



Planetary Health Report Card:

Brighton & Sussex Medical School



2021-2022 Contributing Team:

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Summary of Findings

Overall	B
<u>Curriculum</u>	B+
<ul style="list-style-type: none"> Planetary health and sustainable healthcare topics are apparent throughout the curriculum across years 1-4 in various formats, including dedicated lectures, brief mentions and elective content (SSCs). However, planetary health content lacks longitudinal curricular integration, with most the topics being delivered in years 1,2 and 4. Recommendations: We recommend that the curriculum be reviewed to embed longitudinal integration of planetary health and sustainable healthcare topics across all years. 	
<u>Interdisciplinary Research</u>	A+
<ul style="list-style-type: none"> BSMS has a dedicated Sustainable Healthcare Group and the group’s academic contacts and research activities are centralized in a comprehensive webpage. BSMS also co-hosts the Sustainable Healthcare Academic Research and Enterprise (SHARE) Conference annually. Recommendations: The medical school should establish further links with environmental justice communities who can provide input in the medical school’s research agenda. 	
<u>Community Outreach and Advocacy</u>	C
<ul style="list-style-type: none"> BSMS currently has little community outreach relating to planetary health. We also identified a lack of relevant postgraduate courses offered by BSMS or the affiliated NHS Trust. Recommendations: We recommend that BSMS and its Trust establish training courses, such as those offered by the Centre for Sustainable Healthcare. Community partnerships should also be formed, such as students teaching about climate change in local schools using BSMS’s established widening participation programme. 	
<u>Support for Student-Led Initiatives</u>	A-
<ul style="list-style-type: none"> Overall, there is some support for student-led initiatives at BSMS and the wider institution. An important recent improvement is the addition of student Sustainability Representatives. Recommendations: Support and funding for student-led initiatives mostly comes from the University of Sussex rather than the medical school directly. We recommend that BSMS offer increased support to students, for example by establishing dedicated funding for relevant student-led research. 	
<u>Campus Sustainability</u>	B-
<ul style="list-style-type: none"> The University of Sussex and the University of Brighton, BSMS’s parent institutions, have both made good progress to improve their campus sustainability, including fossil fuel divestment, utilizing sustainable building practices and incorporating sustainability criteria into their supply procurement. Recommendations: Both universities need to take further steps to improve their campus sustainability. As a first step, we recommend that sustainability criteria be formed and made a requirement for all events. 	

Statement of Purpose

Planetary health is human health.

The Planetary Health Alliance describes 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 nationally and internationally on the basis of discrete metrics in five main category areas: 1) planetary health curriculum, 2) interdisciplinary research in health and environment, 3) University support for student planetary health initiatives, and 4) community outreach centered on environmental health impacts 5) medical school campus sustainability.

Definitions & Other Considerations

Definitions:

- **Planetary Health:** is described by the *Planetary Health Alliance* as “the health of human civilisation and the state of the natural systems on which it depends”. For example, topics such as climate change, declining biodiversity, shortages of arable land and freshwater, and pollution would all fall under the realm of planetary health. Both planetary health and traditional ‘environmental health’ examine the relationship between human health and the external environment, including extreme temperatures, chemicals, vector-borne diseases, etc. Planetary health explicitly concerns itself with the potential health harms associated with human-caused perturbations of natural systems. Therefore, the human health focus of planetary health makes the field well-adapted for the context of medical school education. Throughout this report card, we use the term planetary health to refer to this broad swath of topics, but resources do not need to explicitly include the term “planetary health” to satisfy the metric.
- **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 elicits patients' exposures and environmental risk factors. Historically, this has included consideration of exposures like pesticides, asbestos, and lead, though in the modern era shaped by climate change, it can be expanded to include things like wildfire smoke exposure, air pollution and mold after flooding. Key components include place of residence over the lifecourse, occupational history, food and water sources (e.g. meat from industrial feeding operations, regular fishing in contaminated water, access to clean drinking water), and exposure to air pollution.
- **Elective:** The word "elective" refers to an optional course or lecture series that a medical student can opt to take part in but is not a requirement in the core curriculum. Generally, these elective courses take place in the preclinical curriculum but vary by school.
- **Clerkship:** This is a term used in the USA to refer to placements that medical students go on e.g. Pediatrics, General medicine, Psychiatry. In the UK these are referred to as rotations or placements.

Other considerations:

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

Abbreviations:

- BSMS - Brighton and Sussex Medical School
- IRP - Independent Research Project
- SSC - Student Selected Component (an elective course usually done in 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 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>Score explanation:</i> <i>BSMS has offered multiple relevant elective components or SSCs during academic year 2020/21 and the first term of 2021/22 :</i></p> <p><u><i>Year 1</i></u></p> <ul style="list-style-type: none"> ● <i>Module 104 (2020/21): SSC 'Climate change and health: how can healthcare be more sustainable?' - supervisor Dr Anna Jones</i> <p><u><i>Year 2</i></u></p> <ul style="list-style-type: none"> ● <i>Module 202 (2020/21): SSC 'Doctors against climate change' - supervisor Dr Jonathan Sadler</i> ● <i>Module 203 (2020/21): SSC 'Climate change and health: how can healthcare be more sustainable?' - supervisor Dr Anna Jones</i> <p><u><i>Year 4</i></u></p> <ul style="list-style-type: none"> ● <i>Elective breakout seminars offered during Global Health Conference day as part of Year 4's Base Week 2 (2021/22):</i> <ul style="list-style-type: none"> ○ <i>Global safe surgery</i> ○ <i>Snake bites: A neglected tropical disease</i> ○ <i>Pharmaceutical industry corporate social</i> 	

- responsibility projects, volunteering and community work
- Primary care around the world
- The biology of malaria eradication
- Storytelling in Public Health: The health of Nepalese Migrant Workers
- Vaccination beyond hesitancy
- Therapeutic geographies of war: Conflict and health in Iraq
- The anthropology of palliative care in Bangladesh
- Hearing disease: The fourth most common disability in the world
- Malnutrition and climate change: Sustainable nutrition for human and planetary health
- Pharmaceutical donations to the global south
- Independent Research Project (IRP) options available (2021/22):
 - Striving for Environmental Sustainability in Anaesthesia (Project code B15, supervisor Dr Vanessa Fludder)

NB 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

Year 5

- A new clinical elective has been introduced for the academic year 2021/22 on Sustainable Primary Care in Brighton. The student(s) are offered the opportunity to lead on developing a sustainability charter for the new premises of a large General Practice (GP). This will involve considering a wide range of aspects of sustainability in primary care such as prescribing, energy usage and staff travel - supervisors Dr Rachel Cottam, GP at the practice (also Clinical Commissioning Group Clinical Director with responsibility for sustainability) and Dr Anna Jones, Lead for Sustainable Healthcare Education at BSMS.

