



Planetary Health Report Card:

Queen's University Belfast



**QUEEN'S
UNIVERSITY
BELFAST**

2021-2022 Contributing Team:

- Students: Victoria England*, Fionan McBride, Hannah McPhee, Mhairi Cowan, Riley Westwood, Rhiannon Wells, Ryan McFall, Samuel Scholes, Sarah Connon
- Faculty Mentors: Dean Pascal McKeown, Professor Neil Kennedy, Professor Diarmuid O'Donovan, Dr Vivienne Crawford.
- *Primary Contact: Victoria England, vengland01@qub.ac.uk

All named individuals have given permission to be mentioned in this report.

Summary of Findings

Overall	B
<u>Curriculum</u>	B +
<ul style="list-style-type: none"> Queen’s University Belfast places a large focus on planetary health and sustainability curriculum throughout the longitudinal integration of its new C25 curriculum. Recommendations: We hope that, as planetary health is further integrated into the medical school’s curriculum, the medical school will continue to evaluate and review this curriculum. We also look forward to the integration of sustainable development goals into all courses at Queen’s, and to the integration of the PHRC findings into the other courses in the School of Medicine, Dentistry and Biomedical Sciences at QUB. 	
<u>Interdisciplinary Research</u>	B +
<ul style="list-style-type: none"> Queen’s University Belfast has a large number of researchers engaged in planetary health research and healthcare sustainability research, some through SECA. The university has also hosted many planetary health events in the past year. Recommendations: The university should continue to support faculty members throughout the institution and at the School of Medicine who have a primary research focus in planetary health or healthcare sustainability, and should continue to maintain and develop the new Sustainability website. 	
<u>Community Outreach and Advocacy</u>	B -
<ul style="list-style-type: none"> Queen’s University Belfast partners with community organisations to promote planetary and environmental health, and has significantly improved in this area from last year’s report. Recommendations: Although improvement has been made, there is still work to be done in this area. In particular, further integration between the medical school and community organisations is required. 	
<u>Support for Student-Led Initiatives</u>	A -
<ul style="list-style-type: none"> Queen’s University Belfast provides a great deal of support and opportunities for student-led initiatives. Recommendations: The university should provide greater publication of such initiatives, and encourage projects which emphasise planetary health issues. We strongly encourage the establishment of an annual Planetary Health or Sustainability conference or event in the university, and we hope that this will become more of a priority following the recent establishment of SECA. 	
<u>Campus Sustainability</u>	C +
<ul style="list-style-type: none"> Queen’s University Belfast has prioritised sustainability through building practices, transportation options, recycling, food and beverage selections, procurement and lab spaces. Recommendations: The university is still extremely lacking in terms of its commitment to carbon reduction and neutrality, renewable energy, and divestment from fossil fuels. We implore the university to urgently change their stance on this; to include detailed plans to tackle these issues in the new Sustainability Action Plan; and to greatly improve their transparency and publicly-available information on these issues. 	

Statement of Purpose

Planetary health is human health.

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

As future health professionals, we must be prepared to address the impacts of human-caused environmental changes on our patients’ health. This preparation is in the hands of the institutions providing our medical training. It is imperative that we hold our institutions accountable for educating medical students about the health impacts of climate change and other anthropogenic environmental changes, generating research to better understand health impacts and solutions, supporting related student initiatives, embracing sustainable 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 colour, older adults sensitive to health threats, and individuals in low-resource settings), these issues are inherently ones of equity and justice.

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

Definitions & Other Considerations

Definitions:

- **Planetary Health:** is described by the *Planetary Health Alliance* as “Planetary health is a solutions-oriented, transdisciplinary field and social movement focused on analysing and addressing the impacts of human disruptions to Earth’s natural systems on human health and all life on Earth.” For example, topics such as climate change, declining biodiversity, shortages of arable land and freshwater, and pollution would all fall under the realm of planetary health. Both planetary health and traditional ‘environmental health’ examine the relationship between human health and the external environment, including extreme temperatures, chemicals, vector-borne diseases, etc. Planetary health explicitly concerns itself with the potential health harms associated with human-caused perturbations of natural systems. Therefore, the human health focus of planetary health makes the field well-adapted for the context of medical school education. Throughout this report card, we use the term planetary health to refer to this broad swath of topics, but resources do not need to explicitly include the term “planetary health” to satisfy the metric.
- **Education for Sustainable Healthcare (ESH):** is defined as the process of equipping current and future health professionals with the knowledge, attitudes, skills and capacity to provide environmentally sustainable services through health professional education, thus working to decrease the enormous environmental impact of the healthcare industry. Planetary Health Education is an integral part of this education rather than an end in itself. This is because knowledge on Planetary Health is required to be able to fully understand the necessity of sustainable healthcare as well as being part of the broader knowledge needed to fully protect and promote health. In summary, ESH is covered by the three Priority Learning Outcomes of the Centre of Sustainable Healthcare below, and Planetary Health Education is embraced in the first learning objective and is a fundamental requirement to achieve learning outcomes 2 and 3:
 1. Describe how the environment and human health interact at different levels.
 2. Demonstrate the knowledge and skills needed to improve the environmental sustainability of health systems.
 3. Discuss how the duty of a doctor to protect and promote health is shaped by the dependence of human health on the local and global environment.
- **Medical School vs. Institution:** When “medical school” is specified in the report card, this only refers to curriculum and resources offered by the School of Medicine and does not include offerings from other parts of the university (for example, undergraduate departments (USA), other related departments eg Public Health, Population Health departments). In contrast, when “institution” is specified in the report card, we are referring to the university more broadly. Any resource reasonably accessible by medical students, no matter where in the institution the

resource comes from or if it is specifically targeted for medical students, can meet this metric.

- **Environmental history (Metric 19 in curriculum section):** This is a series of questions providers are taught to ask during medical encounters that 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. Paediatrics, General medicine, Psychiatry. In the UK these are referred to as rotations or placements.

Other considerations:

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

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

Planetary Health Curriculum

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

NOTE: In 2020, QUB began to deliver a new curriculum, C25. This curriculum is longitudinal in style and has four main threads: Clinical Science and Practice, Achieving Good Medical Practice, Teamwork for Safe Care, and Global and Population Health. QUB is therefore in the process of phasing out one curriculum, and beginning to deliver another. At time of writing, C25 is only being delivered to Year 1 and Year 2 students. We are therefore only able to assess the first 1 ½ years of the C25 curriculum that have been delivered at time of writing, as well as the established C20 curriculum which is concluding. We would like to thank the faculty at QUB for their constant revision of the new C25 curriculum, and look forward to evaluating more of it next year.

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> Medical students at QUB choose to study various ‘Student Selected Components’ (SSC’s) in Years 1, 2 and 3. Of these SSC’s, there are currently a number of modules offered that primarily focus on ESH/planetary health. The details of these modules are as follows:</p> <p>‘Healthcare needs smaller feet- Sustainable Healthcare: Theory into practice’- led by Dr. Vivienne Crawford & Ms. Mairead Boohan The SSC introduces participants to topics central to sustainable healthcare. The module aims to</p>	

facilitate an understanding of the range of factors that can impact on healthcare sustainability including political, economic, ethical beliefs and behaviours. Based on this understanding of global aspects relevant to sustainable healthcare, participants will begin to consider local aspects that may be amenable to change with a view to improving sustainability.

‘SusQI’- led by Dr. Vivienne Crawford

The module aims to facilitate an understanding of the range of factors that can affect healthcare quality and sustainability including political, economic, ethical beliefs and behaviours. Based on this understanding of global aspects relevant to sustainable healthcare, and the methods and processes of quality improvement, participants will begin to consider local aspects that may be amenable to change with a view to improving quality and sustainability.

‘Global Health: Concepts, Trends and Priorities’- led by Dr. Charlene McShane & Dr. Chris Jenkins

This course will provide an introduction on global health history before discussing the key organisations and institutions that influence global health; for example, the World Health Organisation. The course will explore some of the major challenges within the field, such as pandemic response, climate change, antimicrobial resistance; and the rise of non-communicable disease in low and lower-middle income settings. Finally, the course will introduce students to some of the key debates in the field; namely on the value of international medical electives; and on decolonising global health.

There are two other SSC modules that focus primarily on Global Health and Global Health Issues; however, they may engage students in some relevant planetary health topics. These include, **‘Global Child Health’** (led by Prof. Neil Kennedy), and **‘Global Cancer Trends’** (led by Dr. Blánaid Hicks).

Since last year’s report, another SSC titled **‘Medics in Primary Schools’** (led by Ms. Mairead Boohan) has been reviewed to include some planetary health content that can be utilised by students in the planning of their teaching curriculum as part of a course of lessons delivered in local primary schools.

The new SSC **‘Pandemic Management’** (led by Dr. Andrew Kunzmann) looks at the factors affecting pandemic management, and discussions are facilitated to investigate the importance of social determinants of health during pandemics. The course also looks at how pandemics could be managed better in the context of impact to health care. This course doesn’t have a planetary health focus but has the potential to allow students to research how changes to healthcare could make them more sustainable from the perspective of public health and social contexts.

Recommendations: The medical school should continue to support and encourage students and staff to develop SSCs, especially those which focus on planetary health and sustainability.

