Planetary Health Report Card:

St George's Medical School

2020-2021 Contributing Team:

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Summary of Findings

Curriculum	F+

- The St George's curriculum covers PH topics very briefly, with almost no connections made throughout the course. The medical school should consider collaborating with the Institute for Biomedical Education, which runs the Global Health course. Ideally, more learning objectives relating to PH should be incorporated into the curriculum.

Interdisciplinary Research	D

- St George's Hospital Medical School lacks a specific institute for interdisciplinary planetary health research, although there are faculty members in the Population Health Research Institute and the Infection and Immunity Institute with a primary or secondary research focus on planetary health.
- The Centre for Global Health in the Infection and Immunity Institute holds great potential for PH research and as a platform to centralize resources in health and the environment.
- Planetary health research at SGUL is generally focused on outdoor air and noise pollution in London and Europe, including a collaborative institute, the 'MRC Centre for Environment and Health'.
- Community involvement in interdisciplinary PH research at SGUL occurs on an individual basis, from researcher to researcher, who call for members of funding bodies to include community-based needs in their funding criteria

Community Outreach and Advocacy	D

- The institute is conducting research on the effects of certain environmental factors on the local community. There is also very little informational material provided by St George's University Hospitals. Overall, there is little community outreach and advocacy.
- However, the institute's Environmental Working Group and the Students' Union Environment and Ethics Officers are working on developing and implementing new strategies to increase awareness of environmental advocacy. It is suggested that the institute, medical school, and affiliated hospital create a website for the St George's community regarding environmental issues and planetary health.

Support for Student-Led Initiatives	D -

- As an institution, St George's has student representatives under the environmental and ethics offers of the student union that advocate for sustainable practices within the university.
- There are unfunded research opportunities that provide an avenue for development and completion. A suggested improvement is to provide explicitly paid fellowship positions for medical students to engage in research related to planetary health and or sustainable healthcare practices.

Sustainability	B

- Overall, St George's campus is sustainable. Administration is actively involved in efforts to further increase sustainability, including further recommendation, policies and plans. To further increase sustainability, the administration could make the recommendations and guidelines for sustainable practices mandatory rather than optional. Additionally, a transition to mostly renewable energy and usage of exclusively recyclable materials could be beneficial, although the transition would understandably take time.

Statement of Purpose

Planetary health is human health.

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

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

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

Planetary Health Curriculum

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

Curriculum: General

1. Did your medical school offer elective courses to engage students in Education for Sustainable Healthcare or Planetary Health in the last year?	
3*	Yes, the medical school has offered more than one elective whose primary focus is ESH/planetary health in the past year.
2	Yes, the medical school has offered one elective whose primary focus is ESH/planetary health in the past year.
1	**The medical school does not have any electives whose primary focus is ESH/planetary health, but there are one or more electives that include a lecture on planetary health.**
0	No, the medical school has not offered any electives on planetary health or electives that include ESH/planetary health topics in the past year.
Although St George's Medical School does not specifically offer elective courses in Education for Sustainable Healthcare or Planetary Health, there are Bachelor's and Master's courses in Global Health run by the Institute for Biomedical Education. The course includes one session entitled 'The Ethics of Climate Change', which can be taken by undergraduate and postgraduate students and covers aspects of the topic.	

Curriculum: Health Effects of Climate Change

2. Does your medical school curriculum address the relationship between extreme temperature health risks and climate change, as well as the socioeconomic/racial disparities in extreme heat exposure?	
3	This topic was explored in depth by the core curriculum.
2	This topic was briefly covered in the core curriculum.
1	This topic was covered in elective coursework.
0	**This topic was not covered.**

Within the MBBS transitional year curriculum, the Life Structure module incorporates a lecture entitled the 'Physiology of Exercise' which looks at exercise in extreme temperatures, but does not link this to climate change or other socioeconomic inequalities and racial disparities.

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.**
This topic was touched on very briefly in mainly broader discussion on MBBS course in a session on climate change.	