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.
<p>Score explanation:</p> <p><u>Year 1</u></p> <ul style="list-style-type: none"> ● Module 101 (2020/21 & 2021/22): Topic covered briefly in core curriculum session 'Inequalities and Inclusion Healthcare: Environment and Health' ● Module 104 (2020/21): Topic covered in SSC 'Climate change and health: how can healthcare be more sustainable?' - supervisor Dr Anna Jones 	

Year 2

- *Module 201 (2020/21): Topic covered briefly in core curriculum session ‘Sustainable Healthcare’*
- *Module 203 (2020/21): Topic covered in SSC ‘Climate change and health: how can healthcare be more sustainable?’ - supervisor Dr Anna Jones*

Year 4

- *Base Week 2 (2021/22) - Sustainable Healthcare session: Topic covered briefly in core curriculum lecture ‘Principles of Sustainable Healthcare’ by Dr Anna Jones (detailed infographic of heatwave exposure)*
- *Base Week 2 (2021/22) - Global Health Conference: Topic covered briefly in core curriculum lecture ‘Climate change and Health’ by Dr Anna Jones (graph of heatwave exposure trends, infographic depicting impact of greenhouse emissions on heat waves and subsequent link to health risks)*

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:

Year 1

- *Module 101 (2020/21 & 2021/22): Topic covered briefly during core curriculum session ‘Inequalities and Inclusion Healthcare: Environment and Health’*
- *Module 104 (2020/21): Topic covered in SSC ‘Climate change and health: how can healthcare be more sustainable?’ - supervisor Dr Anna Jones*

Year 2

- *Module 201 (2020/21): Topic covered briefly in core curriculum session ‘Sustainable Healthcare’*
- *Module 203 (2020/21): Topic covered in SSC ‘Climate change and health: how can healthcare be more sustainable?’ - supervisor Dr Anna Jones*

Year 4

- *Base Week 2 (2021/22) - Sustainable Healthcare session: Topic covered in core curriculum lecture ‘Principles of Sustainable Healthcare’ by Dr Anna Jones (mention of flooding)*
- *Base Week 2 (2021/22) - Global Health Conference: Topic covered in core curriculum lecture ‘From local to global: an introduction to global health’ by Dr Melanie Newport (mention of drought and floods)*
- *Base Week 2 (2021/22) - Global Health Conference: Topic covered briefly in core curriculum lecture ‘Climate change and Health’ by Dr Anna Jones (infographic depicting impact of*

greenhouse emissions on floods, heatwaves, droughts and fires, and subsequent link to health risks)

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:

Year 1

- *Module 101 (2020/21 & 2021/22): Topic covered briefly during core curriculum session 'Inequalities and inclusion healthcare: Environment and Health'*
- *Module 102 (2021/22): Topic briefly addressed in core curriculum symposium 'Host factors in infection'*
- *Module 104 (2020/21): Topic covered in SSC 'Climate change and health: how can healthcare be more sustainable?' - supervisor Dr Anna Jones*
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Year 2

- *Module 203 (2020/21): Topic covered in SSC 'Climate change and health: how can healthcare be more sustainable?' - supervisor Dr Anna Jones*

Year 4

- *Base Week 2 (2021/22) - Sustainable Healthcare session: Topic covered briefly in core curriculum lecture 'Principles of Sustainable Healthcare' by Dr Anna Jones (mention of climate change risks to infectious disease vectors and intermediate host ecology for zoonotic diseases)*
- *Base Week 2 (2021/22) - Global Health Conference: Topic covered briefly in core curriculum lecture 'Climate change and Health' by Dr Anna Jones (infographic depicting impact of greenhouse emissions on biodiversity loss, ecosystem collapse and pests, and subsequent link to vector-borne disease)*

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.

Score explanation:

Year 1

- *Module 101 (2020/21): Topic covered briefly in core curriculum session 'Inequalities and inclusion healthcare: Environment and Health'*
- *Module 101 (2021/22): Topic covered over a few slides in core curriculum session 'Inequalities and inclusion healthcare: Environment and Health'*
- *Module 103 (2020/21) - Theme 4: Topic covered in depth across multiple lectures on respiratory disease*
- *Module 104 (2020/21): Topic covered in SSC 'Climate change and health: how can healthcare be more sustainable?' - supervisor Dr Anna Jones*
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Year 2

- *Module 201 (2020/21): Topic covered briefly in core curriculum session 'Sustainable Healthcare'*
- *Module 203 (2020/21): Topic covered in detail in SSC 'Climate change and health: how can healthcare be more sustainable?' - supervisor Dr Anna Jones*

Year 4

- *Base Week 2 (2021/22) - Sustainable Healthcare session: Topic covered briefly in core curriculum lecture 'Principles of Sustainable Healthcare' by Dr Anna Jones (infographic of how air pollution affects people throughout their lifetime with examples of respiratory disease)*
- *Base Week 2 (2021/22) - Global Health Conference: Topic covered briefly in core curriculum lecture 'Climate change and Health' by Dr Anna Jones (infographic depicting impact of greenhouse emissions on ozone increase, particulate pollution and pollen allergenicity burden and subsequent link to respiratory disease, graph depicting air pollution as environmental risk factor for chronic respiratory disease)*

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.

Score explanation:

Year 1

- *Module 101 (2020/21): Topic covered briefly in core curriculum session 'Inequalities and inclusion healthcare: Environment and Health'*

- *Module 101 (2021/22): Topic covered over a few slides in core curriculum session ‘Inequalities and inclusion healthcare: Environment and Health’*
- *Module 104 (2020/21): Topic covered in SSC ‘Climate change and health: how can healthcare be more sustainable?’ - supervisor Dr Anna Jones*

Year 2

- *Module 201 (2020/21): Topic covered briefly in core curriculum session ‘Sustainable Healthcare’*
- *Module 203 (2020/21): Topic covered in SSC ‘Climate change and health: how can healthcare be more sustainable?’ - supervisor Dr Anna Jones*

Year 4

- *Base Week 2 (2021/22) - Sustainable Healthcare session: Topic covered briefly in core curriculum lecture ‘Principles of Sustainable Healthcare’ by Dr Anna Jones (infographic of how air pollution affects people throughout their lifetime with examples of cardiovascular disease)*
- *Base Week 2 (2021/22) - Global Health Conference: Topic covered briefly in core curriculum lecture ‘Climate change and Health’ by Dr Anna Jones (infographic depicting impact of greenhouse emissions on heat waves, ozone increase and particulate pollution, and subsequent link to cardiovascular disease, graph depicting air pollution as environmental risk factor for cardiovascular disease)*

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.

Score explanation:

Year 1

- *Module 101 (2020/21 & 2021/22): Secondary mental health impacts of direct climate change effects covered briefly in core curriculum session ‘Inequalities and inclusion healthcare: Environment and Health’*
- *Module 102 (2020/21) - Theme 2: Brief overview in across a few lectures*
- *Module 104 (2020/21): Topics of eco-anxiety and secondary mental health impacts of direct climate change effects covered in SSC ‘Climate change and health: how can healthcare be more sustainable?’ - supervisor Dr Anna Jones*

Year 2

- *Module 201 (2020/21): Topic covered briefly in core curriculum session ‘Sustainable Healthcare’*

- *Module 203 (2020/21): Topic covered briefly in SSC 'Climate change and health: how can healthcare be more sustainable?' - supervisor Dr Anna Jones*
- *Module 202 (2021/22) - Theme 3, Lecture 5: Brief mention of climate anxiety*

Year 4

- *Base Week 2 (2021/22) - Global Health Conference: Topic covered briefly in core curriculum lecture 'Climate change and Health' by Dr Anna Jones (infographic depicting impact of climate on mental health due to shocks, chronic stressors and climate anxiety)*

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.

