



Planetary Health Report Card: Brighton and Sussex Medical School



2020-2021 Contributing Team:

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Summary of Findings

Curriculum	B
<p>Planetary health connections appear throughout the curriculum from years 1 to 4 both in the form of dedicated lectures, brief mentions and elective content. Coverage of some content such as the cardiorespiratory health effects of climate change (metric 5) and human-caused environmental health threats were done in great detail. The following metrics scored poorly in the 19/20 curriculum identifying areas for improvement: Metric 6,7,10,12,13 &16. Of note we felt there was a distinct lack of teaching around the disproportionate health effects of climate change on marginalised communities and lack of training on addressing the health impacts of climate change with patients.</p>	
Interdisciplinary Research	B +
<p>This report identifies the multiple researchers at BSMS with a focus on planetary health and sustainable healthcare. The addition of the new Sustainable Healthcare Group is a great asset to the school and testimony to the progressive research agenda. However there was a lack of opportunity for communities disproportionately affected by the health impacts of climate change to have an input into the research agenda.</p>	
Community Outreach and Advocacy	D
<p>This report has identified that BSMS lacks meaningful community partnerships that promote planetary health. The affiliated hospital, BSUH has no easily accessible patient education material on the health impacts of climate change or dangers of pollution.</p>	
Support for Student-Led Initiatives	B
<p>The enthusiasm for planetary health projects at BSMS has always been well supported by members of faculty and there are multiple societies with a focus on sustainable healthcare/global health. There is a lack of student sustainability representation at leadership meetings and little to no funding for student societies from the medical school.</p>	
Sustainability	B -
<p>BSMS as part of Brighton and Sussex Universities scores well here with ongoing development of renewable energy on campus and other sustainability initiatives. However we identified a lack of sustainable transport planning from the medical school and a lack of sustainability guidelines for hosting events both faculty and student run.</p>	

Statement of Purpose

Planetary health is human health.

The Planetary Health Alliance defines planetary health as “a field focused on characterizing the human health impacts of human-caused disruptions of Earth's natural systems.” This definition is intentionally broad, intended to encompass the multitude of ways that the environment can affect health, including water scarcity, changing food systems, urbanization, biodiversity shifts, natural disasters, climate change, changing land use and land cover, global pollution, and changing biogeochemical flows. The health of humanity is dependent on our environment and our environment is changing rapidly and in disastrous ways. Although the World Health Organization has called climate change “the greatest threat to global health in the 21st century,” many medical 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 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 defined by the *Planetary Health Alliance* as “the health of human civilization 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.
- **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. 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 Healthcare¹ 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.

¹ Thompson T, Walpole S, Braithwaite I, Inman. A, Barna S, Mortimer F. 2014. Learning objectives for sustainable health care. *Lancet*. 384:1924-1925.

- **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 varies 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 etc in the UK

Other considerations:

- A * next to the metric score option indicates that a school receiving this score has gone above and beyond in the associated category and will receive a bonus point for their achievement in this category. Phrased another way, the section’s point total does not include this additional point so receiving this point tier can make up for a missed point in another metric.
- 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 2020 Harvard report card as an example).

Abbreviations:

- BSMS – Brighton and Sussex Medical School
- UoB – University of Brighton
- UoS – University of Sussex
- BM BS – Bachelor of Medicine Bachelor of Surgery
- IRP – Independent research Project
- SSC – Student Selected Component (an elective course usually done as small group teaching)

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 change. Therefore, it is critical that medical students are trained to understand the health effects of climate change, as well as planetary health more broadly. Topics like the changing geography of vector-borne diseases, the health consequences of air pollution, environmental health inequities, and disaster response principles must be part of every medical school's core curriculum.

Curriculum: General

1. Did your medical school offer elective courses 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>Score explanation:</i> (3/3) – Multiple elective courses offered. Year 2: Module 203: <i>Student Selected Component (SSC): #16 - Green Medicine - Doctors against climate change - Dr Jonathan Sadler.</i> <i>(This elective planned for 19/20 but cancelled due to covid. The SSC was delivered however in 18/19 and additional places were made available for 20/21 to compensate)</i></p> <p>Year 4: Module 403: <i>Global health Day: Various Elective Lectures:</i></p> <ul style="list-style-type: none"> ● <i>Globalisation and social justice</i> ● <i>Global burden of disease</i> ● <i>Road traffic collisions</i> ● <i>Disease eradication and elimination: the example of smallpox</i> ● <i>Neglected Tropical Diseases</i> ● <i>PTSD and Medically unexplained symptoms</i> ● <i>Doctor burnout</i> ● <i>Importance, relevance and benefits of general practice and primary health care systems: international comparisons</i> ● <i>The role of general practice in preventing female genital mutilation (FGM)</i> ● <i>Philanthropy, pharma and global health</i> 	

Independent Research Project Options 19/20:

- *D6 Solidarity in healthcare*
- *D2 Leading in Equality in the NHS*

(each student is required to complete an IRP from a list of given titles each year but there is also scope to design an alternative study if the student has a particular interest)

Curriculum: Health Effects of Climate Change

2. Does your medical school curriculum address the relationship between extreme temperature health risks and climate change, as well as the socioeconomic/racial disparities in extreme heat exposure?

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.

Score explanation:

(2/3) – Brief coverage in 2 core curriculum lectures and briefly covered in elective content.

Year 2: Module 201:

Term 2: Session 7 OSCE briefing and global health:

Lecture: Global & Social responsibility in healthcare by Dr Anna Jones. (Slide 8, 10 – infographics containing overview of impacts of climate change on health and one specifically mentions deaths from heatwaves) (core curriculum)

Module 202:

SSC 9 - Session 3. Extreme cold and physiology. Dr Masseh Yakubi - elective course

Year 4: Module 403:

Global Health Day: Lecture: Environment and Health (slide 9 – Infographic on health impacts of climate change. Paris Heatwave 2003 used as a case study) – Dr Anna Jones

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.

Score explanation:

(2/3) – brief coverage in 2 lectures and elective material but very little depth.