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.**
The Medical school curriculum does not address the impact of climate change on the changing pattern of infectious diseases.	

5. Does your medical school curriculum address the cardiorespiratory health effects of climate change, including air pollution?	
3	This topic was explored in depth by the core curriculum.
2	This topic was briefly covered in the core curriculum.
1	This topic was covered in elective coursework.
0	**This topic was not covered.**
This topic was touched on very briefly in mainly broader discussion on MBBS course in a session on climate change.	

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

7. Does your medical school curriculum address the relationships between health, individual patient food and water security, ecosystem health, and climate change?	
3	This topic was explored in depth by the core curriculum.
2	**This topic was briefly covered in the core curriculum.**
1	This topic was covered in elective coursework.
0	This topic was not covered.
Currently the medical school curriculum does, in part, address the relationship between health, individual patient food and water security, ecosystem health and climate change. The first year lecture entitled 'Inequalities in health lecture' on the first year graduate entry program (GEP) referenced the Marmot Review (2010), which explained how those living in the most deprived areas were disproportionately affected by least favourable environmental conditions such as river water quality, air quality, green space, flood risk, detritus and housing conditions.	

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

The medical school curriculum currently does not have any sessions that address the outsized impact of climate change on marginalised populations such as those with SES, women, communities of color, childre, homeless populations and older adults. This would be awarded a score of 0.

9. Does your medical school curriculum address the unequal health impacts of climate change globally?	
3	This topic was explored in depth by the core curriculum.
2	This topic was briefly covered in the core curriculum.
1	This topic was covered in elective coursework.
0	**This topic was not covered.**
The medical school curriculum does not currently hold any sessions that address the unequal health impacts of climate change globally.	

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

10. Does your medical school curriculum address the reproductive health effects of industry-related environmental toxins (e.g. air pollution, pesticides)?	
3	This topic was explored in depth by the core curriculum.
2	This topic was briefly covered in the core curriculum.
1	This topic was covered in elective coursework.
0	**This topic was not covered.**
This is considered as a specialist topic, that is offered to intercalating students or students progressing further in the reproductive medical field. For example: 'What is the impact of the environmental toxins bisphenol A (BPA) and diethystilbestrol (DES) on female fertility and reproductive outcomes?' is a project that was undertaken under this faculty.	

11. Does your medical school curriculum address important human-caused environmental threats that are relevant to the university's surrounding community?	
3	This topic was explored in depth by the core curriculum.
2	**This topic was briefly covered in the core curriculum.**
1	This topic was covered in elective coursework.

0	This topic was not covered.

The St George's MBBS final year (year 5) core curriculum has two weeks of public health teaching including an approximately 30-minute component on climate change within a broader environmental health session. The health impacts of climate change, from a global and UK perspective are addressed and the findings/recommendations based on the Lancet Commission on Climate Change are discussed, and the session ends with an overview on the Paris Climate Agreement. Although this session may not specifically cover environmental threats implicating the University's immediate surrounding community, it does cover topics relevant to the United Kingdom as a community. Optional learning ex. links to a documentary/videos produced by the Lancet Commission on Climate Change is provided. Furthermore, Personal and Professional Lectures in the MBBS course cover 'Inequalities in Healthcare', addressing for example the Marmot Review 2010, which explained how those living in the most deprived areas were disproportionately affected by least favourable environmental conditions such as river water quality, air quality, green space, flood risk, detritus, housing conditions. MBBS students also have the option to intercalate in Biomedical Science modules including the Global Health iBSc organised by the Institute of Biomedical Education. In this course, an optional module entitled 'Humanitarian Action and Ethics' covers the challenges faced by humanitarian workers impacted by the changing nature of global conflict, climate change and environmental disasters in the context of health injustice and human rights. A new environmental health module in this course is underway planning to launch in 2022/2023 and will focus on the climate crisis and other environmental global health issues. SGUL medical students have expressed interest in greater focus and depth of such teaching in their core curriculum.