Score explanation:

Year 1

- *Module 101 (2020/21): Topic covered briefly in core curriculum session 'Inequalities and inclusion healthcare: Environment and Health'*
- *Module 101 (2020/21): Topic of food/water security as an inequality factor covered in core curriculum session 'Inequalities and inclusion healthcare: Environment and Health'*
- *Module 104 (2020/21): Topic covered in SSC 'Climate change and health: how can healthcare be more sustainable?' - supervisor Dr Anna Jones*

Year 2

- *Module 201 (2020/21): Topic covered briefly in core curriculum session 'Sustainable Healthcare'*
- *Module 203 (2020/21): Topic covered in SSC 'Climate change and health: how can healthcare be more sustainable?' - supervisor Dr Anna Jones*

Year 4

- *Base Week 2 (2021/22) - Global Health Conference: Topic covered briefly in core curriculum lecture 'Climate change and Health' by Dr Anna Jones (infographic depicting impact of greenhouse emissions on biodiversity loss and ecosystem collapse, reduced fishery and aquaculture productivity, reduced agricultural productivity and bacterial diarrhoea - no specific mention of impact on water security)*
- *Base Week 2 (2021/22) - Global Health Conference: Topic of climate change and malnutrition covered in elective breakout session 'Sustainable nutrition for human and planetary health' by Elaine Macaninch*

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

3	This topic was explored 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:

Year 1

- *Module 101 (2020/21): Topic of disproportionate impact of climate change (particular link with air quality/air pollution) on children and populations with low SES covered in core curriculum session 'Inequalities and inclusion healthcare: Environment and Health' and impacts on communities of colour are discussed in small-group workshops of the same session*
- *Module 104 (2020/21): Topic covered in SSC 'Climate change and health: how can healthcare be more sustainable?' - supervisor Dr Anna Jones*

Year 2

- *Module 201 (2020/21): Topic covered briefly in core curriculum session 'Sustainable Healthcare'*
- *Module 203 (2020/21): Topic covered in SSC 'Climate change and health: how can healthcare be more sustainable?' - supervisor Dr Anna Jones*

Year 4

- *Base Week 2 (2021/22) - Global Health Conference: Topic covered in core curriculum lecture 'Global health in a divided world' by Dr Arianne Shahvisi (mention of environmental degradation affecting populations in less developed nations)*
- *Base Week 2 (2021/22) - Global Health Conference: Topic covered in core curriculum lecture 'From local to global: an introduction to global health' by Dr Melanie Newport (mention of climate change affecting poorer populations)*
- *Base Week 2 (2021/22) - Global Health Conference: Topic covered briefly in core curriculum lecture 'Climate change and Health' by Dr Anna Jones (mention of climate climate and exacerbation of health inequalities, mention of winter mortality due to cold homes disproportionately affecting populations facing food and fuel poverty)*

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.
<p><i>Score explanation:</i></p> <p><u>Year 1</u></p> <ul style="list-style-type: none"> • <i>Module 101 (2020/21): Topic of climate change as global health inequality and climate change contributions of Global North versus Global South covered in core curriculum session 'Inequalities and inclusion healthcare: Environment and Health'</i> • <i>Module 104 (2020/21): Topic covered in SSC 'Climate change and health: how can healthcare be more sustainable?' - supervisor Dr Anna Jones</i> <p><u>Year 2</u></p> <ul style="list-style-type: none"> • <i>Module 201 (2020/21): Topic covered briefly in core curriculum session 'Sustainable Healthcare'</i> • <i>Module 203 (2020/21): Topic covered in SSC 'Climate change and health: how can healthcare be more sustainable?' - supervisor Dr Anna Jones</i> <p><u>Year 4</u></p> <ul style="list-style-type: none"> • <i>Base Week 2 (2021/22) - Global Health Conference: Topic covered in core curriculum lecture 'Global health in a divided world' by Dr Arianne Shahvisi (relative climate change contributions of Global North versus Global South, environmental degradation affecting populations in less developed nations)</i> 	

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.
<p><i>Score explanation:</i></p> <p><u>Year 4</u></p> <ul style="list-style-type: none"> • <i>Base Week 2 (2021/22) - Sustainable Healthcare session: Topic covered briefly in core curriculum lecture 'Principles of Sustainable Healthcare' by Dr Anna Jones (infographic depicting how air pollution affects people throughout their lifetime, particularly in pregnancy leading to low birth weight)</i> 	

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.

Score explanation:

Relevant environmental threats to BSMS' local community include air pollution, sea pollution and ocean acidification, extreme weather events (particularly flooding), car use and industrial pollution, all of which are covered in various lectures and elective sessions, however, they are not always directly linked to the surrounding community, resulting in a score of 2.

Year 1

- *Module 101 (2020/21): Topics covered in core curriculum session 'Inequalities and inclusion healthcare: Environment and Health'*
- *Module 101 (2021/22): Topics covered in core curriculum session 'Inequalities and inclusion healthcare: Environment and Health'*
- *Module 104 (2020/21): Topic covered in SSC 'Climate change and health: how can healthcare be more sustainable?' - supervisor Dr Anna Jones*

Year 2

- *Module 201 (2020/21): Topic covered briefly in core curriculum session 'Sustainable Healthcare'*
- *Module 203 (2020/21): Topic covered in SSC 'Climate change and health: how can healthcare be more sustainable?' - supervisor Dr Anna Jones*

Year 4

- *Base Week 2 (2021/22) - Sustainable Healthcare session: Topics covered in core curriculum lecture 'Principles of Sustainable Healthcare' by Dr Anna Jones*
- *Base Week 2 (2021/22) - Global Health Conference: Topics covered briefly in core curriculum lecture 'Climate change and Health' by Dr Anna Jones*

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

3	Indigenous knowledge and value systems are 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.

Score explanation:

Year 4

- *Base Week 2 (2021/22) - Global Health Conference: Topic of colonialism/neocolonialism and environmental degradation covered in core curriculum lecture 'Global health in a divided world' by Dr Arianne Shahvisi, however, there was no mention of Indigenous populations.*

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

3	This topic was explored 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:

Although the disproportionate health impacts of climate change on marginalised populations are addressed throughout the curriculum, environmental toxins, for example particulate matter from air pollution, are mainly mentioned in the wider context of climate change and they are not always linked to marginalised populations, apart from the following sessions:

Year 1

- *Module 101 (2020/21): Topic covered briefly in core curriculum session 'Inequalities and inclusion healthcare: Environment and Health'*
- *Module 101 (2021/22): Topics of air pollution/air quality and link with children, low SES populations and people of colour covered in core curriculum session 'Inequalities and inclusion healthcare: Environment and Health' and during small-group discussion surrounding case of Ella Kissi-Debrah*
- *Module 104 (2020/21): Topic covered in SSC 'Climate change and health: how can healthcare be more sustainable?' - supervisor Dr Anna Jones*

Year 2

- *Module 201 (2020/21): Topic covered briefly in core curriculum session 'Sustainable Healthcare'*
- *Module 203 (2020/21): Topic covered in SSC 'Climate change and health: how can healthcare be more sustainable?' - supervisor Dr Anna Jones*

Year 4

- *Base Week 2 (2021/22) - Sustainable Healthcare session: Topic covered briefly in core curriculum lecture 'Principles of Sustainable Healthcare' by Dr Anna Jones*
- *Base Week 2 (2021/22) - Global Health Conference: Topics covered briefly in core curriculum lecture 'Climate change and Health' by Dr Anna Jones*

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.

Score explanation:

Year 1

- *Module 101 (2020/21): Topic covered in depth in core curriculum 'Inequalities and Inclusion Healthcare: Environment and Health' session addressing the benefits and barriers to plant-based diet*
- *Module 101 (2020/21): Topic covered in depth in core curriculum 'Inequalities and Inclusion Healthcare: Environment and Health' session addressing the planetary health diet and gas emissions from food production*
- *Module 104 (2020/21): Topic covered in SSC 'Climate change and health: how can healthcare be more sustainable?' - supervisor Dr Anna Jones*

Year 2

- *Module 201 (2020/21): Topic covered briefly in core curriculum session 'Sustainable Healthcare'*
- *Module 203 (2020/21): Topic covered in SSC 'Climate change and health: how can healthcare be more sustainable?' - supervisor Dr Anna Jones*

Year 4

- *Base Week 2 (2021/22) - Global Health Conference: Topic briefly covered in core curriculum lecture 'Climate change and Health by Dr Anna Jones (Health co-benefits slide includes benefits of less meat consumption and increased local fruit and veg)*
- *Base Week 2 (2021/22) - Global Health Conference: Topic covered in elective breakout session 'Sustainable nutrition for human and planetary health' by Elaine Macaninch*

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.