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><i>Score explanation:</i> In Year 2 of the C25 curriculum, Professor O'Donovan delivers a Public Health lecture titled "Sustainable Healthcare", which outlines throughout the relationship between climate change and areas of extreme heat. Infographics are used to link extreme heat exposure to health risks and groups of people involved.</p> <p><i>Recommendations:</i> The medical school should continue to integrate this topic longitudinally into the C25 curriculum as it is rolled out across the course.</p>	

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.
<p><i>Score explanation:</i> In Year 2 of the C25 curriculum, Professor O'Donovan delivers a Public Health lecture titled "Sustainable Healthcare", which contains a number of slides and infographics relating the impact of climate change to human health. Some examples demonstrated the effects of climate change such as floods, heatwaves, drought and fire on various individual and macro-level health problems.</p> <p><i>Recommendations:</i> The medical school should continue to integrate this topic longitudinally into the C25 curriculum as it is rolled out across the course.</p>	

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:

In Year 1 of the C25 curriculum the SSC “Global Health: Concepts, Trends & Priorities” led by Dr. Charlene McShane & Dr. Chris Jenkins is partly focused on how global health is at risk from climate change, and the from the rise of antimicrobial resistance. However, it is unclear if this elective course bridges the gap between climate change and changing patterns of infectious disease.

In Year 1, the overview lecture for Case 2 delivered by Professor O’Donovan discusses climate change, global infectious diseases, and vaccinations. Dr Ciaran O’Gorman also covers this topic in his lecture titled “Organisms and Infections”. The Sustainable Development Goals are also discussed in terms of global health, but climate change is not directly linked to changes in infectious diseases.

In Year 2 of the C25 curriculum, a lecture delivered by Professor O’Donovan on Public Health, titled “Sustainable Healthcare” states that an indirect effect of climate change is a change in the spread of vector borne diseases. An infographic on another slide adds to the previous statement, linking changing temperature with changing vector ecology and then furthermore listing specific examples of changes in vectors such as malaria and dengue. This specific impact of climate change, like all others in the lecture, is reiterated multiple times throughout the lecture slides.

Recommendations: The medical school should continue to integrate this topic longitudinally into the C25 curriculum as it is rolled out across the course.

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:

In the C25 curriculum, the health effects of climate change on the respiratory system are emphasised at many points throughout the course in a longitudinal nature: as learning objectives to be discussed, both through case-based learning and through tutorials.

In Year 1, this topic is addressed through two cases (Case 6 and Case 7), one focusing on asthma and pneumonia, and one on COPD, asbestosis and lung cancer. In both of these, there are opportunities for students to research how air pollution would affect the chances of developing these diseases. There is also a specific learning outcome, to “Describe the global and local burden of respiratory diseases, and the related risk factors including indoor and outdoor air pollution, and smoking”. One of the tutorials that discusses the respiratory health effects of climate change is titled “The Social Determinants of Health”.

In Year 2 of the C25 curriculum, a lecture delivered by Professor O’Donovan on Public Health, titled “Sustainable Healthcare” contains infographics relating an increase in respiratory health problems to climate change through an increase in ground level ozone, particulate pollution and pollen allergenicity.

Recommendations: The medical school should continue to integrate this topic longitudinally into the C25 curriculum as it is rolled out across the course.

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:

In the C25 curriculum, the health effects of climate change on the cardiovascular system are emphasised at many points throughout the course as learning objectives to be discussed, such as in a tutorial titled “The Social Determinants of Health”.

In Year 2 of the C25 curriculum, a lecture delivered by Professor O’Donovan on Public Health, titled “Sustainable Healthcare” contains infographics relating an increase in cardiovascular health problems to climate change through an increase in heatwaves, ground level ozone and particulate pollution.

There is a longitudinal incorporation of this topic throughout the course, however, the cardiovascular effects of climate change are not discussed in the same depth as the respiratory effects of climate change.

Recommendations: The medical school should continue to integrate this topic longitudinally into the C25 curriculum as it is rolled out across the course.

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:

In Year 1 of the C25 curriculum, a lecture is delivered by Dr. Mairead Corrigan, titled “Social Determinants of Health”. There is also a tutorial delivered on the same topic. These two sessions discuss environmental determinants of health, and how access to green spaces can improve physical and psychological health. However, while they focus on the importance of the environment for people’s health, there is not a focus on how health could be affected by environmental degradation.

Recommendations: The medical school should continue to integrate this topic longitudinally into the C25 curriculum as it is rolled out across the course.

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:

There has been longitudinal incorporation of this topic into the new C25 curriculum, both in tutorials and in case-based learning. These factors as social determinants of people’s health are discussed, with relation to the increased vulnerability that rural people in LEDC’s may face due to climate change, including their food and water security. This is also compared to people in the UK who live in poverty and to Irish travellers within the UK. One of the cases (Case 3) in the C25 curriculum is themed around dietary related anaemia, and includes the learning objective “Consider factors influencing dietary choice including availability, sustainability and cultural aspects”. This gives students an opportunity to explore this topic in more depth.

In Year 2 of the C25 curriculum, a Public Health lecture delivered by Professor O’Donovan titled “Sustainable Healthcare” contains slides and infographics, relating the impacts of water and food supply, and water quality as causes of malnutrition and diarrheal disease, as some of the international effects of climate change. Year 2 also contains a lecture on “Water, Sanitation, and Hygiene” by Professor Diarmuid O’Donovan, which relates the importance of water security to health.

Recommendations: The medical school should continue to integrate this topic longitudinally into the C25 curriculum as it is rolled out across the course.

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

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

Score explanation:

In Year 1 of the C25 curriculum, Dr. Mairead Corrigan delivers a lecture and accompanying tutorial on the “Social Determinants of Health”. These both discuss how access to green spaces is beneficial to people’s health, and how green spaces are unequally spread, with more affluent areas generally having better access than poorer areas. However, the impact of climate change is not directly mentioned.

The Year 1 curriculum also offers the SSC “Global Health: Concepts, Trends & Priorities” (Dr. Charlene McShane & Dr. Chris Jenkins) which discusses the topic of decolonizing global health. This SSC explores the historic discrimination of marginalized groups, western views of global health and how global health needs to be understood from the perspective of those affected. While the impact of climate change on marginalised groups is not directly discussed here, the SSC does discuss global health, climate change, and marginalised groups throughout.

In Year 2 of the C25 curriculum, a Public Health lecture delivered by Professor O’Donovan titled “Sustainable Healthcare” contains slides outlining the groups of people most at risk of climate change. The term “Most Affected People and Areas” (MAPA) is introduced, which explains the disproportionate effects of climate change globally, (such as those living in small island developing countries, other coastal and mountainous regions, people already living with chronic conditions) and how areas most affected have often been exploited and historically marginalised. These countries are often least responsible for climate change but the most affected.

Recommendations: The medical school should continue to integrate this topic longitudinally into the C25 curriculum as it is rolled out across the course.

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.

Score explanation:

The Year 1 curriculum also offers the SSC “Global Health: Concepts, Trends & Priorities” (Dr. Charlene McShane & Dr. Chris Jenkins) which discusses the topic of decolonizing global health. This SSC explores the historic discrimination of marginalised groups, western views of global health and how global health needs to be understood from the perspective of those affected. While the impact of climate change on marginalised groups is not directly discussed here, the SSC does discuss global health, climate change, and marginalised groups throughout.

In Year 2 of the C25 curriculum, a Public Health lecture delivered by Professor O’Donovan titled “Sustainable Healthcare” contains slides outlining the groups of people most at risk of climate change. The term “Most Affected People and Areas” (MAPA) is introduced, which explains the disproportionate effects of climate change globally, and how areas most affected have often been exploited and historically marginalised. These countries are often least responsible for climate change but the most affected.

In Year 1 of the C25 curriculum, Dr. Mairead Corrigan delivers a lecture and accompanying tutorial on the “Social Determinants of Health”. These both discuss how access to green spaces is beneficial to people’s health, and how green spaces are unequally spread, with more affluent areas generally having better access than poorer areas. However, the impact of climate change is not directly mentioned.

Recommendations: The medical school should continue to integrate this topic longitudinally into the C25 curriculum as it is rolled out across the course.

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.

Score explanation:

In the outgoing C19 curriculum, a lecture on “Screening for Congenital Abnormalities” is available on the Medical Education Portal for Year 4 Students on their ‘Obstetrics and Gynaecology’ placement. This lecture makes reference to environmental exposures increasing the risk of congenital abnormalities in the foetus, specifically exposure to chemicals, pesticides, medications, alcohol and radiation during pregnancy.

In the C25 curriculum, one of the cases (Case 14) is based around infertility, and whilst taking a male reproductive history in this case, it is discovered that the male partner works in a chemical factory. This prompt creates one of the learning objectives for the case, “Consider social and environmental factors which impact fertility”. This encourages students to research and explore this topic in more depth. Another of the cases (Case 1) has the learning objective “consider social and environmental factors which impact maternal behaviours and health” which allows students to explore how environmental factors (e.g., industrial pollution) can affect maternal health.

Also in the C25 curriculum, the lecture “Social Determinants of Health” by Dr. Mairead Corrigan touches on life-course theory and health inequalities across someone's lifetime. This allows students to study how certain factors (e.g., environmental pollution) can unequally affect different people in society. This includes how the prenatal life course stages can be affected with implications for later life, up to adulthood when “family building” occurs.

This topic may be explored more in depth in elective courses, such as ‘Women’s Global Health’ referenced previously.

Recommendations: The medical school should continue to integrate this topic longitudinally into the C25 curriculum as it is rolled out across the course.

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:

In Year 2 of the C25 curriculum, the Public Health lecture “Sustainable Healthcare” and the tutorial “Sustainability QI” both focus on the topic of sustainability. Through showing the contribution the healthcare system has to Northern Ireland’s carbon footprint, the lecture and tutorial encourage students to consider ways in which they can contribute to a more sustainable healthcare system, as future healthcare workers. This is a relevant example of addressing human-caused environmental threats, which is specific to the school of medicine.