12. Does your medical school curriculum address the unique climate and environmental health challenges that have impacted and are impacting Indigenous communities?	
3	This topic was explored in depth by the core curriculum.
2	This topic was briefly covered in the core curriculum.
1	This topic was covered in elective coursework.
0	**This topic was not covered.**

No teaching on Indigenous communities and the impact of climate challenges on said communities is available at present in the St George's MBBS curriculum. The intercalating BSc in Global Health hosts honorary lecturers such as Dr Laura Nellums, who's research is on diverse populations and migratory patterns with respect to disparities in migrant communities' access to healthcare and representation in research in the UK.

13. Does your medical school curriculum address the outsized impact of anthropogenic environmental toxins on marginalized populations such as those with low SES, women, communities of color, 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.
Waiting on freedom of information to get back to me with the MBBS curriculum. This was covered in 3-4 lectures in the third year of MBBS.	

Curriculum: Sustainability

14. Does your medical school curriculum address the environmental and health co-benefits of a plant-based diet?	
3	This topic was explored in depth by the core curriculum.
2	This topic was briefly covered in the core curriculum.
1	This topic was covered in elective coursework.
0	**This topic was not covered.**
The medical school does not address the environmental and health co-benefits of a plant-based diet. However, the (student-led) Vegan Society regularly promotes a plant-based diet and advocates for the health co-benefits. The (student-led) NutriTank Society also works to inform and promote the implementation of nutrition knowledge in the curriculum. The Environment and Ethics Officers for the Students' Union also post regular informational posts on the environmental and health co-benefits of a plant-based diet.	

15. Does your medical school curriculum highlight the waste generated by the healthcare system and identify ways to advocate for and implement sustainable best practices in health care?	
3	This topic was explored in depth by the core curriculum.
2	**This topic was briefly covered in the core curriculum.**
1	This topic was covered in elective coursework.
0	This topic was not covered.
The medical school briefly highlights the health impacts of climate change. The public health firm has a ~30 minute component on the Climate Crisis within a broader Environmental Health session. In the component, they discuss the health impacts of climate change, from a global and UK perspective. In addition, the findings/recommendations based on the Lancet Commission on Climate Change are discussed, and the session ends with an overview on the Paris Climate Agreement. In addition, they have a dedicated page on the "Environment and Sustainability" where they acknowledge their environmental impact with statistics on their waste production. The page also provides resources for policies and guidance on environment and sustainability.	

Curriculum: Clinical Applications

16. In training for patient encounters, does your medical school's curriculum introduce strategies to have conversations with patients about the health effects of climate change?	
2	Yes, there are strategies introduced for having conversations with patients about climate change in the core curriculum.
1	Yes, there are strategies introduced for having conversations with patients about climate change in elective coursework.
0	**No, there are not strategies introduced for having conversations with patients about climate change**
The medical school has not introduced strategies to have conversations with patients about the health effects of climate change.	

17. In training for patient encounters, does your medical school's curriculum introduce strategies for taking an environmental history or exposure history?	
2	**Yes, the core curriculum includes strategies for taking an environmental history.**
1	Only elective coursework includes strategies for taking an environmental history.
0	No, the curriculum does not include strategies for taking an environmental history.
At St George's University, in the Communications skills course, students are trained to take a full social history, which includes asking patients about exposures to environmental and occupational hazards. SGUL students must explicitly ask standardised patients about environmental exposures at work in order to prevent possible point deductions on practical examinations. Further, a problem-based case in the first-year medical school curriculum involves a case surrounding carbon monoxide poisoning at work, and emphasizes the importance of asking about environmental expore when taking a patient's history. This aspect of history-taking is reinforced through the clinical teaching skills course, used to stratify a patient's risk of exposure to harmful chemicals or substances. This would be awarded a score of 2.	

Curriculum: Administrative Support for Planetary Health

18. Is your medical school currently in the process of improving Education for Sustainable Healthcare (ESH)/planetary health education?	
4	Yes, the medical school is currently in the process of making major improvements to ESH/planetary health education.