Score explanation:

Year 1

- *Module 103 (2020/21) - Theme 4: Impact of inhalers on NHS carbon footprint and alternatives covered briefly across multiple lectures*
- *Module 104 (2020/21): Topic covered in SSC 'Climate change and health: how can healthcare be more sustainable?' - supervisor Dr Anna Jones*

Year 2

- *Module 201 (2020/21): Topic covered briefly in core curriculum session 'Sustainable Healthcare'*
- *Module 203 (2020/21): Topic covered in SSC 'Climate change and health: how can healthcare be more sustainable?' - supervisor Dr Anna Jones*

Year 3

- *Module 308 (2020/21 & 2021/22): Sources of greenhouse gas emissions in NHS and carbon footprint of NHS, with specific focus on contribution of pharmaceuticals, covered in detail during 'Sustainable prescribing' lecture by Dr Anna Jones*

Year 4

- *Base Week 2 (2021/22) - Sustainable Healthcare session: Carbon footprint of surgery and personal protective equipment covered in detail in core curriculum lecture 'Sustainable surgery and PPE' by Prof Mahmood Bhutta*
- *Base Week 2 (2021/22) - Sustainable Healthcare session: Topic covered in depth in core curriculum lecture 'Principles of Sustainable Healthcare' by Dr Anna Jones (NHS-related travel and air pollution, breakdown of carbon footprint of the NHS, sources of greenhouse gas emissions in NHS, net zero NHS, contribution of pharmaceuticals to NHS carbon footprint)*
- *Module 402 (2021/22): Public Health task on 'Sustainable Healthcare and Quality Improvement' as part of Neurology/Neurosurgery/Ophthalmology/ENT rotation, led by Dr Anna Jones. Session is part of core curriculum, however, it is delivered in a small-group setting so content varies across sessions.*

17. Does your medical school curriculum cover these components of sustainable clinical practice in the core 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 fulfill 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

Score explanation:

1. *Covered in core curriculum in the following sessions:*

- Year 2: Module 201 (2020/21): Topic covered briefly in lecture and small-group discussion of session 'Sustainable Healthcare'
- Year 3: Module 308 (2020/21 and 2021/22) Sources of greenhouse gas emissions in NHS and carbon footprint of NHS, with mention to waste, covered in detail during 'Sustainable prescribing' lecture by Dr Anna Jones
- Year 4
 - Base Week 2 (2021/22) - Sustainable Healthcare session: Carbon footprint of surgery, including reducing waste, covered in detail in core curriculum lecture 'Sustainable surgery and PPE' by Prof Mahmood Bhutta
 - Base Week 2 (2021/22) - Sustainable Healthcare session: Topic covered in depth in core curriculum lecture 'Principles of Sustainable Healthcare' by Dr Anna Jones (breakdown of carbon footprint of the NHS, sources of greenhouse gas emissions in NHS)

2. *Covered in core curriculum in the following sessions:*

- Year 1: Module 103 (2020/21) - Theme 4: Impact of inhalers on NHS carbon footprint and alternatives covered briefly across multiple lectures
- Year 2: Module 201 (2020/21): Topic covered briefly in lecture and small-group discussion of session 'Sustainable Healthcare'
- Year 3: Module 308 (2020/21 and 2021/22) Carbon footprint of inhalers and dry powdered versus metered dose inhalers covered in detail during 'Sustainable prescribing' lecture by Dr Anna Jones
- Year 4: Base Week 2 (2021/22) - Sustainable Healthcare session: Topic covered in depth in core curriculum lecture 'Principles of Sustainable Healthcare' by Dr Anna Jones

3. *Covered in core curriculum in the following sessions:*

- Year 2: Module 201 (2020/21): Topic covered briefly in lecture and small-group discussion of session 'Sustainable Healthcare'
- Year 3: Module 308 (2020/21 and 2021/22) Sources of greenhouse gas emissions in NHS and carbon footprint of NHS with mention to anaesthetic gases, covered in detail during 'Sustainable prescribing' lecture by Dr Anna Jones
- Year 4
 - Base Week 2 (2021/22) - Sustainable Healthcare session: Carbon footprint of surgery, including anaesthetic gases, covered in detail in core curriculum lecture 'Sustainable surgery and PPE' by Prof Mahmood Bhutta
 - Base Week 2 (2021/22) - Sustainable Healthcare session: Topic covered in depth in core curriculum lecture 'Principles of Sustainable Healthcare' by Dr Anna Jones (breakdown of carbon footprint of the NHS, sources of greenhouse gas emissions in NHS, including anaesthetic gases)

4. *Covered in core curriculum in the following sessions:*
 - *Year 1: Module 103 (2020/21) - Theme 4: Impact of inhalers on NHS carbon footprint and alternatives covered briefly across multiple lectures*
 - *Year 2: Module 201 (2020/21): Topic covered briefly in lecture and in detail during small-group discussion of session ‘Sustainable Healthcare’*
 - *Year 3: Module 308 (2020/21 and 2021/22) Sources of greenhouse gas emissions in NHS and carbon footprint of NHS, with specific focus on contribution of pharmaceuticals, covered in detail during ‘Sustainable prescribing’ lecture by Dr Anna Jones*
 - *Year 4: Base Week 2 (2021/22) - Sustainable Healthcare session: Topic covered in depth in core curriculum lecture ‘Principles of Sustainable Healthcare’ by Dr Anna Jones (contribution of pharmaceuticals to NHS carbon footprint)*

5. *Covered in core curriculum in the following sessions:*
 - *Year 1: Module 101 (2020/21 and 2021/22) Topic covered briefly during ‘Inequalities and Inclusion Healthcare: Environment and Health’*
 - *Year 2: Module 201 (2020/21): Topic covered briefly in lecture and in detail during small-group discussion of session ‘Sustainable Healthcare’*
 - *Year 3: Module 308 (2020/21 and 2021/22) Covered in detail during ‘Sustainable prescribing’ lecture by Dr Anna Jones*
 - *Year 4: Base Week 2 (2021/22) - Sustainable Healthcare session: Topic covered in depth in core curriculum lecture ‘Principles of Sustainable Healthcare’ by Dr Anna Jones*

6. *Covered in core curriculum in the following sessions:*
 - *Year 2: Module 201 (2020/21): Topic covered briefly in lecture and in detail during small-group discussion of session ‘Sustainable Healthcare’*
 - *Year 3: Module 308 (2020/21 and 2021/22): Covered in detail during ‘Sustainable prescribing’ lecture by Dr Anna Jones*
 - *Year 4: Base Week 2 (2021/22) - Sustainable Healthcare session: Topic covered in depth in core curriculum lecture ‘Principles of Sustainable Healthcare’ by Dr Anna Jones*

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
<p><i>Score explanation:</i></p> <p><u>Year 1</u></p> <ul style="list-style-type: none"> • <i>Module 101 (2020/21 and 2021/22): Topic briefly introduced in core curriculum lecture 'Inequalities and Inclusion Healthcare: Environment and Health'</i> <p><u>Year 2</u></p> <ul style="list-style-type: none"> • <i>Module 201 (2020/21) - Small group sessions facilitated by GP doctors on clinical cases surrounding sustainable healthcare, such as inhaler use and social prescribing</i> <p><u>Year 3</u></p> <ul style="list-style-type: none"> • <i>Module 308 (2020/21 & 2021/22): 'Sustainable prescribing' lecture by Dr Anna Jones covers clinical examples on sustainable prescribing, including social prescribing as alternative to antidepressant prescribing and using the National Institute for Health and Care Excellence (NICE) decision aid for discussing inhaler use with patients.</i> <p><u>Year 4</u></p> <ul style="list-style-type: none"> • <i>Base Week 2 (2021/22) - Sustainable Healthcare session: Small-group breakout sessions facilitated by doctors on discussing with patients about climate change and health risks</i> 	