In 2021, QUB secured funding for 400 students across the university to undertake Carbon Literacy Training in 2022. The course is bespoke to the university and accredited by the Carbon Literacy Project. The training is designed to offer students an awareness of climate change science, and the climate impacts of our everyday actions, as well as building confidence, knowledge, skills and motivation to empower individuals and organisations to play a crucial role in responding to the climate crisis. This is available to all students across the university, including medical students. There are discussions about a Carbon Literacy module to be made compulsory for medical students.

Recommendations: The medical school should continue to integrate this topic longitudinally into the C25 curriculum as it is rolled out across the course. We feel that, through the incorporation of some facts and statistics, the medical school could easily and quickly make environmental threats relevant to medical students and their surrounding community.

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

3	Indigenous knowledge and value systems are integrated throughout the medical school’s planetary health education
2	Indigenous knowledge and value systems as essential components of planetary health solutions are included briefly in the core curriculum.
1	Indigenous knowledge and value systems as essential components of planetary health solutions are included in elective coursework.

0	This topic was not covered.
<p><i>Score explanation: There is no evidence to support this metric.</i></p> <p><i>Recommendations: Whilst understanding how Indigenous communities are uniquely impacted by climate and environmental challenges globally is of importance and interest, these communities are not prevalent across the UK & Ireland. We feel that emphasis and priority should be given to addressing the impact on minority ethnic groups, the Irish travelling community, people experiencing homelessness and refugee or asylum seeking communities, alongside other prevalent or marginalised groups such as those listed.</i></p>	

14. Does your medical school curriculum address the outsized impact of anthropogenic environmental toxins on marginalised populations such as those with low SES, women, communities of colour, children, homeless populations, Indigenous populations, and older adults?	
3	This topic was explored in depth by the core curriculum.
2	This topic was briefly covered in the core curriculum.
1	This topic was covered in elective coursework.
0	This topic was not covered.
<p><i>Score explanation:</i> In the C25 curriculum, this topic is taught longitudinally in case-based learning and tutorials based on Dr. Mairead Corrigan’s “Social Determinants of Health” and “Health Inequalities” lectures. There is an opportunity to explore the increased exposure to anthropogenic toxins amongst a variety of patients from low-income communities, for example, less green spaces in areas of lower socio-economic background contribute to a general decrease in air quality to pollutants.</p> <p><i>Recommendations: The medical school should continue to integrate this topic longitudinally into the C25 curriculum as it is rolled out across the course. We propose that this topic could also be included in the Year 2 lecture on Sustainable Healthcare, which already discusses “Most Affected People and Areas”.</i></p>	

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.
<p><i>Score explanation:</i> In Year 1 of the C25 curriculum, a lecture on nutrition briefly covers this topic by discussing how vegan diets may be considered by some individuals for a variety of reasons, including environmental.</p> <p>Also in Year 1, one of the cases (Case 3) focuses on a vegan patient and her diagnosis of anaemia. This case has the following relevant learning objectives; “Know how to assess the nutritional adequacy of an individual’s diet”, and “Understand the main nutritional and health concerns of an unbalanced vegan diet”. This case provides an opportunity to explore plant-based diets at an early stage in the course. However, there is a lack of learning points on the co-benefits of a plant-based diet and the case focuses on how people can properly supplement their diet with iron, folate etc. while on a vegan diet to avoid illnesses like anaemia.</p> <p><i>Recommendations:</i> The medical school should continue to integrate this topic longitudinally into the C25 curriculum as it is rolled out across the course.</p>	

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.
<p><i>Score explanation:</i> In Year 2 of the new C25 Curriculum in a Public Health lecture delivered by Professor O’Donovan, titled “Sustainable Healthcare” explains what climate change is and what a carbon footprint is. Later in the lecture there is a comparison of the UK’s healthcare systems’ carbon footprint contribution to the total UK carbon output. Also included is suggested ways in which carbon footprint can be reduced, the NHS “Net Zero” plan and examples of how changes in the management of certain disease/ patients could be more sustainable</p> <p>A Year 2 tutorial titled “Quality Improvement” contains learning outcomes: “Describe what a carbon footprint is and consider the carbon footprint of the healthcare sector” and “Consider links between quality improvement and sustainable healthcare”. This tutorial is focused on incorporating the topics of quality improvement and sustainability. One aim of the tutorial is to make students more carbon literate and appreciative of choices and the impact they have on the planet. In the tutorial, students discuss</p>	

possible ways to improve the healthcare system whilst also making it a more environmentally sustainable system.

This topic may also be explored more in depth in elective courses, such as ‘Healthcare needs smaller feet- Sustainable Healthcare: Theory into practice’ or ‘SusQI’ referenced previously.

Recommendations: The medical school should continue to integrate this topic longitudinally into the C25 curriculum as it is rolled out across the course.

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 fulfil this metric.
1	The health and environmental co-benefits of non-pharmaceutical management of conditions where appropriate such as exercise or yoga classes for type 2 diabetes; social group activities such as gardening for mental health conditions; active transport such as bicycle schemes for obesity. This is commonly known as social prescribing in the UK.
1	The health and environmental co-benefits of avoiding over-medicalisation, over-investigation and/or over-treatment

Score explanation:

In Year 1 of the C25 curriculum, the lecture “Social Determinants of Health” by Dr. Mairead Corrigan mentions how social prescribing is recommended by the BMA as a tool to be used by clinicians to tackle inequalities that affect patients. In doing so, this lecture allows students to explore how doctors have a duty to reduce inequalities in healthcare and provide patients with sustainable health interventions. Covering social prescribing in the curriculum also allows students to learn how the NHS is developing sustainable healthcare plans for patients.

In Year 2 of the C25 curriculum, Professor O'Donovan delivers a Public Health lecture titled "Sustainable Healthcare", which includes infographics to compare the daily CO2 production of an anaesthetist compared to the average UK citizen. It then compares the positive effect some changes (such as having the air hygiene unit on setback) pose in reducing the CO2 output for an anaesthetist.

The additional problems highlighted above are discussed in many lectures throughout the course, but the solutions to these problems are rarely included. For example, the environmental impact of over-prescribing is taught longitudinally throughout both the pre-clinical and clinical years, but the benefits of deprescribing are not discussed. There are also lots of informal conversations surrounding these topics, such as in clinical surgery, anaesthetic, or GP placements, and in extra-curricular events held by medical school societies. However, the group could not find evidence to support the inclusion of these components in the core curriculum.

Recommendations: There are a number of obvious places in the curriculum where these topics could be integrated. Inhalers are already discussed as part of the Year 4 Healthcare of Children module. Students in Year 4 undertake a placement in Anaesthetics, which could incorporate discussion of the impact of gases used. Students in Year 4 study Ageing and Health, which includes a lecture on polypharmacy and deprescribing. The environmental impact of over-prescribing could be discussed in this module. We encourage the medical school to incorporate these small changes into the core curriculum, especially with the expansion of the C25 curriculum.

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

Score explanation: There is no evidence to support this metric.

Recommendations: We propose that this topic could be introduced as part of communication skills training or integrated into case histories in clinical skills teaching examples.

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.

Score explanation:

As part of QUB’s clinical skills teaching, students are taught to take a thorough history from patients, which includes a social history. This includes aspects such as: their occupational and living situation and may explore their exposure to potential toxins (if relevant). An example of this would be asking if someone had been exposed to asbestos in an industrial or home environment, or any environmental toxins if they were involved in agricultural work.

Recommendations: The importance of a thorough social history, including environmental and exposure risks, should continue to be emphasised. This topic could also be introduced as part of communication skills training or integrated into case histories in clinical skills teaching examples, and should continue to be reinforced in clinical years. Asbestosis is highlighted in social history taking, due to its importance in industrial populations in Belfast. However, other aspects of social history taking, such as housing conditions and heat sources should also be emphasised.

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:

In 2020, QUB began to deliver a new curriculum, C25. This curriculum is longitudinal in style and has four main threads: Clinical Science and Practice, Achieving Good Medical Practice, Teamwork for Safe Care, and Global and Population Health. ‘Social Accountability & Sustainable Healthcare’ is a

sub theme within the ‘Global and Population Health’ theme. Faculty regularly meet with the PHRC group at QUB, and are actively integrating planetary health and sustainable healthcare into the C25 curriculum, and there are regular meetings regarding and reviewing this process.

Recommendations: Although the new C25 curriculum places a large focus on global health, it is important for the medical school to continue to integrate planetary health as part of this theme, and to do so in a longitudinal fashion. For the C25 curriculum, we have only been able to reflect and evaluate on areas of the curriculum which have been taught so far. We hope that in future years, as the C25 curriculum is fully implemented, the metric above will increasingly be achieved, as planetary health is further integrated into the medical school’s curriculum, and that the medical school will continue to evaluate and review the planetary health curriculum. We also look forward to the integration of sustainable development goals into all courses at Queen’s, and to the integration of the PHRC findings into the other courses in the School of Medicine, Dentistry and Biomedical Sciences at QUB.

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:

In the C25 curriculum, ‘Global and Population Health’ is one of the main four themes, and ‘Social Accountability and Sustainable Healthcare’ is a sub-theme within this. Global and planetary health issues are well integrated into case-based learning scenarios. But planetary health and sustainable healthcare are only appropriately integrated into some of the cases. So, the material isn’t incorporated into one single series of lectures but is instead incorporated longitudinally mainly through a wide variety of these cases.