Year 1: Module 103:

SSC Extreme Environments – How the body copes with altitude, diving and more – Dr Jonathan Brown. (elective)

Year 2: Module 201:

Term 2, Session 7 Lecture: Global & Social responsibility in healthcare by Dr Anna Jones (slide 8, 10, 14 – infographics on effect of climate change on human health and environment and health co-benefits) (Core Curriculum)

Year 3: Module 301:

Lecture: Global health, Professor Melanie Newport, (slide 16,17 – Slides includes graphics depicting the distribution of global deaths from floods and droughts following a slide stating that climate change is a human health threat.) (Core curriculum)

Year 4: Module 403:

Global Health Day: Lecture: Environment and Health (slide 9, 10, 11, 12 – Health impacts of extreme weather case studies – Bangladesh flooding, flooding in the UK, Paris Heatwave) – Dr Anna Jones

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.

Score explanation:

(2/3) – briefly mentioned in 2 core curriculum lectures but no great detail.

Year 1: Module 101:

Inequalities and inclusion health Session 4: Environment and Health: Lecture: Impact of diet on health and the environment (Slide 13 – Zoonotic pandemics, Covid-19, SARS, Swine flu. Connection between changing diets and prevalence of these diseases) – Dr Josh Cullimore

Year 2: Module 201:

Term 2, Session 7, Lecture: Global & Social responsibility in healthcare by Dr Anna Jones (slide 14 - Health and climate co benefits infographic includes reducing spread of vector borne diseases as an indirect benefit of reduced climate change)

Year 4: Module 402:

Handbook learning objective: “Global health: the global perspective on infectious diseases including epidemiology, organisation and funding of health care systems in resource poor settings, and implications for the high-income settings”

Module 403:

Global Health Day Introduction Lecture (slide 5) (Acknowledged but no detail) – Dr Max Cooper

Global Health Day: Lecture: Environment and Health (slide 14 – Climate change risks to health – acknowledges risks mediated by changes in ecological systems such as infections disease vectors and increased zoonotic diseases) – Dr Anna Jones

Independent Research Project Choices:

B70 Exploring the Role of podcasts as supplementary learning tools in infectious diseases – Dr Bethany Davis

5. Does your medical school curriculum address the cardiorespiratory health effects of climate change, including 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.

Score explanation:

(3/3) – Respiratory health effects of air pollutants explored in depth. Cardiology included briefly in other core lectures.

Year 1: Module 101:

Inequalities and inclusion health: Lecture: Air Pollution. (Health effects of air pollution, roles of healthcare professionals in advocating for health and environment co-benefits) – Dr Anna Jones

Module 103:

Theme 4 (Physiology of the lungs and gas exchange. Pulmonary disorders and principles of their treatment: Lecture 15: Occupational Lung disease (Slides 2, 33-44 – section on ‘Airborne environmental factors in respiratory disease. Includes vehicle pollution, nitrogen oxides, health effects of ground level ozone, particulate matter and asthma) – Dr Harpreet Ranu.

Year 2: Module 201:

Term 2, Session 7 Lecture: Global & Social responsibility in healthcare by Dr Anna Jones (slide 6,7, 8, 10, 14 – infographics include health impacts of climate change. Two slides on Air pollution and the cardiorespiratory effects)

Year 3: Module 301

Lecture: Where nutrition is relevant in healthcare. Dr Elaine Macaninch, (slide 5 – includes graphic containing environmental risk factors for cardiorespiratory disease)

Year 4: Module 403:

Global Health Day Introduction Lecture (slide 5) (Acknowledged but no detail) – Dr Max Cooper

Global Health Day: Lecture: Environment and Health (slides 4,5,6,7 – effects of air pollution on health and relationship between air quality and deaths) – Dr Anna Jones

6. 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.

Score explanation:

(2/3) – Diffuse effects of climate change health impacts discussed including mental health.

Year 2: Module 201:

Term 2, Session 7 Lecture: Global & Social responsibility in healthcare by Dr Anna Jones (slide 8, 14) (Acknowledged but no detail.)

Year 4: Module 403:

Global Health Day Introduction Lecture (slide 5) (Acknowledged but no detail – slide listing non-physical health impacts of climate change including mental health impacts.) – Dr Max Cooper

Global Health Day: Lecture: Environment and Health (slide 14 – Climate change risks to health – tertiary effects – mental health impacts of climate change explored) – Dr Anna Jones

7. 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.

Score explanation:

(2/3) – Very little on food and water security. The team has identified evidence for the impact of changing ecosystems on human health and climate change.

Year 1: Module 101:

Inequalities and inclusion health Session 4: Environment and Health: Lecture: Impact of diet on health and the environment (Slide 3,11,13,14,25 – Planetary health diet and ecosystem change, biodiversity loss and climate change, antibiotic resistance and agriculture, Zoonotic pandemics, brief mention of issues of affordability and accessibility of a plant based diet) – Dr Josh Cullimore

Module 102:

Theme 2 (Learning and Development): Lecture 1: A Biopsychosocial perspective on health (Slides 12 &20 – no specific mention to climate change but does talk about link between health and environmental factors such as food security) – Dr Richard De Visser.

Year 2: Module 201:

Term 2, Session 7

Lecture: Global & Social responsibility in healthcare by Dr Anna Jones (slide 8, 14) (Acknowledged but no detail – health and climate co-benefits infographic includes reduced meat consumption, more fruit and vegetable consumption with positive environmental impacts of these.)

Year 3: Module 302

Lecture: Pathogenesis of Human Malaria, Dr Chi Eziefula, (slide 42 – briefly mentions the role of protecting ecosystems and transmission of malaria – not related to food or water)

Module 307:

SSC A10-Global Health, Ethics and Justice-Dr Peter West-Oram (not specifically related to food or water)

Year 4: Module 402:

Health Protection – What is Health Protection (slide 4 & 5 – slides on health hazards and emergencies caused by environmental health hazards – not related to food or water) – Dr Louise Sigfrid

Module 403:

Wider determinants of health (slide 8 – infographic on the wider determinants of health including the role the natural environment – not related to food or water) – Dr Darrlel Gale

8. Does your medical school curriculum address the outsized impact of climate change on marginalized populations such as those with low SES, women, communities of colour, 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.