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.
<p><i>Score explanation:</i></p> <p><u>Year 1</u></p> <ul style="list-style-type: none"> • <i>Module 101 (2020/21): Occupational exposure history covered</i> • <i>Module 101 (2021/22): Seminar sessions and clinical skills history taking sessions have covered the importance of asking about workplace and environmental exposures.</i> <p><u>Year 4</u></p> <ul style="list-style-type: none"> • <i>Base Week 2 (2021/22) - Global Health Conference: Topic covered briefly in core curriculum lecture 'Climate change and Health by Dr Anna Jones (cold homes, respiratory disease and climate change, preventing excess winter deaths and ills associated with cold homes)</i> • <i>Module 402 (2021/22) - Public Health task as part of Infectious Diseases, HIV/Genitourinary medicine & Health Protection rotation includes a case-based scenario on mercury exposure.</i> 	

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.

Score explanation:

The medical school is in the process of embedding planetary health education and sustainable healthcare topics in the curriculum across all years. [Dr Anna Jones](#) who serves as Project Lead for Sustainable Healthcare Education is currently overseeing the longitudinal curricular integration of these topics.

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.

Score explanation:

Currently, the majority of material related to planetary health and climate change at BSMS is within the Year 1, 2 and 4 curriculums and is covered in multiple settings, including lectures, small-group sessions and SSCs. The Year 3 and 5 curriculums significantly lack in planetary health topics.

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.

Score explanation:

[Dr Anna Jones](#) has been appointed Project Lead for Sustainable Healthcare Education which involves overseeing curricular integration and implementation of teaching in sustainable health.

Section Total (55 out of 69)

B+

Back to Summary Page [here](#)

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?	
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.
<p><i>Score explanation:</i> The <u>BSMS Sustainable Healthcare Group</u> has a core team of 7 researchers who pursue research interests in the sustainability of health systems:</p> <ul style="list-style-type: none"> ● <i>Professor Mahmood Bhutta (DPhil FRCS) – Research Areas: Environmental sustainability in healthcare systems; labour rights in healthcare supply chains</i> ● <i>Miss Chantelle Rizan (Bsc(Hons) MBBCh MRes MRCS(ENT)) – Research Areas: Sustainable surgery</i> ● <i>Dr Anna Jones (MBBS, DTM+H, MPH, FFPH, PGCert Med Ed, FHEA) Research Areas: Public Health, Medical Education, Sustainable Health.</i> ● <i>Dr Arianne Shahvisi (BA, MSc, MSt, PhD) – Research Areas: Reproductive ethics; feminist bioethics; migration; gender; race; scientific methodology; academic freedom.</i> ● <i>Dr Lisa Page – Research Areas: Liaison Psychiatry, Environmental Epidemiology, Sustainability and Health, Self-harm, Suicide, Public Health.</i> ● <i>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.</i> ● <i>Dr Jonathan Sadler (MBChb, BSc, PG Cert Med Ed) – Research Areas: Medical Education, Playful Learning and Sustainability.</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.
<p><i>Score explanation:</i> The BSMS Sustainable Healthcare Group focuses on research and education relating to environmental, social and financial elements of sustainability in health and healthcare. Its core functions are to:</p> <ul style="list-style-type: none"> • 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 <p>University of Sussex's Sussex Sustainability Research Programme delivers interdisciplinary research to help achieve the global sustainability goals for humanity and the environment - one of its research areas is Global Health and Environment.</p>	

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
<p><i>Score explanation:</i> BSMS engages with communities disproportionately impacted by climate change and environmental injustice through the SURFACES project. This is an interdisciplinary project integrating public health and biodiversity conservation in threatened rainforests in Papua New Guinea (focusing first on neglected tropical skin diseases). The project has developed a long-term collaboration with a remote forest-dwelling community (nine lowland rainforest clans in the Wanang village) who have established</p>	

multi-stakeholder agreements to preserve their forest in the face of financial incentives from logging companies. Similar partnerships were also developed with clans up on [Mount Wilhelm](#). These communities actively collaborate with the SURFACES team for the delivery of health-related sustainable development goals linked with forest conservation research in their areas. For example, the Wanang villagers requested the provision of health services, resulting in the construction of a nurse-staff community clinic partly funded by BSMS. The project is funded by the [Sussex Sustainability Research Project](#) and the research team includes Co-Investigators from BSMS ([Jo Middleton](#), [Professor Jackie Cassell](#) and Dr Gavin Colthard).

4. Does your institution have a planetary health website that centralizes ongoing and past research 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:

University of Brighton and University of Sussex, the two universities under which BSMS was formed, have several web pages centralizing campus resources related to health and the environment:

- [Sustainable Sussex](#) compiles the university's sustainability strategy, policies, performance, research (including research on [Global Health and Environment](#)), news and upcoming events.
- [University of Brighton Sustainability](#) compiles the university's governance, policies, performance, research (including research on [Environment and Public Health](#))
- The [BSMS Sustainable Healthcare Group](#) centralizes BSMS' research, education and events relating to environmental, social and financial elements of sustainability in health and healthcare. It also includes information on BSMS academics whose research interests lie within the sustainability of healthcare systems.

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.
<p><i>Score explanation:</i> The international Sustainable Healthcare Academic Research and Enterprise (SHARE) Conference 2021: Resetting the agenda for sustainable healthcare was hosted virtually on 7 May 2021 in partnership between BSMS and the University of Brighton School of Health Sciences. It offered keynote talks and oral presentations on a variety of topics related to the triple-bottom-line of sustainability in healthcare practice including:</p> <ul style="list-style-type: none"> • Carbon footprint reduction across a range of clinical specialities • Ethical and fair trade in healthcare supply chains • Sustainability in healthcare education • Quality improvement projects embedding sustainability principles • Students, academics, researchers and clinical colleagues from a wide range of disciplines all attended and were provided the opportunity to learn how healthcare can be made more sustainable. 	

6. Is your medical school a member of a national or international planetary health or ESH organization?	
1	Yes, the medical school is a member of a national or international planetary health or ESH organization
0	No, the medical school is not a member of such an organization
<p><i>Score explanation:</i></p> <ul style="list-style-type: none"> • BSMS is a member of the Planetary Health Alliance (Institutional Liaison: Jo Middleton) • BSMS has joined the Global Consortium on Climate and Health Education and is listed as a member institution. 	