Within cases, students need to consider the possible global and population health implications of the scenario, guided by prompts. However, planetary health and healthcare sustainability focused learning objectives are not the main focus. Students can choose to explore planetary health, but this would not fulfil the compulsory learning objectives for the cases, and so, students not interested in the topic may not choose to investigate planetary health.

However, in Year 2 of the C25 curriculum, the lecture “Sustainable Healthcare” and tutorial, “SusQI” help to directly incorporate planetary health into the core curriculum and cement the learning, which can then be built upon longitudinally through further cases and tutorials in the course.

Although we have awarded the medical school a 6 for this metric due to their hard work and dedication on the integration of planetary health into the core curriculum, we would like to acknowledge that the integration is not yet perfect. We would particularly encourage the introduction of direct connections between pre-existing material and planetary health, which we feel should be relatively easy to implement. We also look forward to the further integration of planetary health into the core curriculum of clinical years as the C25 curriculum is established.

Recommendations: Although the new C25 curriculum places a large focus on global health, it is important for the medical school to continue to integrate planetary health as part of this theme, and to do so in a longitudinal fashion. For the C25 curriculum, we have only been able to reflect and evaluate on areas of the curriculum which have been taught so far. We hope that in future years, as the C25 curriculum is fully implemented, the metric above will increasingly be achieved, as planetary health is further integrated into the medical school's curriculum.

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:

Professor Diarmuid O'Donovan is the QUB academic lead for the 'G' theme of the C25 Curriculum: Global and Population Health, which has a sub-theme of Social Accountability and Sustainable Healthcare'. Dr Vivienne Crawford is deputy academic lead for this theme. Both Professor O'Donovan and Dr Crawford work in partnership with the PHRC group at QUB and are regularly revising and evaluating this new curriculum. We would like to thank Professor O'Donovan and Dr Crawford for their dedication to implementing this theme of the C25 curriculum. There are ongoing discussions at QUB of integrating the Sustainable Development Goals into every course, and of employing officers to oversee this integration in each school, however, this is yet to come into fruition.

Recommendations: We hope that in future years, as the C25 curriculum is fully implemented, the metric above will continue to be achieved, as planetary health is further integrated into the medical school's curriculum, and that the medical school will continue to place such a high value on the provision of planetary health and sustainable healthcare.

Section Total (53 out of 69)	77%
------------------------------	-----

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 emphasised.

1.Are there researchers engaged in planetary health research and healthcare sustainability research at your medical school?	
3	Yes, there are faculty members at the School of Medicine who have a primary research focus in planetary health or healthcare sustainability.
2	Yes, there are individual faculty members at the School of Medicine who are conducting research related to planetary health or healthcare sustainability, but it is not their primary research focus.
1	There are planetary health and/or healthcare sustainability researchers at the institution, but none associated with the medical school.
0	No, there are no planetary health and/or healthcare sustainability researchers at the institution or medical school at this time.
<p><i>Score explanation:</i></p> <p>Professor Ruth Hunter is the Professor of Public and Planetary Health in the Centre for Public Health, one of the three main research centres within the School of Medicine, Dentistry and Biomedical Science (SMDBS). She is co-lead of the Epidemiological and Public Health Research group, and a member of the Centre for Sustainability, Equality and Climate Action (SECA). Professor Hunter is the Principal Investigator (PI) of several large, interdisciplinary research grants that work at the intersection of public health and planetary health.</p> <p>For example, she is the PI of the £7m funded UK Prevention Research Partnership (UKPRP) GroundsWell consortium (https://ukprp.org/what-we-fund/groundswell/) which aims to drive community innovation applying systems science that maximise the contribution of Urban Green and Blue Space to the primary prevention of, and reduction of inequalities in, non-communicable diseases (NCD) and planetary health co-benefits. Professor Hunter is PI of the ESRC-funded Supportive Environments for Physical and Social Activity, Health Ageing and Cognitive Health (SPACE, http://www.qub.ac.uk/sites/space) project which aims to explore the mechanistic pathways by which urban environmental factors, including air pollution, impacts on cognitive health and inequalities.</p>	

Professor Hunter's research focuses on the built environment, urban health and non-communicable diseases; she has recently led an application to undertake a study aiming to generate new evidence from the application of new, accessible tools related to the intersection of urban design and health, understanding and estimating the improvements in non-communicable diseases and health inequalities which can be achieved through tangible alteration in urban design. Earlier in 2021, Professor Hunter was credited as a co-author of Geary RS, Wheeler B, and Lovell R et al. A call to action: Improving urban green spaces to reduce health inequalities exacerbated by COVID-19. *Preventive Medicine* 145 (2021): <https://www.sciencedirect.com/science/article/pii/S0091743521000098#!>; this output contributes to the following SDGs: Good Health and Wellbeing (3), Sustainable Cities and Communities (11) and Climate Change (13). The work of Professor Hunter contributes towards the following SDGs: Good Health and Wellbeing (3), Clean Water and Sanitation (6), Industry, Innovation and Infrastructure (9), Reduced Inequalities (10), Sustainable Cities and Communities (11), Climate Action (13), Life on Land (15) and Peace, Justice and Strong Institutions (16).

Dr Leandro Garcia is a researcher within the Centre for Public Health and has continued to work within planetary health since his mention in last year's PHRC. Dr Garcia, alongside Professor Rodrigo Reis (Centre for Public Health) and Professor Ruth Hunter and Dr Deborah Salvo, published an article examining what the physical activity community can do for climate action and planetary health: <https://journals.humankinetics.com/view/journals/jpah/aop/article-10.1123-jpah.2021-0719/article-10.1123-jpah.2021-0719.xml>. This paper contributes to the following Sustainable Development Goals (SDGs): Climate Action (13).

Dr Garcia and Professor Hunter co-lead the "Complexity, Public and Planetary Health" cluster, which involves both staff and students from the Centre for Public Health to investigate and address population and planetary health issues. Alongside Professor Hunter, he is a PI for a MRC-funded project that explores systems approaches to reducing car dependency in Belfast. This project involves numerous other researchers, including

As part of GroundsWells, Dr Garcia is involved in the co-development of a systems-orientated framework of how urban green and blue spaces impact non-communicable diseases and leads a work package that will use agent-based models to explore how urban green and blue space transformations can reduce levels and inequalities in non-communicable diseases. Dr Garcia is also currently accepting further PhD candidates with interest in his field of research. His work contributes towards the following SDGs: No Poverty (1), Good Health and Wellbeing (3), Reduced Inequalities (10), Sustainable Cities and Communities (11) and Climate Action (13).

Another excellent example of interdisciplinary research comes from the following article published in *Systems* earlier this year. The article titled "Developing system-oriented interventions and policies to reduce care dependency for improve population health in Belfast: study protocol" relates to a study funded by the MRC Public Health Intervention Development Scheme and involved the following researchers: Professor Ruth Hunter; Dr Claire Cleland (Centre for Public Health, SMDDBS); Professor Frank Kee (Centre for Public Health, SMDDBS); Professor Alberto Longo (Institute for Global Food Security and School of Biological Sciences); Professor Brendan Murtagh (School of Natural and Built Environment); Professor John Barry (co-director of the Centre for Sustainability, Equality and Climate

Action [SECA] and School of History, Anthropology, Philosophy and Politics); Dr Gary McKeown (School of Psychology); and Dr Leandro Garcia (Centre for Public Health, School of Medicine, Dentistry and Biomedical Sciences). Professor Kee, like Professor Hunter, is also a research fellow for SECA. This output contributes to the following SDGs: Good Health and Wellbeing (3), Reduced Inequalities (10), Sustainable Cities and Communities (11) and Climate Action (13).

Professor Jayne Woodside is a Professor of Human Nutrition within the Centre for Public Health, one of the research institutes within the SMDBS, and the head of the Food, Nutrition and Health Theme within the Institute for Global Food Security, one of the four interdisciplinary research institutes at QUB. Her work contributes towards the following SDGs: Zero Hunger (2), Good Health and Wellbeing (3), Sustainable Cities and Communities (11), Responsible Consumption and Production (12), and Climate Action (13). Professor Woodside is working with Dr Anne Nugent on a project titled “Food-based dietary guidelines for healthy lifestyles”. As part of this project, a 12-week parallel RCT will be conducted across the three study sites (QUB, UCD and UCC) to test the effectiveness of newly developed dietary guidelines at reducing diet-related greenhouse gas emissions, meeting nutritional and health requirements, and being considered acceptable by the general public.

The Institute for Global Food Security branch entitled “Nutrition and Preventive Medicine” straddles the school of Biological Sciences and the School of Medicine, Dentistry and Biomedical Sciences. This core pillar for interdisciplinary research has expertise in three main areas – molecular nutrition, biomarker development and discovery, and nutritional epidemiology – and contains 14 academic staff, 27 PDRFs and 36 PhD candidates. This includes Professor Michelle McKinley, Professor Ian Young, Professor Brian Green, Dr Claire McEvoy and Dr Laura McGowan, all of the Centre for Public Health. The staff mentioned above all contribute towards the SDG Good Health and Wellbeing (3), with work by Professors McKinley, Young and Dr McEvoy also contributing towards the SDG Climate Action (13).