2	Yes, the medical school is currently in the process of making minor improvements to ESH/planetary health education.
0	**No, there are no improvements to planetary health education in progress.**
The medical school doesn't have any particular processes of improving Education for Sustainable Healthcare (ESH)/planetary health education. This has been confirmed through Professor Hannah Cock who is a Professor of Epilepsy and Medical Education and Consultant Neurologist.	

19. How well are the aforementioned planetary health/Education for Sustainable Healthcare topics integrated longitudinally into the core curriculum?	
6	Planetary health/ESH topics are well integrated into the core medical school curriculum.
4	Some planetary health/ESH topics are appropriately integrated into the core medical student curriculum.
2	Planetary health/ESH is not integrated and is primarily addressed in (a) standalone lecture(s).
0	**There is minimal/no education for sustainable healthcare.**
The aforementioned planetary health themes and sustainable healthcare topics are not prioritised in the core medical curriculum. In cases where they are covered, they are touched upon very briefly and have not been integrated longitudinally into the core curriculum. This would be awarded a score of 0.	

20. Bonus: Does your medical school have a program that offers incentives for faculty/departments to develop new planetary health/ESH courses and/or incorporate planetary health/ESH into existing courses?	
1	Yes, the medical school has an incentive program.
0	**No, the medical school does not have an incentive program.**
The medical school does not have any incentives to develop planetary health related courses. This has been confirmed through Professor Hannah Cock who is a Professor of Epilepsy and Medical Education and Consultant Neurologist. The Institute for Biomedical Education currently teaches a module called "The Ethics of Climate Change" in the Global Health pathway. They are also currently working on a new environmental health module in the Global Health Pathway which will launch in 2022/2023.	

Section Total (11 out of 58)	**11**

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

Interdisciplinary Research

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

1. Are there researchers engaged in planetary health research and healthcare sustainability research at your medical school?	
4	Yes, there are faculty members at the School of Medicine who have a primary research focus in planetary health and healthcare sustainability.
3	**Yes, there are faculty members at the School of Medicine who have a primary research focus in 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.

Faculty members in the Population Health Research Institute (PHRI) are involved in research using routine health statistics on the impact of planetary health on population health, led by the head of the institute: Prof Peter Whincup. Professor Peter Whincup is also the Co-Chair of the SGUL environmental working group. Professor Peter Whincup and co-director of PHRI, Professor Christopher G Owen, are also working on the ENABLE London study which is assessing the effect of the built environment on physical health. One of the main research themes at the PHRI is on air pollution, including participation in a European multi-centre research project to investigate the health effects associated with European air pollution levels known as 'Effects of Low-level Air Pollution: A Study in Europe"(ELAPSE). One of these investigators, Professor Richard Atkinson, states his primary focus is on environmental research, namely the health effects of outdoor air pollution in the short- and long-term. In this theme, St George's has co-founded the MRC Centre for Environment and Health along with Imperial College London and London School for Tropical Disease and Hygiene. Here, PHRI researchers of the air pollution epidemiology group collaborate to study London air pollution. Professors Owen and Atkinson are involved in teaching statistics, epidemiology, public health and research on the MBBS curriculum. However, they are not in the Faculty of Medicine and there is no evidence of research on healthcare sustainability, rather the focus is on healthcare effectiveness. Lastly, a team of researchers in the Infection and Immunity Institute Centre for Diagnostics and Antimicrobial Resistance are looking into antimicrobial resistance, partly caused by agricultural use of antimicrobials and their subsequent contamination of waterways and soil.

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.**
There is no dedicated department or institute explicitly for interdisciplinary planetary health research in St George's, University of London. However, the Population Health Research Institute covers research on air and noise pollution. Additionally, a Centre for Global Health is opening up within the Infection and Immunity Institute. The Centre for Global Health is focused on infectious diseases in low and middle income countries, and these are often disproportionately influenced by environmental conditions. For example, they are investigating the impact of social and environmental conditions on asthma incidence in a paediatric Ecuadorian cohort.	