Section Total (17 out of 17)	A+
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Back to summary page [here](#)

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> <i>BSMS currently has no partnerships with community organizations to promote planetary and environmental health, but one of our partner institutions, the University of Brighton, runs the Community University Partnership Programme (CUPP). CUPP has many partnership projects with local community organizations that promote planetary and environmental health, including:</i></p> <ul style="list-style-type: none"> ● <i>Brighton & Hove Food Partnership</i> ● <i>Falmer Vegetable Garden</i> ● <i>Darley Road Gardening Project</i> ● <i>KTP Project: Spring Barn Farm Park</i> ● <i>KTP Project: Farmshop and outlet</i> ● <i>Urban wildlife in the UK</i> ● <i>Community resilience and changing water environments</i> ● <i>Green Spaces Network in Brighton & Hove - Seed Fund</i> ● <i>FutureCoast Youth: Creative Collaborations for a Changing Climate- Seed Fund</i> ● <i>Hanover Centre Carbon RACE (Reduction, Awareness and Community Engagement)</i> ● <i>Waste House</i> ● <i>Ban on Fisheries Discard - Seed Fund</i> ● <i>Hastings Blue Reef Aquarium - Seed Fund</i> ● <i>Tourism for Inshore Fishing, Food and Sustainability (TourFish)</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.
<p><i>Score explanation:</i> BSMS co-hosts the Sustainable Healthcare Academic Research and Enterprise (SHARE) Conference annually. Although the conference is aimed at healthcare professionals and students, it is free to attend and is open to the wider community.</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> The BSMS student newsletter, <i>Digest</i>, which is emailed monthly to all students since December 2021, includes a section on sustainability in every edition. It covers topics on food and nutrition, climate change, travel and transport, healthcare and medicine, gender equality and inclusion, and health and wellbeing. It also covers updates, news and events around sustainability in healthcare and specifically at BSMS. The first issue of <i>Digest</i> (December 2021) can be found here.</p>	

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
<p><i>Score explanation:</i> iris, the e-learning platform for education and training at University Hospitals Sussex (BSMS's main affiliated NHS Trust) was searched for in-person and online courses relating to planetary health and/or sustainable healthcare, however, no relevant courses were found.</p> <p>The International Sustainable Healthcare Academic Research and Enterprise (SHARE) Conference is an annual conference hosted in partnership between BSMS and the University of Brighton School of Health Sciences. It offers keynote talks and oral presentations on a variety of topics related to the triple-bottom-line of sustainability in healthcare practice including:</p> <ul style="list-style-type: none"> • Carbon footprint reduction across a range of clinical specialities • Ethical and fair trade in healthcare supply chains • Sustainability in healthcare education • Quality improvement projects embedding sustainability principles <p>Students, academics, researchers and healthcare professionals from a wide range of disciplines are able to attend, hence this conference provides an element of CPD. This scores 1 point.</p>	

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 centers have accessible educational materials for patients.
<p><i>Score explanation:</i></p> <ul style="list-style-type: none"> • BSMS does not currently provide accessible educational materials for patients on topics around environmental health exposures. • BSMS' main affiliated Trust, University Hospitals Sussex NHS Foundation Trust, website was searched for patient information leaflets on environmental health exposures but no relevant materials were found. 	

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.

Score explanation:

BSMS does not currently provide accessible educational materials for patients on topics around climate change and health impacts, however, at least one of its affiliated hospital Trusts does:

- *University Hospitals Sussex NHS Foundation Trust: [Online brochure](#) accessible to patients outlining the Trust's Green Plan for reducing its environmental impact. This brochure has a dedicated chapter (Chapter 1) on the health impacts of climate change.*
- *Sussex Community Trust: [Care Without Carbon](#) is a framework created to guide delivery of sustainable healthcare. Although the actions of this strategy are aimed at NHS staff, the website and information are accessible to patients and the general public.*
- *Sussex Partnership NHS Foundation Trust: Webpage dedicated to the Trust's [approach for sustainable healthcare](#), however, this does not include educational material for patients about climate change and health impacts.*

Section Total (7 out of 14)

C

Back to summary page [here](#)

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 fulfill 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.
<p><i>Score explanation:</i> One of BSMS's partner institutions, the University of Sussex, hosts the annual Pitch for the Planet student innovation competition offering up to four prizes from a £20,000 funding pot for the best proposals to maximize sustainability at Sussex in the following areas:</p> <ul style="list-style-type: none"> ● <i>reducing energy consumption;</i> ● <i>carbon capture and/or compensation;</i> ● <i>reducing water consumption;</i> ● <i>sustainable education and/or community engagement;</i> ● <i>protecting or enhancing biodiversity;</i> ● <i>sustainable food and/or agriculture; or</i> ● <i>sustainable travel.</i> <p><i>The winners of each prize receive a share of the £20,000 prize pot and are guaranteed a place on the University's summer accelerator which provides a platform to launch and grow the initiatives, offering coaching, specialist advice, mentorship from founders, intern support and further funding opportunities. All current undergraduate students at Sussex can apply, hence this scheme is also open to BSMS medical students.</i></p>	

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.
<p><i>Score explanation:</i></p> <ul style="list-style-type: none"> • <i>Students in Year 4 are required to undertake an Independent Research Project (IRP) from a list of given titles which become available each year. These options often include projects in planetary health/sustainable healthcare. Relevant titles available in 2021/22: Striving for Environmental Sustainability in Anaesthesia (Project code B15, supervisor Dr Vanessa Fludder). There is also scope to design and undertake an alternative study if the student has a particular interest in planetary health/sustainable healthcare as part of the IRP module in Year 4. As this module is not specifically for sustainability projects, this scores 1 point.</i> • <i>The Junior Research Associate (JRA) Scheme run by the University of Sussex allows selected undergraduate students to take part in an eight-week, full-time summer research project under the guidance of an academic. Students interested in applying to the scheme must identify a supervisor and a research proposal. Research projects may be undertaken in any research area the applicant is interested in, including planetary health/sustainable healthcare, provided they identify a supervisor. The scheme is open to undergraduate students at Sussex and hence, medical students at BSMS are eligible. This scores 1 point.</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 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></p> <p><i>The BSMS Sustainable Healthcare Group web page includes details about publications and faculty members with interests in sustainable healthcare with their contact information.</i></p>	

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

2	Yes, there is a student organization 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.
0	No, there is not a student organization at my institution dedicated to planetary health or sustainability in healthcare.
<p><i>Score explanation:</i></p> <ul style="list-style-type: none"> • <i>BSMS Green Medicine Society</i> is a student-led society dedicated to the promotion of planetary health and sustainable healthcare. • <i>BSMS Students for Global Health</i> is a student-led society which works with national branches to promote sustainable healthcare and advocate with groups disproportionately affected by climate change. <p><i>Both these societies exist as part of the medical school Student Union (BSMS MedSoc) and receive annual funding of £150 each.</i></p>	

5. Is there a student liaison representing sustainability interests who serves on a medical school or institutional decision-making council to advocate for curriculum reform and/or sustainability best practices?	
1	Yes, there is a student representative that serves on a medical school or institutional decision-making council/committee.
0	No, there is no such student representative.
<p><i>Score explanation:</i></p> <p><i>BSMS has two medical student Sustainability Representatives whose roles include:</i></p> <ul style="list-style-type: none"> • <i>Attending the University of Sussex Students' Union sustainability committee meetings and reporting back to BSMS on relevant topics from these meetings</i> • <i>Attending relevant academic meetings with BSMS staff</i> • <i>Working with other representatives and staff to envisage, advocate for, and bring about change at BSMS</i> • <i>Maintaining regular contact with academic year representatives and representatives from student societies</i> • <i>Exploring ways to engage with the broader student body and receive and manage input from other students</i> <p><i>The term of service is two years, with the option of ending the role after one year. The role is voluntary and requires a commitment of no more than eight hours per month.</i></p>	

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

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

Score explanation:

1. Two schemes were identified, scoring 1 point.

- [Roots \(Communal Gardening\) Society](#) and [Sussex Forest Food Garden](#) are student-led communal gardening initiatives at the University of Sussex.
- The University of Brighton, runs the [Community University Partnership Programme \(CUPP\)](#) which has many partnership projects with local community organizations that promote planetary and environmental health, including:
 - Brighton & Hove Food Partnership
 - Falmer Vegetable Garden
 - Darley Road Gardening Project
 - KTP Project: Spring Barn Farm Park
 - KTP Project: Farmshop and outlet
 - Urban wildlife in the UK
 - Community resilience and changing water environments
 - Green Spaces Network in Brighton & Hove - Seed Fund
 - FutureCoast Youth: Creative Collaborations for a Changing Climate- Seed Fund
 - Hanover Centre Carbon RACE (Reduction, Awareness and Community Engagement)
 - Waste House
 - Ban on Fisheries Discard - Seed Fund
 - Hastings Blue Reef Aquarium - Seed Fund
 - Tourism for Inshore Fishing, Food and Sustainability (TourFish)

2. The following relevant events were identified, which score 1 point;

- The [Sustainable Healthcare Academic Research and Enterprise \(SHARE\) Conference](#) is an annual conference hosted in partnership between BSMS and the University of Brighton School of Health Sciences. It offers keynote talks and oral presentations on a variety of topics related to the triple-bottom-line of sustainability in healthcare practice. Students are included in a wider intended audience of healthcare professionals.
- The University of Sussex runs [sustainability seminars](#) which are aimed at students.