Researchers in the School of Natural and Built Environment continue to work in various aspects of planetary health. Professor Geraint Ellis, a Professor of Environmental Planning and part of the SECA management team, contributed to an editorial in *Cities & Health*, which reflected on city resource use and waste on the ecosystem services that support human health:

<https://www.tandfonline.com/doi/full/10.1080/23748834.2017.1316025>. Professor Ellis’ fundamental research interests include planning and sustainability and healthy urban planning, and his work contributes towards the following SDGs: Good Health and Wellbeing (3), Quality Education (4), Affordable and Clean Energy (7), Decent Work and Economic Growth (8), Industry, Innovation and Infrastructure (9), Reduced Inequalities (10), Sustainable Cities and Communities (11), Responsible Consumption and Production (12), Climate Action (13), Life Below Water (14), Life on Land (15) and Peace, Justice and Strong Institutions (16).

Dr Tilman Kuhn is a member of the Institute for Global Food Security and a lecturer in the School of Biological Sciences. He was a listed co-author of “Co-benefits from sustainable dietary shifts for population and environmental health: an assessment from a large European cohort study”. This was a multi-institute cohort study involving researchers from across Europe, including Imperial College London, Sorbonne Paris Nord University, and the University of Oxford, highlighted the benefits of

universally sustainable diets on minimising diet-related greenhouse gas emissions and land use and improving population health:

<https://pure.qub.ac.uk/en/publications/co-benefits-from-sustainable-dietary-shifts-for-population-and-environmental-health/>. His work contributes towards the following SDGs: Zero Hunger (2), Good Health and Wellbeing (3), Responsible Consumption and Production (12), Climate Action (13), Life Below Water (14) and Life on Land (15).

Although considerable research is being done on planetary health and the relationship between climate change and individual and population health, less research focuses on healthcare sustainability. An abstract was submitted by researchers to the International Conference on Resource Sustainability 2021, reflecting a study that focused on 1) the pyrolysis process and characterisation of pyrolysis products, and 2) environmental impact assessment to analyse the circularity of resources in healthcare organisations. Authors Dr Neha Mehta, Dr Ahmed I. Osman, and Professor David Rooney work within the School of Chemistry and Chemical Engineering at QUB, whilst Callum Anderson, Dr Eoin Cunningham, and Dr Beatrice Smyth work in the School of Mechanical and Aerospace Engineering; additionally, Professor Rooney and Dr Smyth are both a part of the Research Centre in Sustainable Energy. This output contributes to the following UN SDGs: Responsible Consumption and Production (12).

Recommendations: The university should continue to support faculty members throughout the institution and at the School of Medicine who have a primary research focus in planetary health or healthcare sustainability, and should continue to fund research in these areas.

2. Is there a dedicated department or institute for interdisciplinary planetary health research at your institution?

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

Score explanation:

The Centre for Sustainability, Equality And Climate Action (SECA) is one of the four cross-faculty research centres at QUB. It is the newest of the four research institutions and brings together cross-faculty academic and directorate staff, graduate students and industry professionals to address pressing socio-ecological challenges from an interdisciplinary and engaged perspective. The centre's key research themes include:

- Interdisciplinary approaches to understanding the interconnection between socioeconomic (in)equality and the interlinked climate and ecological crisis and formulating appropriate responses in terms of governance, political activism and action, economic thinking and practices, public health etc.
- Understanding the low carbon energy transition and creation of climate-resilient communities, regenerative and inclusive economies, health, prosperous and sustainable societies.
- Enabling Centre members to collaborate on embedding interdisciplinary and engaged sustainability research within their teaching,
-

Research fellows of SECA include Professors Ruth Hunter and Frank Kee, both of the Centre for Public Health within the School of Medicine, Dentistry and Biomedical Science. The Centre’s two co-directors, Professor John Barry and Dr Amanda Slevin, are of the School of History, Anthropology, Philosophy and Politics at Queen’s.

SECA has research fellows and management team members from across various faculties, including the School of Biological Sciences, School of Natural and Built Environment, School of Architecture; and external stakeholders including chartered town planners, mechanical engineers, and sociologists. <https://www.qub.ac.uk/research-centres/SECA/>

Recommendations: The university should continue to support the Centre for Sustainability, Equality and Climate Action, and should continue to fund the important research at this centre.

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

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

Score explanation:

When researchers apply for grants from any of the research councils within the UKRI, they have to complete a section entitled Public and Patient Involvement (PPI). In this section, researchers must clearly state how those affected by the research can be involved at all stages of the research process. Although incredibly important to justify, researchers do not have to explicitly outline how communities

disproportionately impacted by climate change/environmental injustice can get involved with this research:

<https://www.publichealth.hscni.net/directorate-nursing-and-allied-health-professions/allied-health-professions-and-personal-and-publi-5>.

Recommendations: QUB should create plans to establish a process for community members impacted by climate and environmental injustice to advise on the climate and environmental research agenda. This could potentially be piloted through the Centre for Sustainability, Equality and Climate Action, discussed in the metric above.

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

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

Score explanation:

QUB has recently produced and published a new Sustainability website. This acts as a centralised resource for sustainability news and opportunities across the university, including events, student initiatives, and the university’s commitment to the UN SDGs. The website is regularly updated and much easier to navigate this year than last year. It lacks information on past and current research related to planetary health, but much of this information can be found on the Centre for Sustainability, Equality and Climate Action (SECA) webpages, as this is the institute which focuses most on planetary health. SECA’s web pages lack information on funding and research opportunities, i.e., potential PhD candidates. It has a web page for key members of the centre linked to their QUB Pure accounts, offering an indirect route towards potential research opportunities.

<https://www.qub.ac.uk/about/sustainability/>
<https://www.qub.ac.uk/research-centres/SECA/>

Recommendations: We encourage QUB to continue to maintain and develop the Sustainability website. It would be ideal to provide links on this to the SECA website, which provides information on funding and research opportunities. This would ensure a completely comprehensive website which centralises all campus resources and information on sustainability.

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.

Score explanation:

Professor Diarmuid O’Donovan hosted a session at the Northern Ireland Confederation for Health and Social Care conference session on climate and health in October 2021. This event was attended by staff and students at QUB alongside colleagues working in the NHS in Northern Ireland. Professor O’Donovan contributed to a panel discussion on climate/sustainable healthcare at the European Public Health Association conference in November 2021. However, no events were hosted primarily by the School of Medicine, Dentistry and Biomedical Science.

In June 2021, the Centre for Sustainability, Equality and Climate Action held an online event entitled “QUB and the Planetary Crisis: What is to be Done?”. The event was open to all QUB staff and students and included an open discussion on how education provision, research, and engagement with external stakeholders change in light of the planetary crisis.

<https://www.qub.ac.uk/research-centres/SECA/EventsMedia/QUBandthePlanetaryCrisisWhatistobeDone.html>

A follow-up event, called “QUB and Climate Action” was intended to be held in July 2021, but was unfortunately postponed due to the Covid-19 pandemic.

<https://www.qub.ac.uk/research-centres/SECA/EventsMedia/PostponedQUBandClimateAction.html>

Also in June 2021, SECA hosted a one-day multidisciplinary conference entitled “Life Innovations for the Climate Crisis: PhD research at Queen’s University Belfast. The conference saw several speakers from various QUB schools, including the School of Natural and Built Environment, School of Biological Sciences and School of Arts, English and Languages. Dr Rachel Reid-McCann from the School of Medicine, Dentistry and Biomedical Sciences was a member of the panel entitled “Sustainable use of land and space”, discussing her research into whether sustainable protein sources can support healthy muscle ageing.

<https://www.qub.ac.uk/research-centres/SECA/EventsMedia/LifeInnovationsfortheClimateCrisisPhDresearchatQueensUniversityBelfast.html>

Professor John Barry, co-director for SECA and Professor in the School of History, Anthropology, Philosophy and Politics, was the keynote speaker at the John Hewitt Summer School and gave a talk entitled “The Imagination, Hope and the Planetary Crisis”.

<https://pure.qub.ac.uk/en/activities/the-imagination-hope-and-the-planetary-crisis>

SECA hosted many events related to COP26 this year, all of which were advertised here:

<https://www.qub.ac.uk/research-centres/SECA/EventsMedia/COP26/>

The School of Biological Sciences held a number of events in 2021 related to planetary health and climate change. Professor Sharon Huws hosted an inaugural lecture entitled “Agriculture, Planetary Health and Microbiomes”. Professor Huws’ key research lies in understanding the role of rumen microbiomes in ruminant food security. Her research focuses on understanding the functionality of these microbes, intending to address food security and human health:

<https://www.qub.ac.uk/Research/GRI/TheInstituteForGlobalFoodSecurity/institute-for-global-security-events/InauguralLecture-ProfessorSharonHuws.html>

In May 2021, School of Biological Sciences hosted “Threats to our Food System”, a two-day workshop examining the impact of climate change and legislative changes on the control of mycotoxins and antimicrobial agents:

<https://www.qub.ac.uk/Research/GRI/TheInstituteForGlobalFoodSecurity/institute-for-global-security-events/ThreatstoourFoodSystem.html>

In June 2021, the School of Biological Sciences hosted the 1st International Endocrine Disruptor Conference on the Island of Ireland, which brought together all 15 Early Stage Researchers from the EU funded PROTECTED (PROTECTION against Endocrine Disruptors) project. The project aims to carry out further research into endocrine disruptors and their mixtures, examining their effects on critical growth stages of both animals and humans:

<https://www.qub.ac.uk/Research/GRI/TheInstituteForGlobalFoodSecurity/institute-for-global-security-events/1stInternationalEndocrineDisruptorConferenceontheIslandofIreland.html>

QUB hosted a Winter School Sustainable Summit, a five day virtual summit in January 2022. The event gave participants access to a series of interdisciplinary talks from academics in the university, hosting seminars around sustainability and climate change themes from politics, health, nature and business to social policy and engineering solutions that could help tackle climate change:

<https://www.qub.ac.uk/events/whats-on/listing/winterschoolsustainabilitysummit.html>

Recommendations: A number of events have been held by the School of Biological Sciences, another school in the Faculty of Medicine and Life Sciences. A number of staff from the medical school have also been involved in planetary health events. However, we would like to encourage the School of Medicine to host its own conference or symposium on topics related to planetary health.