3. Is there a process by which communities disproportionately impacted by climate change and environmental injustice give input or make decisions about the research agenda at your medical school?	
3	Yes, there is a process in which community members impacted by climate and environmental injustice have decision-making power in the climate + environmental research agenda.
2	Yes, there is a process in which community members impacted by climate and environmental injustice advise the climate + environmental research agenda.
1	**No, but there are current efforts to establish a process for community members to advise or make decisions on the research agenda.**
0	There is no process, and no efforts to create such a process.
There are no explicit criteria that involve the communities disproportionately impacted by climate change and environmental change in decision-making for the research projects at St George's, University of London. However, some researchers (Angela Loyse, Phil Cooper, Sebastian Fuller, Sanjeev Krishna, Kirsty LeDoare, Sally Hargreaves) of the Infection and Immunity Institute currently involve local communities in their research decision-making in varying ways. It is well-reported by the Director of Cross-Cutting Research Themes and Academic Lead for REF2021 at St George's, Professor Jodi Lindsay, that funding bodies greatly influence decisions on the direction of research. Researchers on governmental or council funding committees could drive forward the decision to implement planetary health research according to community-based needs.	

4. Does your institution have a planetary health website, or a website centralizing various campus resources related to health and the environment?	
3	There is an easy-to-use, adequately comprehensive website that centralizes various campus resources related to health and the environment including all of the following: upcoming events, leaders in planetary health at your institution, and relevant funding opportunities.
2	There is a website that attempts to centralize various campus resources related to health and the environment, but it is hard-to-use, not updated, or not adequately comprehensive.
1	The institution has an Office of Sustainability website that includes some resources related to health and the environment.
0	**There is no website.**
No institutional website with a centralised collection of resources related to planetary health and environmental research is currently affiliated with St George's Medical School. A page on the SGUL main website, entitled' Environment and Sustainability' provides a brief overview of the relevant policies, procedures, guidance and forms in relation to environment and sustainability at St George's. It is noted that this page is neither adequately comprehensive nor updated. Nonetheless, there remains potential for the Centre of Global Health website to fill this gap.	

5. Has your institution recently hosted a conference or symposium on topics related to planetary health?	
4	Yes, the institution has hosted more than one conference or symposium on topics related to planetary health in the past year, including at least one on climate change.
3	Yes, the institution has hosted one conference or symposium on topics related to planetary health in the past year.
2	**Yes, the institution has hosted a conference on topics related to planetary health in the past three years.**
1	The institution has not hosted any conferences directly, but they have provided financial support for a local planetary health event.
0	No, the institution has not hosted a conference on topics related to planetary health in the past three years.
St George's hosts the International Consortium for Trials of Chemotherapeutic Agents in Tuberculosis (INTERTB); an annual symposium on tuberculosis in global health with researchers from all over the world. Organised by Dr Amani Jandini, INTERTB aims to help design and conduct randomized controlled clinical trials to shorten and simplify treatment of tuberculosis (TB) as well as developing a network of clinical trial centres across the world. Results of this research focus include the recent efforts from Dr Ken Laing and Dr Adam Witney of the Infection and Immunity Institute's Pathogen	

Genomics and Bioinformatics Group, helping to answer the World Health Organisations (WHO) call and develop a novel diagnostic test for TB, which poses a momentous threat to global health in its controlled transmission and spread. In a similar fashion, St George's is hosting the 2021 Acid Fast Club meeting this year. The Acid Fast Club aims to bring together global researchers in mycobacterium, including TB.

6. Has your institution or medical school joined the Planetary Health Alliance and/or the Global Consortium on Climate and Health Education?	
2	Yes, the medical school has joined the Planetary Health Alliance and/or the Global Consortium on Climate and Health Education.
1	Yes, the institution has joined the Planetary Health Alliance and/or the Global Consortium on Climate and Health Education, but the medical school specifically has not.
0	**No, the institution has not joined the Planetary Health Alliance or the Global Consortium on Climate and Health Education.**
Neither St George's, University of London or St George's Hospital Medical School have joined the Planetary Health Alliance or the Global Consortium on Climate and Health Education. As of 2017, St George's NHS Trust was the second Trust to achieve the Planet Mark sustainability accreditation. This is awarded annually to Trusts that manage at least 2.5% reduction in carbon emissions in one year.	