Score explanation:

(2/3) – While health inequalities resulting from climate change are briefly addressed there are no specific mentions to populations within the metric title.

Year 2: Module 201:

Term 2, Session 7

Lecture: Global & Social responsibility in healthcare by Dr Anna Jones (slide 8, 10, 14) (Acknowledged but no detail)

Year 3: Module 301:

Lecture: Global health, Professor Melanie Newport, (slide 15 – highlights the higher predicted deaths from climate change in Africa)

Module 307:

SSC A10-Global Health, Ethics and Justice-Dr Peter West-Oram - elective

Year 4: Module 403:

Global Health Day (slide 4) (Acknowledged but no detail) – Dr Max Cooper

Global Health Day: Lecture: Environment and Health (slide 15,16 – graphic illustrating carbon emissions vs mortality associated with climate change – quantifying a growing ethical crisis. Slide on exacerbation of health inequalities as a result of climate change. Specific groups in the metric title not mentioned) – Dr Anna Jones

Independent research Choices 19/20:

Incidence and outcomes of pregnancies in women with gestational diabetes in ethnic minorities in Brighton & Sussex University Hospitals – Dr Chakera.

9. Does your medical school curriculum address the unequal 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.

Score explanation:

(2/3) – Multiple slides across different lectures introducing the inequalities exacerbated by climate change.

Year 1: Module 103:

Theme 4 (Physiology of the lungs and gas exchange. Pulmonary disorders and principles of their treatment): Lecture 15: Occupational Lung disease (Slide 36 – environmental factors acknowledged as factors affecting susceptibility to pulmonary disorders.) – Dr Harpreet Ranu.

Year 2: Module 201:

Term 2, Session 7

Lecture: Global & Social responsibility in healthcare by Dr Anna Jones (slide 8, 10, 14) (Acknowledged but no detail)

Year 3: Module 301:

Lecture: Global health, Professor Melanie Newport, (slide 15 – highlights the higher predicted deaths from climate change in Africa)

Module 307:

SSC A10-Global Health, Ethics and Justice - Dr Peter West-Oram

Year 4: Module 403:

Global Health Day (slide 5) (Acknowledged but no detail) – Dr Max Cooper

Global Health Day: Lecture: Environment and Health (slide 15,16 – graphic illustrating carbon emissions vs mortality associated with climate change – quantifying a growing ethical crisis. Slide on exacerbation of health inequalities as a result of climate change.) – Dr Anna Jones

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

10. 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.
<p><i>Score explanation:</i> (0/3) – no evidence found</p>	

11. 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.
<p><i>Score explanation:</i> (3/3) – Multiple lectures include information about Coal Miners Pneumoconiosis. Additionally, information included about local carbon reducing initiatives to improve health.</p> <p>Year 1: Module 103: Theme 4 (Physiology of the lungs and gas exchange. Pulmonary disorders and principles of their treatment): Lecture 10: Restrictive Lung Disease (slides 6 &10 – Coal miners’ lung + current epidemiology of pneumoconiosis) – Karen Patterson, M.D Theme 4 (Physiology of the lungs and gas exchange. Pulmonary disorders and principles of their treatment): Lecture 15: Occupational Lung disease (Slides 8 & 32 -restrictive airway dysfunction syndrome causative agents and pneumoconiosis related to coal mining - *not specific to the universities surround community) – Dr Harpreet Ranu.</p> <p>Year 2: Module 201: Term 2, Session 7 Lecture: Global & Social responsibility in healthcare by Dr Anna Jones (slide 12 – Sussex Community trust – Care without carbon – information reducing carbon emissions locally in reference to health benefits) (Acknowledged but no detail)</p> <p>Module 202: SSC 16 - Green Medicine - Doctors against climate change - Dr Jonathan Sadler (elective)</p> <p>Year 4: Module 403: Global Health Day (slide 5) (Acknowledged but no detail) – Dr Max Cooper</p>	

12. Does your medical school curriculum address the unique climate and environmental health challenges that have impacted and are impacting Indigenous communities?

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.

Score explanation:

(1/3) – As previously mentioned there is some material on the health inequalities exacerbated by climate change but no specific mention to indigenous communities around the world.

Year 3 Module 301:

SSC: A10-Global Health, Ethics and Justice (elective) (Course includes a session looking at the ethical issues of climate change. While the guided discussion was focused on general inequality rather than indigenous community specifically, the required and recommended readings did look at these issues.) - Dr Peter West-Oram

13. Does your medical school curriculum address the outsized impact of anthropogenic environmental toxins on marginalized populations such as those with low SES, women, communities of colour, 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.

Score explanation:

(0/3) – Brief inclusions of health impacts of pollutants and toxins but this is not linked specifically to marginalised populations such as those mentioned in the metric title. However, the module 301 contained an elective SSC on ethical issues of climate change and covered this topic.

Year 1: Module 103:

Theme 4 (Physiology of the lungs and gas exchange. Pulmonary disorders and principles of their treatment): Lecture 15: Occupational Lung disease (Slides 33-36 – toxins and pollutants and environmental factors acknowledged as partially determining susceptibility) – Dr Harpreet Ranu
Symposium 7: HIV and Respiratory Infections - Dr Jaime Vera Rojas

Year 3: Module 301

Lecture: Global health, Professor Melanie Newport (slides 21-41 - detail about podoconiosis and briefly mentions environmental aetiology)

SSC: A10-Global Health, Ethics and Justice (elective) (Course includes a session looking at the ethical issues of climate change focusing specifically on inequalities and inequities of the impacts of climate change.) - Dr Peter West-Oram

Year 4: Module 402:

Health Protection – Vulnerable populations (slide 9) – Louise Sigfrid

Curriculum: Sustainability

14. 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.
<p><i>Score explanation:</i> (2/3) – Lecture on plant based diet included in Inequalities and inclusion health workshop sessions during first year. Reduced meat consumption included in infographic contained in two lectures.</p> <p>Year 1: Module 101: <i>Inequalities and inclusion health: Session 4: Environment and Health: Lecture: Impact of diet on health and the environment (Lectures includes health and environmental benefits of plant-based diet/EAT lancet recommendations. Case examples include diabetes) – Dr Josh Cullimore</i></p> <p>Year 2: Module 201: <i>Term 2, Session 7 Lecture: Global & Social responsibility in healthcare by Dr Anna Jones (slide 10, 14 – health co-benefits slide includes benefits of reduced meat consumption and increased local fruit and vegetables)</i></p> <p>Year 4: Module 403: <i>Global Health Day: Lecture: Environment and Health (slide 22 – Health co-benefits slide includes benefits of less meat consumption and increased local fruit and veg) – Dr Anna Jones</i></p>	

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15. Does your medical school curriculum highlight the waste generated by the healthcare system and identify ways to advocate for and implement sustainable best practices in health care?

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.

Score explanation:
 (3/3) Waste generated by healthcare system covered in moderate detail in the lecture 'Impact of healthcare on the environment' and other core curriculum and elective material.
Year 2: Module 201
Term 2, Session 7 (OSCE briefing and Global health)
Lecture: Global & Social responsibility in healthcare by Dr Anna Jones (slides 15, 16 – unused prescriptions wasted, promotes advocacy for reducing waste in clinical activity)
Lecture: Impact of healthcare on the environment (Greenhouse gas emissions of healthcare, NHS, Surgical Carbon footprint, medical plastics, ideas for changing practice) - Dr Chantelle Rizan (ENT)
Module 202:
SSC 16 - Green Medicine - Doctors against climate change - Dr Jonathan Sadler

Curriculum: Clinical Applications

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

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
<p><i>Score explanation:</i> (0/2) No Evidence found</p>	

17. 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.
<p><i>Score explanation:</i> (2/2) – Multiple sessions include the importance of taking environmental history included within a social history. Year 1: Module 101: Term 2: Week 5: History taking and Examination of the Respiratory System (Slide 25 – requesting environmental history) – Dr Harpreet Ranu. Year 2: Module 201: Term 1. Week 3 (Health and work), Lecture: Talking about work with patients, (Slide 10 – exposure to chemicals, allergens.) - Dr Anjum Menon Year 3: Module 301 Chest: history, examination and bedside investigations. Dr Harpreet Ranu, slide 22 Year 4: Module 402: Important Infections Case Teaching: Discussion of additional environmental history.</p>	

Curriculum: Administrative Support for Planetary Health

18. Is your medical school currently in the process of 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.
<p><i>Score explanation:</i> (4/4) – Multiple ongoing projects and staff dedicated to improving sustainable healthcare education at BSMS. Dr Anna Jones is employed as Project lead for sustainable healthcare education at BSMS. This role includes developing the teaching on sustainable healthcare at BSMS. This includes the addition of multiple new inclusions in the 20/21 curriculum across all years as well development of the content included in the 19/20 curriculum. Examples of topics in year 20/21 curriculum:</p> <ul style="list-style-type: none"> ● Year 1 and 2 have a Student selected component (elective) on sustainable healthcare every term. ● Year 1: 101 lectures on ● Year 2: 201 lecture on foetal development and air pollution <p>A new online self-study resource on climate change and sustainable healthcare is also in development which was piloted with volunteers from the year 4 cohort. The feedback was very positive, and discussions are now in progress to decide on the most appropriate way of delivering this education to all students. The newly formed BSMS Sustainable Healthcare group includes aims to improve education and research on planetary health at BSMS. More information can be found here - https://www.bsms.ac.uk/about/sustainability.aspx</p>	

19. 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.
<p><i>Score explanation:</i> (4/6) Some topics already integrated over the couple of years with plans for new material to be added in the coming years. Integrated teaching session includes a variety of lectures and discussion seminars. However, Year 1,2 and 4 currently have more access to planetary health education than Year 3 and 5.</p>	

20. Bonus: Does your medical school have a program that offers incentives for faculty/departments to develop new planetary health/ESH courses and/or incorporate planetary health/ESH into existing courses?

1*	Yes, the medical school has an incentive program.
0	No, the medical school does not have an incentive program.
<i>Score explanation:</i> (0/1)	

Section Total (40 out of 58)	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 medical school?	
4	Yes, there are faculty members at the School of Medicine who have a primary research focus in planetary health and healthcare sustainability.
3	Yes, there are faculty members at the School of Medicine who have a primary research focus in a 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.
<p><i>Score explanation:</i> (4/4) <i>Researchers in sustainable healthcare:</i> Miss Chantelle Rizan (Bsc(Hons) MBBCh MRes MRCS(ENT)) – Research Areas: Sustainable surgery. Professor Mahmood Bhutta (DPhil FRCS) – Research Areas: Environmental sustainability in healthcare systems; labour rights in healthcare supply chains. Dr Anna Jones (MBBS, DTM+H, MPH, FFPH, PGCert Med Ed, FHEA) Research Areas: Public Health, Medical Education, Sustainable Health. Dr Arianne Shahvisi (BA, MSc, MSt, PhD) – Research Areas: Reproductive ethics; feminist bioethics; migration; gender; race; scientific methodology; academic freedom. Dr Lisa Page – Research Areas: Liaison Psychiatry, Environmental Epidemiology, Sustainability and Health, Self-harm, Suicide, Public Health. Dr Mei Trueba (BA, BSc, MA, MSc, PhD) – Research Areas: Occupational Health and Safety; Health risk perceptions and behaviours; health risk management; globalization and health, Neglected tropical diseases. Dr Jonathan Sadler (MBChb, BSc, PG Cert Med Ed) – Research Areas: Medical Education, Playful Learning and Sustainability.</p>	

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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.