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

1	Yes, the medical school is a member of a national or international planetary health or ESH organisation
0	No, the medical school is not a member of such an organisation

Score explanation:

Following the publication of the PHRC last year, the School of Medicine, Dentistry and Biomedical Sciences joined the Global Consortium on Climate and Health Education.

<https://www.publichealth.columbia.edu/research/global-consortium-climate-and-health-education/list-gche-member-institutions>

QUB is also a member of several Irish and British climate groups, for example, the Alliance for Sustainability Leadership in Education and the Green Gown Awards.

https://www.eauc.org.uk/our_educational_members

<https://www.greengownawards.org/home>

Recommendations: We encourage the university to continue to collaborate with national and international planetary health organisations.

Section Total (13 out of 17)

76%

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

1. Does your medical school partner with community organisations to promote planetary and environmental health?	
3	Yes, the medical school meaningfully partners with multiple community organisations to promote planetary and environmental health.
2	Yes, the medical school meaningfully partners with one community organisation to promote planetary and environmental health.
1	The institution partners with community organisations, but the medical school is not part of that partnership.
0	No, there is no such meaningful community partnership.
<p><i>Score explanation:</i></p> <p>As part of the Year 2 course, around one-third of medical students undertake the ‘Medics in Primary School’ module. This unit involves medical students teaching about health and medicine in local schools. Planetary health was added as a new topic to be covered by students in the 2021/22 cohort, and we look forward to the further development and implementation of this.</p> <p>The ‘Great Science Share’ for Schools is an organisation that promotes scientific investigation and collaboration in children across the UK. The programme has been running for five years, but this year is QUB’s first on the programme. The theme for 2021 was the UN Sustainable Development Goals (SDG’s) and the theme for 2022 is climate action – following COP26 in November 2021. The university will provide STEM ambassadors across multiple faculties to partake, including several staff from the medical school. https://www.greatscienceshare.org</p> <p>In addition, the university also offers the ‘Queen’s Widening Participation Partnership’ for local schools, with some sessions being provided by the medical school. However, there are no sessions currently related to planetary health. https://www.qub.ac.uk/directorates/sgc/wpu/</p>	

Recommendations: Further integration between the medical school and community organisations is required. The medical school should continue its partnership with the 'Great Science Share' in the coming years, sending ambassadors to promote planetary health. We feel it should also aim to establish greater meaningful connections with local community organisations that promote climate action and planetary health.

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.

Score explanation:

The QUB PHRC team had planned an event titled “Climate Emergency Department” in the medical school, as part of the NI Science Festival in February 2022, focused on the effects of climate change on healthcare. This event involved multiple roleplay scenarios and was aimed at children and young adults in the community who could attend the event for free. Unfortunately, this event was cancelled due to Covid-19 restrictions, however, the QUB PHRC group intends to run this event in the near future.

As part of the NI Science Festival in February 2022, the School of Biological Sciences hosted an event titled “Sea the Damage” that focused on marine pollution. It included a local beach clean and analysis of the collected waste in the QUB Marine Laboratory.

<https://nisciencefestival.com/schools-educators/sea-the-damage>

In 2021 Queen’s held Climate Events such as “Economic & Other Benefits of Local Climate Action”, “The Climate Crisis” and “Arts, creativity & culture in the context of the climate crisis”. The idea behind the event series was to mark COP-26, happening in-line with the events, to spark interest and inspire people to think about Sustainability and the effects climate change has on a local and global level. However, the medical school was not involved in the planning of these events

<https://www.qub.ac.uk/social-charter/sustainability/cop26/>

In January 2022, QUB hosted a Sustainability Summit. This 5 day conference aimed to accelerate key debate on pressing sustainability challenges, and included a talk on public health by a member of staff from the medical school. However, these lectures were aimed at current and prospective students, not the community.

<https://www.qub.ac.uk/events/whats-on/listing/winterschoolsustainabilitysummit.html>

Recommendations: The medical school should continue to organise a number of planetary health events, and particularly those which occur annually and are aimed at a community audience. In addition, we believe that the medical school could get involved in relevant events organised by other faculties, such as the lecture series before COP26, as an opportunity to discuss public and global health.

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.

Score explanation:

The School of Medicine, Dentistry and Biomedical Education and the Centre for Medical Education regularly send emails to all students in the school. Sometimes these contain information about planetary health or events on climate action. However, there is not regular coverage of planetary health or sustainable healthcare.

The Centre for Public Health also publishes a bi-monthly newsletter. Whilst this is only sent to public health students it can be accessed by anyone on their website.

<https://libguides.qub.ac.uk/publichealthbulletin>

The QUBSU Climate Action Group does communicate with students on a regular basis, but their emails are fairly generic and may not be noticed by many students.

However, we would like to note that QUB has recently produced and published a new Sustainability website. This acts as a centralised resource for all sustainability news and opportunities across the university, and as such, sustainability information is now much more accessible for all students.

<https://www.qub.ac.uk/about/sustainability/>

The online platform “Green at Queen’s E-Zine” provides news, information and updates on all thing's environment and climate change, including events at the University and opportunities for student involvement. However, this is not specific to medical school or to planetary health.

<https://www.qub.ac.uk/directorates/EstatesDirectorate/Services/SustainabilityatQueens/GreenatQueensE-Zine/>

Recommendations: The QUB PHRC group appreciates that the medical school has vast quantities of information to disseminate to students already, and the introduction of a specific planetary health update communication may open the floodgates and lead to bombardment of medical students. Although it would be ideal for the medical school to produce a regular planetary health communication, we think it more realistic to instead direct medical students to the other university-wide sustainability resources, which contain a vast amount of up-to-date information. Some other options for disseminating such information are listed below.

Sending the public health newsletter to all students enrolled in the School of Medicine, Dentistry and Biomedical Sciences would help to raise awareness on issues of global health, and considering the newsletter is already available to everyone this shouldn't be too difficult. Alternatively, a sustainability and planetary health newsletter sent to all students in the school – even on a quarterly or bi-annual basis, would also be beneficial. Another option could be the inclusion of planetary health news on a forum on the medical school's portal website.

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

Score explanation:

The university offers both an MPH in Public Health and an MPH in Global Health and postgraduate taught degrees. These courses focus heavily on the determinants of global health and global health development. <https://www.qub.ac.uk/courses/postgraduate-taught/global-health-mph>, <https://www.qub.ac.uk/courses/postgraduate-taught/public-health-mph>

The university also offers the ‘STEM Teachers Ambassador Programme’, which is a three-day CPD programme for science teachers. This year’s theme is the COVID-19 pandemic and includes talks on global health and water waste management.

In addition, a global health live web conference held in September 2020 was partnered by the Centre for Public Health in the university and involved a two-day conference focused on global health. It included talks on the environment and the UN SDG’s. There was a face-to-face conference planned for August 2021, but it was cancelled due to COVID-19 restrictions at the time. <https://www.qub.ac.uk/research-centres/CentreforPublicHealth/News/GlobalHealthLiveWebConferenceSeptember24-252020.html>

Recommendations: The university should aim to offer more CPD courses focusing on planetary health. If these were run over a few days, they may attract a wider audience of those who do not wish to commit to an MPH. Additionally, the local hospitals could become more involved in promoting and organising planetary health education for healthcare professionals already working in the trust that may not be aware of those occurring in the university.

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

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

Score explanation: It is difficult to fully assess what is accessible in each of the hospital trusts considering the width and breadth of departments, especially given the limited access due to COVID-19. However, online resources on the trust websites contain some information available to patients on environmental exposures. In particular, the Belfast Trust offers advice on “Healthy Living”, including sun exposure, smoking cessation and a healthier diet. However, there is no educational materials on other environmental hazards such as toxins or pesticides.

<https://belfasttrust.hscni.net/healthy-living/>

Recommendations: We understand and appreciate that whilst QUB works in partnership with all five of the hospital trusts in Northern Ireland, it does not have a large say in what educational resources are available to patients. However, if the resources were to be improved, they should include information on other environmental exposures such as pesticides and pollutants. Providing these educational materials in an online format could make this more achievable for the trusts, and more accessible for all patients across NI.

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:

As with the last metric, it is difficult to fully analyse what information is accessible to patients across all five hospital trusts. However, we could find no evidence of any online resources focusing on climate change and its health impacts to date. We believe that this is partly a cultural issue in NI, where there is limited clinician-patient discussion on climate change. We hope that the setting of a NetZero target by the NHS in NI earlier this year will help to cause a cultural shift and make such issues more of a priority in trusts.

Recommendations: Once again, we acknowledge that QUB has little say in what materials are available to patients. However, information on the health impacts of climate change could be made available online, along with the resources already provided on other aspects of healthy living. In addition, certain areas of healthcare (such as primary care) could provide brochures and leaflets to patients that inform them of the impacts of climate change on their health and the healthcare system.

Section Total (9 out of 14)	64%
------------------------------------	------------

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 fulfil clerkship or longitudinal requirements) and offers resources to help students succeed in these projects, but there is no student funding available and there is no requirement to participate.
0	No, the institution does not offer opportunities or support for sustainability initiatives or QI projects.

