time staff dedicated to campus sustainability, but no specific staff member in charge of medical school and/or hospital sustainability.
1	There are no salaried sustainability staff, but there is a sustainability task force or committee
0	There are no staff members or task force responsible for overseeing campus sustainability
<p><i>Yes, within the corporate responsibility team there are full time sustainability roles university wide. There are now dedicated faculty members within the medical school employed in planetary health.</i></p>	

2. How ambitious is your medical school/institution's plan to reduce its own carbon footprint?	
4	The institution has a stated goal of carbon neutrality by 2030 or earlier and the medical school / institution has a well-defined and adequate plan in place to achieve this goal.
3	Yes, there is a stated carbon neutrality goal by at least 2040 and the medical school/institution has a well-defined and adequate plan in place to achieve this goal.
2	Yes, there is a stated carbon neutrality goal by at least 2040, but the medical school/institution has not created a plan to reach that goal or the plan is inadequate.
1	There is a CO2 emission reduction goal, but it is not one of carbon neutrality.
0	There is no stated goal for reduction of CO2 emissions.
<p><i>The university has a plan called 'Sustainability and Climate Emergency Strategy' and is committed to achieving zero scope 1 and 2 carbon emissions and reducing scope 3 by 50% by 2035. Here is the link for this: https://online.flippingbook.com/view/898157623/</i></p>	

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

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

The university pays a renewable tariff as well as has an onsite solar generator and a ground source heat pump.

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

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

*BREEAM is an internationally recognised sustainability rating scheme for building design, construction and use.
The medical education building is Excellent at 72.84%, the data science building is Excellent at 72.8%, the IMPACT building is Excellent at 73.3%. The swansea university science and innovation buildings score very good 59.4% The buildings ILS1 and 2 are Excellent as well.*

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

2	Yes, the medical school has implemented strategies to encourage and provide environmentally-friendly transportation options such as safe active transport, public transport, or carpooling and these options are well-utilised by students. Alternatively, the campus location is not amenable to unsustainable forms of transportation by default.
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1	The medical school has implemented some strategies to provide environmentally-friendly transportation options, but the options are unsatisfactorily accessible or advertised.
0	The medical school has not implemented strategies to encourage and provide environmentally-friendly transportation options.
<p><i>The medical school strongly encourages carpooling (especially among house/ friend bubbles due to covid). They also recommend using buses with easy transport links to the hospital. More information can be found here: https://www.swansea.ac.uk/sustainability/travel/</i></p> <p><i>The university is also a gold 'Cycle Friendly Employer' and has set-up the Santander bike scheme for Swansea.</i></p>	

6. Does your medical school have an organics recycling program (compost) and a conventional recycling program (aluminium/paper/plastic/glass)?	
2	Yes, the medical school has both compost and recycling programs accessible to students and faculty.
1	The medical school has either recycling or compost programs accessible to students and faculty, but not both.
0	There is no compost or recycling program at the medical school.
<p><i>There are recycling centres across campus and food bins in all food prep areas and common rooms. The university carries out anaerobic digestion for all food waste generated on campus.</i></p>	

7. Does the medical school apply sustainability criteria when making decisions about the campus food and beverage selections (e.g. local sourcing, reduced meat, decreased plastic packaging)?	
3	Yes, the medical school has adequate sustainability requirements for food and beverages, including meat-free days or no red-meat, and is engaged in efforts to increase food and beverage sustainability.
2	There are sustainability guidelines for food and beverages, but they are insufficient or optional. The medical school is engaged in efforts to increase food and beverage sustainability.
1	There are sustainability guidelines for food and beverages, but they are insufficient or optional. The medical school is not engaged in efforts to increase food and beverage sustainability.
0	There are no sustainability guidelines for food and beverages.
<p><i>The university food and catering achieved Soil Association Food for Life at 3 of the catering outlets and the Sustainable Restaurant Association Star Rating. The Campus catering was certified to the Marine Stewardship Council standards, ensuring traceability of sustainable fish served on campus. It</i></p>	

also achieved a Public Health Wales Corporate Health Standard silver award for healthy catering and vending practices. The catering offered isn't well publicised and needs to be asked

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

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

Inclusion of sustainability criteria in all tenders above 25k across the university. There is collaborative working with the University's Procurement team on development of an action plan for implementing ISO20400- the international sustainable procurement standard. Reduced scope 3 carbon emissions by 6843t CO2e since baselining, mostly due to a reduction in supply chain emissions, against the backdrop of a growing university. There is published and communicated top tips for sustainable procurement on a number of themes including laboratory and office procurement. The university also joined the Sustainable Labs Laboratory Efficiency Assessment Framework (LEAF) programme and as of 2020, 16 labs have achieved bronze and one silver status. Further information can be found here: <https://online.flippingbook.com/view/898157623/16-17/>

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

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

We have guidance and support available for hosting a sustainable event, but this is down to the medical school to implement case by case. This can be emailed to the faculty on request. The basic guidelines can be found in the sustainability and climate emergency strategy <https://online.flippingbook.com/view/898157623/16-17/>

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

2	Yes, the medical school has programs and initiatives to assist with making lab spaces more environmentally sustainable.
1	There are guidelines on how to make lab spaces more environmentally sustainable, but not programs or initiatives.
0	There are no efforts at the medical school to make lab spaces more sustainable.
<p><i>The university has guidelines on making lab spaces more environmentally sustainable. They joined the Sustainable Labs Laboratory Efficiency Assessment Framework (LEAF) program and as of 2020, 16 labs have achieved bronze and one silver status. Further information can be found here: https://online.flippingbook.com/view/898157623/16-17/</i></p>	

11. Does your institution's endowment portfolio investments include fossil-fuel companies?	
4	The institution is entirely divested from fossil fuels and has made a commitment to reinvest divested funds into renewable energy companies or renewable energy campus initiatives.
3	No, the institution is entirely divested from fossil fuels.
2	The institution has partially divested from fossil fuel companies or has made a commitment to fully divest, but currently still has fossil fuel investments.
1	The institution has not divested from fossil-fuel companies, but faculty and/or students are conducting organised advocacy for divestment.
0	Yes, the institution has investments with fossil-fuel companies and there have been no efforts to change that.
<p><i>The University entirely divested from fossil fuels in 2019.</i></p>	

Section Total (28 out of 31)	28
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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 Swansea University School of Medicine

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

Section	Raw Score	Letter Grade
Planetary Health Curriculum (30%)	$(43 / 69) \times 100 = 62.3\%$	B-
Interdisciplinary Research (17.5%)	$(3 / 17) \times 100 = 17.6\%$	F+
Community Outreach and Advocacy (17.5%)	$(4 / 14) \times 100 = 28.6\%$	D
Support for Student-led Planetary Health Initiatives (17.5%)	$(5 / 15) \times 100 = 33.3\%$	D+
Campus Sustainability (17.5%)	$(28 / 31) \times 100 = 90.3\%$	A
Institutional Grade	48.42%	C

Report Card Trends

Section Overview

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