Score explanation:
 (3/3)
 BSMS Sustainable healthcare group – focused on research related to environmental, social and final elements of sustainability in health and healthcare. Core functions include:

- Research and influence policy, knowledge, attitudes, and behaviour relating to sustainability in health and healthcare.
- Evaluate the environmental and social (including labour rights) impacts of healthcare and develop responses to mitigate these.
- Collaborate in development of lean health service design.
- Build capacity in teaching and learning on sustainable health and sustainable healthcare.

More info can be found: <https://www.bsms.ac.uk/about/sustainability.aspx>

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.

Score explanation:

(0/3)

While the focus is not climate change BSMS gets input from the Ethiopian National Podoconiosis Action Network for developing research proposals. More details can be found here:

<https://www.bsms.ac.uk/research/global-health-and-infection/nih-global-health-research-unit-for-ntds/nihr.aspx>

and

<https://www.bsms.ac.uk/research/global-health-and-infection/nih-5s-foundation/nih-5s-foundation.aspx>

4. Does your institution have a planetary health website, or a website centralizing various campus resources related to health and the environment?

3	There is an easy-to-use, adequately comprehensive website that centralizes 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 centralize 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.

Score explanation:

(3/3)

Link to BSMS's Healthcare and Sustainability Group (Includes information about current research and education at BSMS as well as related student societies):

<https://www.bsms.ac.uk/about/sustainability.aspx>

Link to Brighton University's Sustainability Page:

<https://www.brighton.ac.uk/about-us/your-university/sustainability/index.aspx>

Link to Sussex University's Sustainability Page:

<https://www.sussex.ac.uk/about/sustainable-university>

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

4	Yes, the institution has hosted more than one conference or symposium on topics related to planetary health in the past year, including at least one on climate change.
3	Yes, the institution has hosted 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.
<p><i>Score explanation:</i> (3/4) Sustainable Healthcare Academic Research and Enterprise (SHARE) Conference. Theme: Resetting the agenda for sustainable healthcare. Planned for 2020 but cancelled due to Covid-19. Link to 2021 conference held via Zoom: https://www.bsms.ac.uk/about/events/2021/05-07-share-conference.aspx</p>	

6. Has your institution or medical school joined the Planetary Health Alliance and/or the Global Consortium on Climate and Health Education?	
2	Yes, the medical school has joined the Planetary Health Alliance and/or the Global Consortium on Climate and Health Education.
1	Yes, the institution has joined the Planetary Health Alliance and/or the Global Consortium on Climate and Health Education, but the medical school specifically has not.
0	No, the institution has not joined the Planetary Health Alliance or the Global Consortium on Climate and Health Education.
<p><i>Score explanation:</i> (2/2) Yes – Member of the Planetary Health Alliance: Institutional Liaison: Jo Middleton (https://www.bsms.ac.uk/about/contact-us/staff/jo-middleton.aspx)</p>	

Section Total (15 out of 19)	B
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BSMS Sustainable Healthcare Group Publications:

- Rizan C, Bhutta MF, Reed M, Lillywhite R. The carbon footprint of waste streams in a UK hospital. *Journal of Cleaner Production*.2020. *Available online ahead of print. doi.org/10.1016/j.jclepro.2020.125446. [Read it here >](#)
- Trueba ML, Bhutta MF, Shahvisi A Instruments of health and harm: how the procurement of healthcare goods contributes to global health inequality *Journal of Medical Ethics* Published Online First: 24 August 2020. doi: 10.1136/medethics-2020-10628

- Starup-Hansen J, Dunne H, Sadler J, Jones A, Okorie M. *Climate change in healthcare: Exploring the potential role of inhaler prescribing. Pharmacol Res Perspect.* 2020 Dec;8(6): e 00675
- Rizan C, Steinbach I, Nicholson R, Lillywhite R, Reed M, Bhutta MF. *The carbon footprint of operating theatres: a systematic review. Annals of Surgery.* 2020; 272(6):986-995. [Read it here >](#)
- Rizan C, Reed M, Mortimer F, Jones A, Stancliffe R, Bhutta MF. *Using surgical sustainability principles to improve planetary health and optimise surgical services following COVID-19.* 2020; *The Bulletin.* 102 (5). 177-181. [Read it here >](#)
- Rizan C, Mortimer F, Stancliffe R, Bhutta MF. *Plastics in healthcare: time for a re-evaluation. Journal of the Royal Society of Medicine.* 2020; 113(2):49-53. [Read it here >](#)
- Rizan C, Das P, Low R, Harden S, Flaherty B, Welland T, Bhutta MF. *A streamlined pathway for patients with unilateral tinnitus: our experience of 22 patients. Clinical Otolaryngology.* 2018; 44(2): 191-196. [Read it here >](#)
- Bhutta MF. *Time for a global response to labour rights violations in the manufacture of health-care goods. Bull World Health Organ.* 2017 May 1;95(5):314-314A. [Read it here >](#)
- Bhutta MF. *Fair and ethical trade in health procurement Lancet.* 2008 Dec 6;372(9654):1935-7. doi: 10.1016/S0140-6736(08)61826-7.
- Bhutta MF. *Fair trade for surgical instruments. BMJ.* 2006 Aug 5;333(7562):297-9. doi: 10.1136/bmj.38901.619074.55.. PMID: 16877453

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 medical school partner with community organizations to promote planetary and environmental health?	
3	Yes, the medical school meaningfully partners with multiple community organizations to promote planetary and environmental health.
2	Yes, the medical school meaningfully partners with one community organization to promote planetary and environmental health.
1	The institution partners with community organizations, but the medical school is not part of that partnership.
0	No, there is no such meaningful community partnership.
<p><i>Score explanation:</i> (1/3) <i>BSMS currently have no partnerships with community organisations to promote planetary and environmental health</i> <i>University of Brighton Community University Partnership Programme (CUPP) programme has many partnerships with community organisations that promote planetary health including:</i> <i>Green Spaces Network in Brighton and Hove, Growing local food project, Hanover Centre Carbon RACE (reduction, awareness and community engagement), Valuing environmental action, Urban Wildlife, University Campus e-bikes, The Grow Project, Moulsecoomb community farm, Falmer Vegetable Garden. Full information about all these partnerships and more can be found at:</i> https://community21.org/partners/cupp/</p>	