Score explanation:
 The university’s Environmental Team supports student-led initiatives such as the “Green Fund” and “Student Environmental Leadership Programme”.

The Queen’s Green Fund promotes environmental awareness amongst staff and students by empowering them to create and deliver projects within their area that will benefit the environment. The maximum available funding per project is £1,500 with an overall budget of £20,000 for the whole fund annually. In 2019-2020 26 applicants were successfully funded. All students across the university can submit proposals for Green Fund projects. Examples of projects include “Elms Accommodation Allotment” (with seven plant beds, an apple orchard and future plans of a composting site and polytunnel), provision of plastic free sanitary products around QUB campus, and a student-led Plastic Workshop.
<https://www.qub.ac.uk/directorates/EstatesDirectorate/Services/SustainabilityatQueens/GreenFund/>

The Environmental Leadership Programme is an enrichment course for students, composed of workshops, volunteering and environmental projects building towards a final pitch to QUB of a solution to an SDG problem. Students can apply to become “Sustainability Champions”- advocates for good environmental practices at the University who spread awareness, provide feedback to staff, liaise, and do community work. There is access to funding opportunities through these.
<https://www.qub.ac.uk/directorates/EstatesDirectorate/Services/SustainabilityatQueens/GetInvolved/>

The medical school offers an elective course in SusQI, led by Dr. Vivienne Crawford. The module aims to facilitate an understanding of the range of factors that can affect healthcare quality and sustainability including political, economic, ethical beliefs and behaviours. Based on this understanding of global aspects relevant to sustainable healthcare, and the methods and processes of quality improvement, participants will begin to consider local aspects that may be amenable to change with a view to improving quality and sustainability. The medical school also has plans to include SusQI in the core curriculum as part of the new C25 curriculum rollout.

Recommendations: We propose for there to be a greater publication of these schemes, in order to increase awareness of them (this could be done via the medical school to gain attention of medical students) and for there to be a call for projects which emphasise planetary health issues.

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.

Score explanation:

There is an opportunity for medical students to intercalate (after second/ third year of the medical degree). Masters of Public Health (MPH) and MPH in Global Health are two intercalating options which provide aspects of Planetary Health and provide an opportunity for students to carry out research relating to the topic during their dissertation; This opens the potential for medical students to receive prizes and grants based on their work. There is additionally the opportunity for medical students to complete a PhD as an intercalated degree, but there are no opportunities in planetary health being advertised. However, there is the potential of trying to start a self-proposed PhD in a Planetary Health related field of research.

<https://www.qub.ac.uk/schools/mdbs/Study/IntercalatedDegrees/IntercalatedMasters/>

Students can apply for paid research opportunities through the means of a Summer Studentship. However, there are currently no available studentships with a focus on planetary health and/ or sustainable healthcare.

<https://www.qub.ac.uk/schools/mdbs/Study/ClinicalAcademicTraining/SummerStudentships/>

In 2021, the university launched an Engaged Research Seed Fund for Sustainable Development Goals. In order to apply for this fund, research must address at least 2 of the SDGs. Funding of up to £5000 per project was made available by the university.

<https://www.qub.ac.uk/about/sustainability/news/THEENGAGEDRESEARCHSEEDFUND-SUSTAINABLEDEVELOPMENTGOALS.html>

Recommendations: We hope that – following the recent establishment of the Centre for Sustainability, Equality and Climate Action, and of QUB becoming a beacon site for the Centre for Sustainable Healthcare – the opportunities for students to perform planetary health and sustainable healthcare research will increase.

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.

Score explanation:

QUB has recently produced and published a new Sustainability website. This acts as a centralised resource for all sustainability news and opportunities across the university. This acts as a centralised resource for sustainability news and opportunities across the university, including events, student initiatives, and the university’s commitment to the UN SDGs. The website is regularly updated and much easier to navigate this year than last year. It lacks information on past and current research related to planetary health, but much of this information can be found on the Centre for Sustainability, Equality and Climate Action (SECA) webpages, as this is the institute which focuses most on planetary health..

<https://www.qub.ac.uk/about/sustainability/>
<https://www.qub.ac.uk/research-centres/SECA/>

The online platform “Green at Queen’s E-Zine” provides news, information and updates on all thing's environment and climate change, including events at the University and opportunities for student involvement. However, this is not specific to medical school or to planetary health.

<https://www.qub.ac.uk/directorates/EstatesDirectorate/Services/SustainabilityatQueens/GreenatQueensE-Zine/>

Recommendations: We appreciate that there is a large amount of work involved in the medical school to create and maintain a school-specific sustainability website. Although it would be ideal for the medical school to produce one, we think it more realistic to instead direct medical students to the university-wide sustainability website, which contains a vast amount of up-to-date information.

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

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

Score explanation:

Students for Global Health (SFGH) is a registered medical society at QUB Student's Union (SU). SFGH is a student network and registered charity tackling global and local health inequalities through education, advocacy and community action. Their aim is to tackle global health inequalities through education, advocacy and community action. Their vision is a fair and just world in which equity in health is a reality for all. This society does not receive any more support through funding and the faculty than any of the other many medical societies do at Queen's, and although the Society encompasses and branches into Planetary Health and sustainability in healthcare they are not solely dedicated towards it.

<https://home.qubsu.org/clubssocieties/sfgh/>

The QUBSU Climate Action Group is the official Queen's Students' Union Campaigning group for Environmental Activism, who lobby on sustainability-related issues and who delivered the Green New Deal to QUB. Although this group is not an official society and does not receive any additional faculty support, the group is led by one of the SU student officers, and so, is very well supported by the SU, and their lobbying has contributed to the declaration of a climate emergency by QUB.

<https://www.facebook.com/QUBSUCAG>

The QUB PHRC team have now collaborated with faculty to form the Sustainable Healthcare Development Group – a committee dedicated to the implementation of sustainable healthcare into the medical school curriculum. However, this group's aims are still in development, and the group is not registered.

Recommendations: We encourage faculty to support, advise, and get involved with Students for Global Health. However, we appreciate that there are many medical societies at Queen's undertaking important work, and it is difficult for faculty to endorse them all, or for the SU to provide more funding to Students for Global Health than for other societies. The QUB PHRC team greatly appreciate the support of faculty, and look forward to continuing to work with them to develop the planetary health curriculum and implement the PHRC recommendations.

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

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

Score explanation:

The Campaigns and Engagement Student Officer (who also chairs the QUBSU Climate Action Group) sits on all institutional management groups in relation to carbon and other sustainability related initiatives. This role is university wide and not specific to the medical school.

<https://qubsu.org/YourUnion/MeettheTeam/StudentOfficers/CampaignsEngagement/#d.en.694607>

The university also has a part-time Environmental Student Officer, who campaigns for sustainability and best practises. This role is not specific to the medical school. The medical School has a representative who advocates best practices for students, however this does not necessarily include sustainability.

<https://qubsu.org/YourUnion/MeettheTeam/Part-TimeStudentOfficers/>

Queen's has a sustainability champion network (previously known as the environmental champion network) across the University. This is a mixture of staff members appointed by their school/ directorate as well as volunteers. These champions aim to embed good environmental behaviours in their working environment, and to embed a sustainable culture, implement projects, host information events and ensure engagement in Queen's wider sustainability programs. They are mainly administrative and technical staff. Unfortunately, this role has been hindered somewhat since the Covid-19 pandemic.

<https://www.qub.ac.uk/directorates/EstatesDirectorate/Services/SustainabilityatQueens/GetInvolved/>

Some schools across the university, including the School of Medicine, have been exploring appointing School Sustainability Champions with a much more specific role and not on a voluntary level.

There are also two academic Sustainability champions at University Operating Board level - Professor Stuart Elborn and Professor Michael Alcorn (Senior Leadership team), however this information is not available publicly.

Recommendations: It would be ideal to create a role for a student representative advocating specifically for planetary health and sustainability best practices on behalf of the medical school. We encourage the medical school to appoint a School Sustainability Champion, with a specific role, including advocating for curriculum reform or sustainability best practices.

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:

- The SU organises several Volunteer SU programmes such as Handy Helpers, who help to plant trees and wildflowers, raise awareness of recycling, and offer training in Environmental and Waste Awareness. Green at Queen's (through Carbon Management) also offer several environmental volunteering opportunities, such as maintaining allotments.
<https://qubsu.org/VolunteerSU/Opportunities/HandyHelpers>
- In 2021 Queen's held Climate Events such as "Economic & Other Benefits of Local Climate Action", "The Climate Crisis" and "Arts, creativity & culture in the context of the climate crisis" with some QUB organisers including the Centre for Sustainability, Equality & Climate Action at QUB. The idea behind the event series was to mark COP-26, happening in-line with the events, to spark interest and inspire people to think about Sustainability and the effects climate change has on a local and global level.
<https://www.qub.ac.uk/social-charter/sustainability/cop26/>
The QUB PHRC group also held an event in November to mark COP-26. The event, titled "COP-26, Plastic Straws and Me", featured expert speakers, and was directed at medical students to highlight the relevance of sustainability to healthcare professionals.

In January 2022, QUB hosted a Sustainability Summit. This 5 day conference was directed at national and international students, to accelerate key debate on pressing sustainability challenges.