3. No such events were held at either partner university

4. No relevant events, installations or performances were held at either partner university

5. The following volunteering opportunities were identified, which score 1 point:

- [Active Student](#), the University of Brighton's Volunteering Service, supports students to find supported and safe volunteering opportunities in the local area, including opportunities relating to environment, agriculture and sustainability:
 - Plot volunteer - Nurture through Nature
 - East Brighton Food Co-Op Volunteer
 - Beach Cleaning and Fundraising Volunteer - Vol Human Appeal
 - Garden Support Volunteer - Brighton & Hove Food Partnership
 - Grow Season Support Volunteer - The Grow Project
 - Winter Fuel Poverty Programme Outreach Coordinator - BHESCo
 - One Planet Living Practitioner - The Green Centre CIC
 - Social Media and Videographer Volunteer - Magpie Recycling

6. The following student-led societies organize outdoor programs for students, scoring 1 point:

- [University of Sussex Mountaineering Society](#) organizes outdoor climbing trips in the UK and internationally
- [University of Brighton Ecological Society](#) hosts outdoor activities, including visiting local nature reserves for walks and exploring rock pools at local beaches.

Section Total (12 out of 15)	A-
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Back to summary page [here](#)

Campus Sustainability

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

1. Does your 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>Score explanation:</i> <i>BSMS is an equal partnership between the University of Sussex and University of Brighton. Each parent university has a dedicated Sustainability Team, and BSMS has a dedicated sustainability steering group with one designated staff member for sustainability and multiple other salaried staff and non-salaried students aiming to improve campus sustainability:</i></p> <ul style="list-style-type: none"> ● <u>University of Sussex Sustainability Team</u> <ul style="list-style-type: none"> ○ Sam Waugh, Sustainability Manager, s.waugh@sussex.ac.uk ○ Juliet Richardson, Graduate Sustainability Intern (Research and Analysis), jr605@sussex.ac.uk ○ Martha Knott, Graduate Sustainability Intern (Communications and Engagement), mk581@sussex.ac.uk ● <u>University of Brighton Sustainability Team</u> <ul style="list-style-type: none"> ○ Ollie Swan, Head of Sustainability, o.swan@brighton.ac.uk ○ Lucy Lisle, Sustainability and Travel Manager, l.lisle@brighton.ac.uk ○ Janey Bray, Environmental and EMS Officer, j.b.bray@brighton.ac.uk ○ Jude Harkins, Sustainability and Energy Analyst, j.harkins@brighton.ac.uk ● <u>BSMS Sustainability Steering Group</u> <ul style="list-style-type: none"> ○ Dr Anna Jones, Project Lead for Sustainable Healthcare Education ○ Liz Kaye, Quality and Placements Manager, L.Kaye@bsms.ac.uk ○ Dr Jonathan Sadler, Research Fellow, J.Sadler@bsms.ac.uk ○ Julie Wilton, Communications Manager, J.Wilton@bsms.ac.uk ○ Matt Bemment, Communications Assistant, M.Bemment@bsms.ac.uk 	

- Dearbhla Mcilroy, Student Sustainability Representative, D.Mcilroy1@uni.bsms.ac.uk
- Kathy Bog, Student Sustainability Representative, J.Bog1@uni.bsms.ac.uk

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.

Score explanation:

- *University of Sussex: The University of Sussex has published a sustainability strategy, called [Sustainable Sussex](#), detailing how the University plans to overhaul its heating, transport and supply chains to achieve a net zero carbon footprint of its entire operations by 2035.*
- *University of Brighton: A sustainability strategic programme ('Brighton 2025') is mentioned in the university's [divestment press statement](#) with a goal to reduce carbon emissions to 4000tCO2e by 2025, there is no mention of carbon neutrality and the complete programme is not available. Staff have made us aware that Brighton's Sustainable Development Strategy and Net Zero Plan are currently under development.*
- *At least one of the medical school's partner institutions has a stated carbon neutrality goal by 2040 and a well-defined plan to achieve this goal so this metric scores 3/4.*

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:

BSMS has buildings at both University of Sussex and University of Brighton campuses:

- *University of Sussex: The energy used on campus ([most recent data from 2018/19](#)) was provided by a mix of power from the university’s District Heating System, Combined Heat and Power Plant (CHP) and their solar farm. Heating is mainly provided by natural gas to the best of our knowledge. Approximately 11% of this energy came from renewable sources, such as solar and combined heat and power. From 2020, the university subscribes to a 100% renewable electricity tariff.*
- *University of Brighton uses 100% renewable electricity, generated mostly from onshore and offshore wind. A proportion of electricity used is also generated by onsite solar panels (nearly 1,500 panels have been installed at Moulsecoomb, Falmer and Eastbourne campuses, and at our Varley Park residences). Heating is provided by natural gas, however, the university uses an Aquifer Thermal Energy Storage (ATES) system and low-carbon Combined Heat and Power (CHP) units to lower the carbon impact of heating and ventilation on campus. The % of renewable energy utilised by the university could not be retrieved.*
- *Although both universities source their electricity needs from 100% renewable on-site and off-site sources, the main source of heating on both campuses is natural gas. We were unable to ascertain the overall % of energy needs sourced by renewable energy on our campuses taking into account the heating sources, hence we have assigned a score of 0 (<20% of energy) based on 2018/19 data from the University of Sussex.*

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

3	Yes, sustainable building practices are utilized for new buildings on the medical school campus and the 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:

- University of Sussex
 - *All new buildings constructed on the University campus must meet the energy efficiency standards set out in the Building Research Establishment Environmental Assessment Method (BREEAM) ‘Excellent’ environmental standard.*
 - *The [Energy Efficient Campus](#) section of University of Sussex’s Sustainability Strategy sets out targets and plans for improving the campus’s energy efficiency and reducing energy consumption. This includes energy efficient retrofitting of existing campus buildings. In the report it is outlined that an initial high-level audit of the energy efficiency of all the buildings will be undertaken to identify cost-effective ways of reducing energy consumption. A more detailed audit will then be undertaken of the 20% most poorly performing buildings by 2023 and a detailed investment opportunity analysis of the entire estate by 2030. This audit information will be used to make regular business cases for funding for energy efficiency improvements to our Capital Programmes Committee and external grant funders, e.g. the Public Sector*