Section Total (6 out of 19)	**6**

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

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.
The medical school does not partner with community organisations to promote planetary and environmental health. However, the institution is currently conducting research on various health aspects that are closely related to the environment, involving research that informs policies for improving public health through behavioural or environmental change. Promotion of physical activity and evaluation of its health benefits form a central research theme, linking behavioural medicine and policies for urban planning and reduction of traffic-related air pollution.	

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.**

The medical school does not offer community-facing courses or events regarding planetary health. However, they host a new and evolving extra-curricular programme bringing science, medicine, and healthcare into dialogue with the arts, humanities, and enterprise, entitled "Finding a Leg", a collaboration between St George's and Birkbeck University of London. It aims to stimulate interdisciplinary encounters between, students from various programmes, and between the University staff and students with the local community.

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.
The medical school does not have regular coverage of issues related to planetary health and/or sustainable healthcare in university update communications. However, they have a dedicated page on "Environment and Sustainability" where they acknowledge their environmental impact with statistics on their waste production though the most recent data is from 2006/07. The page also provides resources for policies and guidance on environment and sustainability.	

5. Do hospitals affiliated with your medical school have accessible educational materials for patients about environmental health exposures?	
2	Yes, all affiliated hospitals have accessible educational materials for patients.
1	**Some affiliated hospitals have accessible educational materials for patients.**
0	No affiliated medical centers have accessible educational materials for patients.
St George's University Hospitals provides limited accessible educational materials for patients about environmental health exposures. They have a dedicated section entitled "Patient Information Leaflets for the Public" which provide access to informational booklets on various medical issue. The only booklet related to environmental health exposures is called "Smoking and Orthopaedic Surgery" where the environmental health risks of smoking are detailed.	

6. Do hospitals affiliated with your medical school have accessible educational materials for patients about climate change and health impacts?

2	Yes, all affiliated hospitals have accessible educational materials for patients.
1	Some affiliated hospitals have accessible educational materials for patients.
0	**No affiliated hospitals have accessible educational materials for patients.**
St George's University Hospitals does not provide accessible educational materials for patients about climate change and health impacts. However, St George's was awarded a grant for the Gas Safety trust, which will investigate the effect of exposure to CO on the brain, which can come from a range of carbon-based fuel sources, including faulty cooking or heating appliances. The hospital has recently announced that they are conducting a study on the impact of carbon monoxide on the brain..	

Section Total (3 out of 12)	**3**

Support for Student-Led Planetary Health Initiatives

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

1. Does your institution offer support for medical students interested in enacting a sustainability initiative?	
2	Yes, the institution offers grants available to medical students for students to enact sustainability initiatives.
1	The medical school encourages sustainability QI projects (to fulfill clerkship or longitudinal requirements) and offers resources to help students succeed in these projects, but there is no student funding available.
0	**No, the institution does not offer opportunities or support for sustainability initiatives.**
St George's university doesn't provide any specific grants for any specific sustainability projects, however it has given its students full freedom to set up societies in any field that interests them. For	

instance, St georges vegetarian and vegan society promotes ideas about how even our small actions such as your food choices can be very beneficial to the environment.

2. Does your institution offer opportunities for medical students to do research related to planetary health and/or sustainable healthcare?	
3*	The institution offers an explicit paid fellowship for medical students to do research related to planetary health and/or sustainable healthcare.
2*	The institution offers paid research opportunities for students and planetary health/sustainable healthcare projects would be considered eligible.
1	**There are unfunded research opportunities for students to perform research related to planetary health/sustainable healthcare.**
0	There are no opportunities for students to receive funding for planetary health/sustainable healthcare research.
In years 2,3 and 5 of the MBBS curriculum, St Georges medical students can undertake an academic project called the Student Selected Component. This can be under their own topic of choice - a scientific one or one that covers social topics such as environmental sustainability in medicine. Specific modules include: .	