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.
<p><i>Score explanation:</i> <i>BSMS hosts the Sustainable Healthcare Academic Research and Enterprise Conference (SHARE) every year (cancelled 2020 due to covid). While the conference is aimed at healthcare professionals and students it is free to everyone and wider members of the community are welcomed to come.</i></p>	

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.
<p><i>Score explanation:</i> <i>(0/2)</i> <i>Students do not regularly receive communications from the medical school in any area of research. Activities and opportunities are often shared. The Medical School's publication: Pulse has not featured any planetary health related topics for multiple years. (summer 2018 edition contained a piece on the newly appointed Jo Middleton, BSMS institutional liaison for the Planetary health alliance.)</i></p>	

5. Do hospitals affiliated with your medical school 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 centers have accessible educational materials for patients.

Score explanation:

(0/2)

Brighton and Sussex Universities Hospitals Trust Patient information leaflets searched but no relevant content found.

Some information on air pollution, fumes, dust and changes in weather triggering asthma. However not enough to qualify for points.

<https://www.bsuh.nhs.uk/wp-content/uploads/sites/5/2016/09/Asthma-ED.pdf>

6. Do hospitals affiliated with your medical school 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.

Score explanation:

(0/2)

Brighton and Sussex Universities Hospitals Trust Patient information leaflets searched but no relevant content found. <https://www.bsuh.nhs.uk/your-visit/patient-information/>

Section Total (3 out of 12)

D

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?	
2	Yes, the institution offers grants available to medical students for students to enact sustainability initiatives.
1	The medical school encourages sustainability QI projects (to fulfill clerkship or longitudinal requirements) and offers resources to help students succeed in these projects, but there is no student funding available.
0	No, the institution does not offer opportunities or support for sustainability initiatives.
<p><i>Score explanation:</i> (0/2) The medical school has been very supportive with the completion of this project but aside from this there has been no encouragement specifically for sustainability QI projects or funding available to students. The Green medicine society focussed on planetary health and sustainability has a section on the BSMS official website, but no funding from the medical school. https://www.bsms.ac.uk/about/sustainability.aspx (Funding available to student societies (£150 a year) through the Medical society membership fund but not from the medical school and spending requirements not specific to QI projects or sustainability related events)</p>	

2. Does your institution offer opportunities for medical students to do research related to planetary health and/or sustainable healthcare?	
3*	The institution offers an explicit paid fellowship for medical students to do research related to planetary health and/or sustainable healthcare.
2*	The institution offers paid research opportunities for students and planetary health/sustainable healthcare projects would be considered eligible.
1	There are unfunded research opportunities for students to perform research related to planetary health/sustainable healthcare.

0	There are no opportunities for students to receive funding for planetary health/sustainable healthcare research.
<p><i>Score explanation:</i> (1/3) No paid opportunities but as part of the 4th Year Curriculum students are required to undertake an independent research project (IRP). Each year a list of choices is published but there is also scope for students to design their own study. Examples from 20/21: <i>Striving for environmental sustainability in anaesthesia.</i> INSPIRE is coordinated by the academy of medical sciences and supported by the Wellcome Trust. Five rounds of ‘small grants awards’ open to all UK medical, dental and veterinary schools and offering up to £20,000 for INSPIRE focused activities.</p>	

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 medical school 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 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.
<p><i>Score explanation:</i> (2/2) BSMS Sustainable Healthcare group webpage includes details about publications and faculty members with interests in sustainable healthcare: https://www.bsms.ac.uk/about/sustainability.aspx UoS – has a press release archive which BSMS has collaborated on. https://archive-stage.sussex.ac.uk/news/press-releases/</p>	

4. Does your medical school have funded, registered student groups dedicated towards fostering a culture of planetary health engagement, scholarship, and advocacy on campus, supported by faculty advisors?	
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2	Yes, there is a funded student organization with faculty support 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 lacks faculty support and/or funding.
0	No, there is not a student organization at my institution dedicated to planetary health or sustainability in healthcare.

Score explanation:

(2/2)

BSMS Green Medicine Society is a student society funded by the Students Union dedicated to the promotion of planetary health and sustainable healthcare. (funding is made up of student memberships, Student Union funding and also a minor contribution from the Medical School.

Facebook page: <https://www.facebook.com/BSMSGreenMed>

BSMS Students for Global Health is a student society funded by Sussex student union that works with national branches to promote sustainable healthcare and advocate with groups disproportionately affected by climate change.

Facebook page: <https://www.facebook.com/sfghbsms>

Both these societies exist as part of the medical school student's union and are funded by membership fees.

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

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

Score explanation:

(0/1)

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	<p>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.</p> <p><i>(1/1)</i> <i>Sussex roots – A student led communal gardening society at the University of Sussex.</i> https://sussexstudent.com/activities/view/Roots-Communal-Gardening-Society</p>
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1	<p>Panels, speaker series, or similar events related to planetary health that have students as an intended audience.</p> <p><i>Sustainable Healthcare Academic Research and Enterprise Conference – cancelled 2020 due to covid. 2021 planned to go ahead virtually in May. Students are included in a wider intended audience of healthcare professionals. (1/1)</i></p> <p><i>(The student society, BSMS Green Medicine, held a panel discussion on the impact of climate change on health.)</i></p>
1	<p>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.</p> <p><i>(1/1)</i></p> <p><i>The student society, BSMS Green Medicine, held a webinar on ‘Activism in Medicine’ and heard from speakers in Doctors for XR and other activism groups</i></p>
1	<p>Cultural arts events, installations or performances related to planetary health that have students as an intended audience.</p> <p><i>Nil - (0/1)</i></p>
1	<p>Local volunteer opportunities related to building community resilience to anthropogenic environmental impacts.</p> <p><i>Nil – (1/1)</i></p> <p><i>University of Sussex Student’s union partnership with Brighton sustainability organisations offers volunteering opportunities. E.g. the Brighton branch of global justice now that works with disproportionately affected communities, ONCA and surfers’ against sewage.</i></p> <p>https://docs.google.com/spreadsheets/d/1kzcSjy4A0HqjsR9BmqA644tyzewU86GZOdWdyUNoh_I/edit#gid=0</p>
1	<p>Wilderness or outdoors programs (e.g., that organize hiking, backpacking, kayaking, or other outings for students) that follow Leave No Trace principles.</p> <p><i>(1/1)</i></p> <p><i>BSMS Wilderness society (student run) held a hiking expedition where principles similar to leave no trace were applied.</i></p> <p><i>There is a society at University of Sussex dedicated to Leave no Trace.</i></p> <p>https://sussexstudent.com/activities/view/leave-no-trace-society</p>
Score explanation: see individual explanations.	