- Decarbonisation Scheme so that these improvements can be built into our annual maintenance and project plans each year.*
- *Although a plan is in place, this has not been actioned yet, with the exception of residential accommodation which has been brought up to energy performance certificate rating E everywhere, unless tenant ill health or gaining vacant possession has made this work unfeasible.*
 - **University of Brighton**
 - *University of Brighton have stated they [aim to achieve BREEAM Excellent standard for all new developments](#).*
 - *The university is also currently working to improve the energy efficiency of older campus buildings through [sustainable refurbishment projects](#), including:*
 - *A recent installation of efficient lighting at our Aldrich and Falmer Libraries is saving 48 tonnes of carbon a year*
 - *An Aquifer Thermal Energy Storage (ATES) system – an innovative way of heating and cooling one of our largest buildings, using water from hot and cold wells below the site.*
 - *Low-carbon Combined Heat and Power (CHP) units - cutting our carbon emissions by generating electricity at the same time as providing heating.*
 - *An extensive building energy management system (BMS) - ensuring our buildings are comfortable places for work and study, while achieving the most efficient use of energy across campus*
 - *Nevertheless, there are still multiple buildings which have not been 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.
<p><i>Score explanation:</i></p> <ul style="list-style-type: none"> ● <i>Both the University of Sussex and the University of Brighton provide good biking infrastructure, including cycle parking (bike racks), free shower facilities for cyclists and lockers. Cycling facilities are easily accessible from the medical school buildings on both campuses.</i> ● <i>Bus travel is encouraged by both universities with student ticket discounts and established bus routes with local bus companies, however, these discounts are not specifically provided from the medical school. The University of Brighton also operates a low-emission free shuttle bus linking different campuses; this is a university-wide service.</i> 	

- *BSMS has a published Student Travel and Accommodation Policy which encourages students to walk, cycle or use public transport where possible and practicable for all journeys. Bus/train fares for any required travel for placements outside of the Brighton and Hove area is reimbursed. Taxi travel is discouraged and not reimbursed unless no public transport is available or placement location is particularly inaccessible.*
- *Private car travel is reimbursed at a given mileage rate and carpool is encouraged.*
- *Regular free bus service is provided between the Royal Sussex County Hospital and Princess Royal Hospital for students to attend their clinical placements, however, this service is offered for all individuals employed by the local Trust, rather than specifically from the medical school.*
- *It is stated that all the above services and travel policies are designed to minimize transport costs, rather than reduce the environmental impact of travel. Despite this, they are considered environmentally-friendly transportation options. Notably, the BSMS Student Travel and Accommodation Policy is poorly accessible to students (MyStudies) and these policies are only mentioned briefly during induction sessions.*

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.

Score explanation:

- *Both the [University of Sussex](#) and [University of Brighton](#) have conventional segregated recycling bins across campuses, including the medical school buildings, covering all commonly recyclable waste (aluminum/paper/plastic bottles/glass), which are easily accessible to students and faculty.*
- *The [University of Sussex](#) has compost bins in multiple areas on campus, but not in the medical school building. Food waste recycling (compost) was introduced to kitchens in East Slope residences in 2019, and an opt-in food waste scheme has been made available to residents in all other residences from Autumn Term 2021.*
- *Notably, the University of Sussex also provides specialized waste services, such as recycling of TetraPak cartons, duvets and pillows, crisp packets, oral health care products, stationery and cooking oil. These services are accessible to students and staff in specific locations across campus, but not in the medical school building.*

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>Score explanation:</i> <i>The catering facilities at the medical school buildings are provided by the University of Sussex and the University of Brighton:</i></p> <ul style="list-style-type: none"> • <i>University of Sussex's catering partner, Sussex Food, uses sustainable procurement, including sourcing the majority of its food from local suppliers.</i> • <i>As outlined in their Sustainable Food Policy, the University of Brighton uses locally grown and seasonal fruit and vegetables, sustainable fish and high welfare meat and they offer a range of vegetarian and vegan options in all their food outlets. Many restaurants at the University of Brighton campuses also take part in 'Meat Free Monday' promotions.</i> 	

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.
<p><i>Score explanation:</i></p> <ul style="list-style-type: none"> • <i>The University of Sussex's Sustainability Strategy Sustainable Sussex contains a dedicated Sustainable Supply Chain section. The university has a well-established approach to sustainable procurement through their Supplier Code of Conduct and Purchasing Policy. These policies set out minimum ethical, social, and environmental standards and behaviours expected of suppliers. The university is engaged in efforts to further reduce their current carbon emissions from their supply chain, resulting in the the launch of a new Sustainable Procurement Framework from summer 2021, which contains nine core sustainable procurement principles that suppliers should be committed to:</i> <ul style="list-style-type: none"> ○ <i>Net zero target and action plan</i> ○ <i>Recycling target</i> ○ <i>Responsible consumption and production</i> 	

- Equality, diversity and inclusion (EDI) training for staff and supply chain staff
- Staff access to wellbeing programmes
- Supporting and volunteering in local issues
- Initiatives to reduce inequality in the workplace
- Real living wage accreditation
- Engaging small- and medium-sized enterprises (SMEs) and voluntary, community and social enterprises (VCSEs) in the supply chain
- University of Brighton is currently in the process of updating its sustainable procurement policy. The most recent version is the Procurement Strategy 2015-2019 which includes general sustainable procurement policies, however, they lack detail and they do not form sustainability requirements, hence this metric scores 2/3.

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.

Score explanation:

- The University of Sussex's [Sustainable Events Policy](#) provides sustainability guidelines for any events taking place on campus, and events hosted at the medical school building on Sussex campus would be covered under this policy. There is no requirement for events to abide by these sustainability criteria and these criteria are not widely accessible to staff and students.
- The University of Sussex's Students' Union also provides a [Sustainability Guide](#) for student-led activities held by student societies, which would cover BSMS student societies. BSMS also has a dedicated students' union (MedSoc) under which its societies fall, however, BSMS MedSoc does not currently provide sustainability guidelines for student society activities.

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.

Score explanation:

The lab spaces used by BSMS are part of University of Sussex and University of Brighton campuses:

- University of Sussex: 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.

- *University of University: Pilot institution for development of the Laboratory Efficiency Assessment Framework (LEAF). These practices are embedded into the School of Pharmacy and Biomolecular Science Labs, which are used by the medical school, hence this metric scores 1 point.*

Notably, BSMS buildings have areas for clinical skills sessions which are currently under review in an effort to improve waste practices, which also contributes to the scoring of this metric.

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 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:

The medical school is under both University of Sussex and Brighton University’s endowment portfolios, as outlined below:

- *University of Sussex: Completely divested from fossil fuels as listed on [Global Fossil Fuel Divestment Commitments Database](#), however, the specific announcement could not be retrieved. Although the university has invested in renewable energy companies and campus initiatives since, this was linked to a specific commitment by the University to reinvest the divested funds.*
- *University of Brighton: Completely divested from fossil fuels as stated in the [divestment press statement](#). No specific commitment in policy to invest in renewable energy companies or renewable energy campus initiatives.*

Section Total (19 out of 31)

B-

Back to summary page [here](#)

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%

**Within each grade bracket, a score in the top 5% (_5 to _9%), receives a “+”, and a score in the bottom 5% (_0- _4%) receives a “-”. For example, a percentage score of 78% would be a B+.*

Planetary Health Grades for Brighton & Sussex Medical School

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

Section	Raw Score	Letter Grade
Planetary Health Curriculum (30%)	$(55 / 69) \times 100 = 79.71\%$	B+
Interdisciplinary Research (17.5%)	$(17 / 17) \times 100 = 100.00\%$	A+
Community Outreach and Advocacy (17.5%)	$(7 / 14) \times 100 = 50.00\%$	C
Support for Student-led Planetary Health Initiatives (17.5%)	$(12 / 15) \times 100 = 80.00\%$	A-
Campus Sustainability (17.5%)	$(19 / 31) \times 100 = 61.29\%$	B-
Institutional Grade	74.89%	B

Report Card Trends

Section Overview

This graph demonstrates trends in overall and section grades for the years in which Brighton & Sussex Medical School has participated in the Planetary Health Report Card initiative.