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 web page with specific information related to planetary health or sustainable healthcare that includes up-to-date information on relevant initiatives and contact information of potential mentors.
1	There is a medical school webpage that features some information on projects and mentors within planetary health and sustainable healthcare within the medical school, but it lacks key information.
0	**There is no medical-school specific webpage for locating planetary health and/or sustainable healthcare projects or mentors.**
St George's doesn't have a web page where medical students can find specific information related to planetary health and/or sustainable activities.	

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

faculty advisors?	
2	Yes, there is a funded student organization with faculty support at my medical school dedicated to planetary health or sustainability in healthcare.
1	Yes, there is a student organization at my medical school dedicated to planetary health or sustainability in healthcare but it lacks faculty support and/or funding.
0	**No, there is not a student organization at my institution dedicated to planetary health or sustainability in healthcare.**
Currently there is no student led organisation at St George's University dedicated towards fostering a culture of planetary health engagement, scholarships, and advocacy on campus supported by faculty advisors. It does however have sustainability on its agenda for senior leadership.	

5. Is there a student liaison representing sustainability interests who serves on a medical school or institutional decision-making council to advocate for sustainability best practices?	
1	**Yes, there is a student representative that serves on a medical school or institutional decision-making council.**
0	No, there is no such student representative.
The student union has special roles for planetary health and sustainability under the name of 'Environment and Ethic officer'. Their aim is to work with Student Union societies to raise awareness of a range of environmental and ethical issues. They are also keen to get students more involved with the on-site allotment, where they grow produce such as peas, tomatoes and spring onions.	

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) that follow Leave No Trace principles.
St Georges environment and ethics officers are very keen on getting students involved with various projects online. e.g. Gardening where they have grown various vegetables such peas, tomatoes and onions in the past.	

Section Total (3 out of 14)	**3**

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

Campus 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
There are not any staff members salaried for sustainability. However, sustainability is always on the agenda for senior leadership meetings. There are however student representatives who take initiatives to raise awareness of environmental and ethical issues which they can then forward to members of staff. They can be contacted through their specific email.	

2. Does your medical school and/or institution have a stated goal of carbon neutrality by 2050?	
4*	The medical school is already carbon neutral.
3	Yes, there is a stated carbon neutrality goal and the medical school has a well-defined and adequate plan in place to achieve this goal.
2	**Yes, there is a stated carbon neutrality goal, but the medical school has not created a plan to reach that goal or the plan is inadequate.**
1	There is a CO2 emission reduction goal, but it is not one of carbon neutrality.
0	There is no stated goal for reduction of CO2 emissions.

St George's University Hospitals NHS Foundation Trust has signed up to 10:10, an ambitious and radical national programme which aims to cut carbon emissions to help tackle climate change by constantly reviewing their electricity and fossil fuel consumption. It was one of the 1st NHS organizations to commit to the program.

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.
In 2018, Centrica Business Solutions announced an overhaul on the St George's energy center on site that delivers "almost all of the power needed to run the hospital".	

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 rating system or sustainable building code/guideline?	
3	**Yes, sustainable building practices are utilized for new buildings on the medical school campus and the majority of old buildings have been retrofitted to be more sustainable.**
2	Sustainable building practices are utilized for new buildings on the medical school campus, but most old buildings have not been retrofitted.
1	Sustainable building practices are inadequately or incompletely implemented for new buildings.
0	Sustainability is not considered in the construction of new buildings.
The "SGUL Sustainable Procurement checklist" mentions the BREEAM requirement, which is "an environmental assessment method and rating system for buildings" that is relevant to "construction contracts for major new build or refurbishment". The university has also remodeled buildings (e.g., Jenner Wing) to make them more sustainable.	

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.
The "Environment and Sustainability" webpage of the university website mentions a "cycle hire scheme" to encourage bicycling as a form of travel, with secure bicycle storage being offered at a number of locations across the university site. Additionally, the university recommends "walking, car sharing, public transport or an occasional telecommute".	