Section Total (10 out of 15)	B
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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.*

This section of the report was produced with the help of faculty members from the respective universities' sustainability teams:

Brighton University: Lucy Lisle (Environmental officer) l.lisle@brighton.ac.uk

Sussex University: Martha Knott (Graduate Sustainability intern) m.knott@sussex.ac.uk

We'd like to thank them for their support and enthusiasm on this project.

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>(3/3)</p> <ul style="list-style-type: none"> <p><i>Sussex university, sustainability manager (full time) and 2 other staff:</i> <i>Samantha Waugh (Sustainability Manager) – s.waugh@sussex.ac.uk</i> <i>Martha Knott (Graduate Sustainability Intern) - m.knott@sussex.ac.uk</i> <i>Juliet Emma Richardson</i></p> <p><i>Brighton university, environmental officer (full time):</i> <i>Lucy Lisle (Environmental Officer) - l.lisle@brighton.ac.uk</i></p> 	

- *BSMS, sustainability lead (part time):
Dr Anna Jones (Head of Sustainability) – a.jones@bsms.ac.uk*

2. Does your medical school and/or institution have a stated goal of carbon neutrality by 2050?

4*	The medical school is already carbon neutral.
3	Yes, there is a stated carbon neutrality goal and the medical school has a well-defined and adequate plan in place to achieve this goal.
2	Yes, there is a stated carbon neutrality goal, but the medical school 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.

Score explanation:

(1/4)

Both Brighton and Sussex Universities do not have carbon neutrality goals in place but do have goals for reducing carbon emission by 2025 with ambitions to increase the commitment to carbon neutrality in the coming years:

- *University of Brighton targets for carbon emissions by 2025: 4000(tCO2e)*
- *University of Sussex - Sussex Sustainability report: (1) Aim to reduce CO2 to 12,500 tonnes per annum by 2025.*

3. Do buildings/infrastructure used by the medical school for teaching (not including the hospital) utilize 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.

Score explanation:

(3/3)

While both the University of Sussex and University of Brighton are both subscribed to 100% renewable energy tariffs. In addition to this, Sussex University have the largest solar energy farm of any university producing 11% of the university's energy expenditure in 2018/2019. Brighton University also generates around 20% of its energy expenditure (435,000kWh) through solar power making it a top 10 university for onsite electricity generation.

Sussex University's renewable energy: <https://www.sussex.ac.uk/about/sustainable-university/energy>

Brighton University's renewable energy:

<https://www.brighton.ac.uk/about-us/your-university/sustainability/what-we-do/index.aspx>

4. Are sustainable building practices utilized 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 rating system or sustainable building code/guideline?

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

Score explanation:

(2/3)

Medical School Buildings are spread across both Sussex University and Brighton University campuses.

Sussex University Construction Policy:

While all new buildings constructed on campus must meet the BREEM "Excellent" Environmental Standard this has been identified as an area of improvement and the need for a new 'Sustainable buildings and construction' policy as part of the 2020 sustainability report:

BREEM Standards used on campus: <http://www.sussex.ac.uk/sef/services/sustainability/breem>

Sussex Sustainability Report:

<https://www.sussex.ac.uk/about/documents/university-of-sussex-sustainability-and-sustainable-development-goal-report-nov-2020.pdf>

Brighton University:

Brighton University aim to achieve BREEN 'Excellence' for all new developments. Lighting upgrades are taking place across sites to switch to LEDs, but it has been identified that there are lots of buildings that are not retrofitted.

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-utilized by students. Alternatively, the campus location is not amenable to unsustainable forms of transportation by default.
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.

Score explanation:
(0/2)

Nothing Specifically from the medical school.

Sussex University

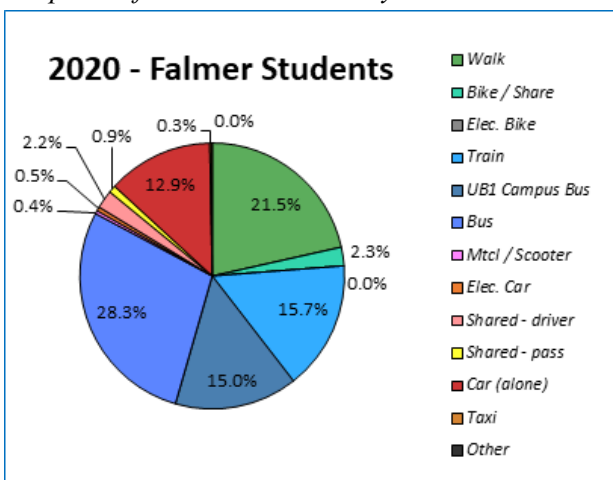
Student accommodation on campus eliminates additional commuting emissions. Bus travel is encouraged with ticket discounts and established bus routes with local bus companies. Additionally, Staff incentives includes Southern Rail Discount and 'Cycle to Work' scheme.