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.
The "Waste Management" webpage of the university website demonstrates evidence of organic and conventional recycling programs. Additionally, the trust has a "Waste Management Policy" that further demonstrates this.	

7. Does the medical school apply sustainability criteria when making decisions about the campus food and beverage selections?	
3	Yes, the medical school has adequate sustainability requirements for food and beverages and is engaged in efforts to increase food and beverage sustainability.
2	**There are sustainability guidelines for food and beverages, but they are insufficient or optional. The medical school is engaged in efforts to increase food and beverage sustainability.**
1	There are sustainability guidelines for food and beverages, but they are insufficient or optional. The medical school is not engaged in efforts to increase food and beverage sustainability.
0	There are no sustainability guidelines for food and beverages.

There are several places on campus with various food and beverage selections. The Peabody's on campus has made all plastic and cardboard catering fully recyclable, with close monitoring of available infrastructure to enhance environmental sustainability. Plastic bottled water was also removed from the menu, having been replaced by glass bottles of tap water. Additionally, the "Environment and Sustainability" webpage of the university recommends measures such as, "using a washable mug as an environmentally-friendly alternative to non-biodegradable styrofoam or plastic cups".

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.
SGUL has a "SGUL Sustainable Procurement checklist" that is "designed to be used by procurement category managers when considering what sustainability issues may be relevant to a new procurement". The document states, "this should be referred to as early on in the procurement process as possible, in order to ensure sustainability is properly embedded". Furthermore, the university has more documents and guidelines such as "SGUL Procurement Policy and Guide" that emphasize sustainability of procurement.	

9. Are there sustainability requirements or guidelines for events hosted at the medical school?	
2	Every event hosted at the medical school 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.
The document, "Promoting Good Campus Relations: Policy on Events and Meetings" released by the university does not explicitly mention sustainability. However, sustainability measures (eg, turning off unnecessary lighting) are mentioned and recommended on the "Environment and Sustainability" webpage of the university.	

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.
Review of lab inspection checklists, general risk assessment laboratories form, and laboratory handbook found on the "A-Z webpage" on the university website shows that the medical school has programs and initiatives to assist with making lab spaces more environmentally sustainable. For example, all new staff and research students must undergo a safety induction. Additionally, there are various guidelines and checklists in place to minimize risk and properly dispose of waste.	

11. Does your institution's endowment portfolio investments include fossil-fuel companies?	
4	The institution is entirely divested from fossil fuels and has made a commitment to reinvest divested funds into renewable energy companies or renewable energy campus initiatives.
3	No, the institution is entirely divested from fossil fuels.
2	The institution has partially divested from fossil-fuel companies.
1	**The institution has not divested from fossil-fuel companies, but faculty and/or students are conducting organized advocacy for divestment.**
0	Yes, the institution has investments with fossil-fuel companies and there have been no efforts to change that.
Review of DESMOGUK and the People & Planet scorecard show that the university has not divested yet. There has been some advocacy for divestment, however (eg, letter to the health sector stating that "continued investment in the fossil fuel industry violates health workers' obligations to do no harm").	

Section Total (21 out of 29)	**21**

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

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 an average of the section grades. Letter grades for each section and the institution overall were then assigned according to the table below.

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

Planetary Health Grades for the __*St George's University of London*__ School of Medicine

The following table presents the individual section grades and overall institutional grade for the __*St George's University*__ School of Medicine on this medical-school-specific Planetary Health Report Card. The overall institutional grade is a weighted average of the section grades, with curriculum receiving a higher weight owing to its larger number of metrics.

Section	Raw Score	Grade
Planetary Health Curriculum (30%)	11 / 58 = 19.0%	F+
Interdisciplinary Research (17.5%)	6 / 19 = 31.6%	D
Community Outreach and Advocacy (17.5%)	3 / 12 =25%	D
Support for Student-led Planetary Health Initiatives (17.5%)	3 / 14 = 21.4%	D -
Campus Sustainability (17.5%)	21 / 29 = 72.4%	B
Institutional Grade	**32%**	**D**