Full details on Sustainable Transport initiatives:

<https://www.sussex.ac.uk/about/sustainable-university/travel>

Brighton University

Similar schemes such as 'Cycle to Work' and salary sacrifice travel season tickets. Car sharing platform also established and 'Travel Smart' leaflets. See chart below for survey done by the university on uptake of sustainable travel by students:



Full details on Brighton's transport policies:

<https://www.brighton.ac.uk/brighton-students/your-student-life/travel-and-transport/index.aspx>

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 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>Score explanation:</i> (1/2) Both Sussex and Brighton Universities have conventional recycling available to all students and staff across all campuses. Brighton University shares surplus food internally with staff and local organisations. Compost is not widely available nor accessible on any campus to students or staff with the exception of a few compost bins in faculty kitchens dotted around the Sussex campus. All commercial food waste is either sent for Anaerobic Digestion or food waste processing through Veolia.</p> <p>Sussex Sustainability report 2020: https://www.sussex.ac.uk/about/documents/university-of-sussex-sustainability-and-sustainable-development-goal-report-nov-2020.pdf</p> <p>Brighton: Reducing food waste: https://eat.brighton.ac.uk/ethics/lovefoodhatewaste/ Sustainable Food Policies: https://eat.brighton.ac.uk/ethics/Policies/ Brighton Recycling: https://blogs.brighton.ac.uk/sustainability/wasterecycling/</p>	

7. Does the medical school apply sustainability criteria when making decisions about the campus food and beverage selections?	
3	Yes, the medical school has adequate sustainability requirements for food and beverages 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>Score explanation:</i> (3/3) Both Brighton University and Sussex University have sustainable food policies with Sussex being named PETA top 20 vegan Universities and awarded the highest rating by the Sustainable Restaurant Association. Medical School Catering facilities are provided by Brighton and Sussex Universities. Brighton: https://eat.brighton.ac.uk/ethics/Policies/</p>	

Sussex: <http://www.sussex.ac.uk/catering/values/sustainability>

Additionally, Sussex collects food waste from its outlets to compost reducing food waste by 80% and the compost is used by university allotments.

<https://sussexstudent.com/activities/view/food-waste-cafe-sussex>

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.

Score explanation:

(2/3)

Sussex University:

Sussex Sustainability Report 2020 includes minimum ethical, social and environmental standards for suppliers working with the University:

<https://www.sussex.ac.uk/about/documents/university-of-sussex-sustainability-and-sustainable-development-goal-report-nov-2020.pdf>

Procurement policy includes a section on sustainability. However, no specific requirements and act more as guidelines. Sustainability team are working to develop clear set of targets. Procurement policy: <https://www.sussex.ac.uk/webteam/gateway/file.php?name=procurement-and-purchasing-policy-121120.pdf&site=262>

Brighton University:

Sustainable Procurement Policies in some specific areas, with general procurement policy with sustainability focus:

Procurement strategy 2015-2019:

https://staff.brighton.ac.uk/efm/Public_Docs/Environment%20Team/Policies%20and%20Strategies/Procurement_Strategy_2015-19.pdf

Specific Policies include: Copier Paper; Stationery and Furniture. Policies can be found here:

<https://www.brighton.ac.uk/about-us/your-university/sustainability/governance/index.aspx>

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.
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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.
<p><i>Score explanation:</i> (0/2) Specific guidelines published by BSMS could not be found. However, Sussex University does have a sustainable events policy, but it is not clear whether this covers BSMS: https://www.sussex.ac.uk/alumni/documents/sustainable-events-policy-2020.pdf</p>	

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>Score explanation:</i> (0/2) BSMS has no specific programs or initiatives to assist with making lab spaces more environmentally sustainable. However, the medical schools share many laboratories with both Brighton and Sussex University. Brighton University: Pilot institution for development of the Laboratory Efficiency Assessment Framework (LEAF). These practices embedded into the School of Pharmacy and Biomolecular Science Labs – not specifically in the medical school but many labs are shared: https://www.greenlabassociates.com/news-notes/2019/2/2/developing-leaf-a-new-tool-to-make-your-lab-green</p> <p>Sussex University: Several laboratory teams engaged in lab sustainability in the Life sciences school under the Green Impact Scheme which they were awarded a NUS Green Impact Gold Award for in 2019. Does not include the medical school and Green Impact Scheme not running this year.</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.
1	The institution has not divested from fossil-fuel companies, but faculty and/or students are conducting organized advocacy for divestment.
0	Yes, the institution has investments with fossil-fuel companies and there have been no efforts to change that.

Score explanation:

(3/4) – The medical school is under both UoB and UoS endowment portfolio and so both have been listed below.

Sussex University:

Completely divested from fossil fuels

Social Responsibility Investment Management Policy (Includes commitment to protect global environment and elimination of fossil fuel exploration and production.):

<https://www.sussex.ac.uk/about/documents/socially-responsible-investment-management-policy.pdf>

Note: No specific commitment in policy to invest in renewable energy companies or renewable energy campus initiatives.

Brighton University:

11.02.21: Amendment to Ethical Investment Policy to included Fossil Free Declaration in line with the Campaign by People and Planet.

Ethical investment statement Jan 2021:

https://staff.brighton.ac.uk/efm/Public_Docs/Environment%20Team/Policies%20and%20Strategies/Ethical%20Investment%20Statement%20-%20Jan%202021.pdf

Ethical investment policy (addendum Jan 2021 includes fossil fuel declaration):

https://staff.brighton.ac.uk/efm/Public_Docs/Environment%20Team/Policies%20and%20Strategies/Ethical%20Investment%20February%202021.pdf

Note: No specific commitment in policy to invest in renewable energy companies or renewable energy campus initiatives.

Section Total (18 out of 29)	B
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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 Brighton and Sussex Medical School

The following table presents the individual section grades and overall institutional grade for Brighton and Sussex Medical school on this medical-school-specific Planetary Health Report Card. 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.

Section	Raw Score	Grade
Planetary Health Curriculum (30%)	40 / 58 = 69%	B
Interdisciplinary Research (17.5%)	15 / 19 = 79%	B +
Community Outreach and Advocacy (17.5%)	3 / 12 = 25%	D
Support for Student-led Planetary Health Initiatives (17.5%)	10 / 14 = 71%	B
Campus Sustainability	18 / 29 = 62%	B -
Institutional Grade	62.2%	B -