<https://www.qub.ac.uk/events/whats-on/listing/winterschoolsustainabilitysummit.html>

- The QUB PHRC group had planned a community outreach cultural event/performance, titled “Climate Emergency Department” to take place during the annual NI Science Festival. The event, for both students and public, was intended to consist of climate emergency simulations as a healthcare professional in the future in NI. Unfortunately, this event was cancelled due to Covid-19 restrictions, however, the QUB PHRC group intends to run this event again in the near future.
- The Scout Network society at QUB Network organises several wilderness and outdoor programmes that follow Leave No Trace principles.
<https://home.qubsu.org/clubssocieties/scoutnetwork/>
- As part of the NI Science Festival in February 2022, the School of Biological Sciences hosted an event titled “Sea the Damage” that focused on marine pollution. It included a local beach clean and analysis of the collected waste in the QUB Marine Laboratory.
<https://nisciencefestival.com/schools-educators/sea-the-damage>

Recommendations: We strongly encourage the establishment of an annual Planetary Health or Sustainability conference or event in the university, and we hope that this will become more of a priority following the recent establishment of the Centre for Sustainability, Equality and Climate Action, and of QUB becoming a beacon site for the Centre for Sustainable Healthcare. We would encourage societies focusing on planetary health to hold an annual symposium or lecture series. Annual events would help to cement and build foundations for co-curricular Planetary Health initiatives rather than just one-off events.

Section Total (12 out of 15)

80%

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 endeavour, the healthcare sector is well poised to lead the world to a more sustainable future. This will involve scrutinising every aspect of how our systems operate, from where we source our energy, to how we build our infrastructure, to what companies we invest in. Our medical schools, clinics, and hospitals must set the standard for sustainable practises, and show other sectors what is possible when it comes to minimising environmental impact.*

1. Does your medical school and/or institution have an Office of Sustainability?	
3	Yes, there is an Office of Sustainability with multiple full-time staff dedicated to campus sustainability. If the Office of Sustainability serves the entire campus, there is at least one designated staff member for sustainability at the hospital and/or medical school.
2	There is an Office of Sustainability with one or more full-time staff dedicated to campus sustainability, but no specific staff member in charge of medical school and/or hospital sustainability.
1	There are no salaried sustainability staff, but there is a sustainability task force or committee
0	There are no staff members or task force responsible for overseeing campus sustainability
<p><i>Score explanation:</i></p> <p>There are number of staff within the Estates Directorate with responsibility for various aspects of Sustainability – e.g. within the Estates Directorate, staff undertake a number of sustainability roles to deliver a range of operational and policy issues around sustainability, such as Energy/ Carbon Management, Sustainable Travel, Waste Management and Engagement. The Estates Manager, Sara Lynch, now attends the PHRC group meetings at QUB, with medical school faculty, and is involved in regular discussions with both students and staff from the school.</p> <p>https://www.qub.ac.uk/directorates/EstatesDirectorate/Services/SustainabilityatQueens/</p> <p>Queen’s has a sustainability champion network (previously known as the environmental champion network) across the University. This is a mixture of staff members appointed by their school/ directorate as well as volunteers. These champions aim to embed good environmental behaviours in their working environment, and to embed a sustainable culture, implement projects, host information events and ensure engagement in Queen’s wider sustainability programs. They are mainly administrative and technical staff. Unfortunately, this role has been hindered somewhat since the Covid-19 pandemic.</p> <p>https://www.qub.ac.uk/directorates/EstatesDirectorate/Services/SustainabilityatQueens/GetInvolved/</p> <p>Some schools across the university, including the School of Medicine, have been exploring appointing School Sustainability Champions with a much more specific role and not on a voluntary level.</p>	

There are also two academic Sustainability champions at University Operating Board level - Professor Stuart Elborn and Professor Michael Alcorn (Senior Leadership team), however this information is not available publicly.

Recommendations: We recommend that the university continues to support Sustainability Champions, and encourage a specific member of staff to be designated responsible for each of the schools, including the medical school.

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:

Queen's University Belfast declared a climate emergency on 1st November 2021.

The University is investing in a Sustainability Action Plan with a goal to reach carbon net zero as soon as possible. The Green New Deal proposed by the QUBSU Climate Action Group will be used as a foundation for the plan to reach carbon neutrality. The Green New Deal (link below) proposes a goal of net zero carbon by 2030, but Queens has yet to specify an exact date for this target.

The Sustainability Action Plan is currently in development. In the last Carbon Management Plan, for 2010 to 2021, the university set a goal of 21% reduction in carbon emissions by 2020 against a 2008 base year. The university achieved this goal, with a 25% emission. However, the Carbon Management Plan for 2021 onwards is yet to be released.

<https://qubsu.org/media/Media,1020140,smxx.pdf?fbclid=IwAR051CgyFAHihWUWpELg8Q0Map1e4obYLx71D9FcC54sJVTQjzqOYRHGuE>

Recommendations: The university should create and implement the Sustainability Action Plan, and state a carbon neutrality goal of 2040 at the latest. This should be made publicly available on the website. The medical school should also put a well-defined plan in place to achieve this goal.

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

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

Score explanation:

Unfortunately, there is very limited information available about the university’s sourcing of energy and carbon management.

The only information publicly available states that in a typical year, the university will use “in the region of 80,000 MWh of natural gas and 20,000 MWh of electricity”, and that “over half of the electricity consumed by the university is generated on site using low carbon technology” (combined heat and power plants). Queen’s also states that it uses 100% low carbon energy sources, but does not give a figure for the proportion of their energy from renewable sources.

<https://www.qub.ac.uk/directorates/EstatesDirectorate/Services/EnergyandCarbonManagement/>

<https://www.qub.ac.uk/about/sustainability/campus-activities/>

The QUB PHRC team reached out to the Estates Manager for clarification on this subject, who stated that “100% of the electricity which we purchase via our electricity contract is renewable. Due to the nature of our location (in a built up suburban area with listed building restrictions) we only utilise a small percentage of renewable electricity on site at the moment. However this is being continually reviewed in light of falling technology costs, changes in guidance, and rising energy prices.”

Unfortunately, the team do not feel that there is sufficient evidence or information available to support this metric. There is no publicly available information on the utilisation of renewable energy, and various members of staff from the Estates department were unable to provide clarification on this. The information that is available on the website boasts of carbon emissions and low carbon energy, but on deeper reading, this information is confusing and contradictory. We were also unable to find any information specifically relating to the medical school buildings.

Recommendations: Although it is extremely important to utilise a high proportion of renewable energy sources, we first and foremost implore Queen’s to become more transparent in the publication of this information. It is incredibly difficult to decipher how and where Queen’s sources its energy, and it is concerning that members of staff in the Estates department are unable to provide clarification on this. We also urge Queen’s to commit to using renewable energy, and to outline this in the new Sustainability Action Plan.

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

3	Yes, sustainable building practices are utilised for new buildings on the medical school campus and the majority of old buildings have been retrofitted to be more sustainable.
2	Sustainable building practices are utilised 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:

Sustainability is integrated across the design and construction of our university estate. All projects greater in value than £1 million are designed to a BREEAM Excellent standard, whilst refurbishments achieve a BREEAM Very Good rating. There are 13 buildings on Queens campus which have received a BREEAM rating of Excellent and Very Good. The new Student Centre and the Business school at Riddel Hall have both been constructed to these standards. The new School of Biology Building will also be heated by geothermal heat pumps.

In the last 10 years, Queen's have implemented over 100 energy efficiency projects across the estates, including improving insulation, replacement of lighting with LED's, installation of PIR lighting etc. Almost all buildings across the estate will have benefitted in some way from these projects.

Recommendations: We encourage the university to continue to utilise sustainable building practices, both in the development of new buildings, and in retrofitting old buildings. We recommend the implementation of a transparent sustainability rating system or building code.

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

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

0	<p>The medical school has not implemented strategies to encourage and provide environmentally-friendly transportation options.</p>
<p><i>Score explanation:</i></p> <p>The University has in the past made a Travel Plan which details the University’s strategy for increasing the uptake of sustainable travel across the University.</p> <p>The last plan made was for between the years of 2015-2020. A survey was undertaken in February 2020, the results of which would have been used to make the next 5 year plan however, the Covid-19 pandemic stalled this process. There are hopes than an interim plan will be released soon.</p> <p>A range of initiatives which aim to encourage active travel options within the student community have been undertaken by the university. This includes the provision of Sheffield cycle stands at most builds and showering facilities. In 2021, a Bike Hub was launched. The Hub caters to students and staff: selling refurbished bikes, renting bikes and offering a range of servicing options.</p> <p>Additionally, the bike parking provisions increased by 20% this year with more cycling stands on campus. There are also plans to design a new bike lane on Botanic Avenue, one of the main streets adjacent to the university, connecting it with Belfast City Centre.</p> <p>Public transport is encouraged, and the university has links with Translink (the local public transport company) and has hosted events to promote travel with Translink in the past. To connect The School of Medicine, Dentistry and Biomedical Sciences with the Royal Victoria Hospital, a shuttle bus, which is free for staff and students, routinely travels between the two sites.</p> <p>A Queen’s Travel Survey is completed every two years, the results of which are used to encourage students and staff to take more sustainable means of travel. However, due to the Covid-19 pandemic, the latest survey was completed in 2018.</p> <p>https://www.qub.ac.uk/directorates/EstatesDirectorate/Services/SustainabilityatQueens/SustainableTravel/</p> <p><i>Recommendations:</i> The university should continue to promote the sustainable travel options available at QUB, and should re-engage with Translink to positively promote and public transport. As soon as possible, the university should complete another Travel Survey and release an updated Travel Plan.</p>	

6. Does your medical school have an organics recycling program (compost) and a conventional recycling program (aluminium/paper/plastic/glass)?	
2	Yes, the medical school has both compost and recycling programs accessible to students and faculty.
1	The medical school has either recycling or compost programs accessible to students and faculty, but not both.

0	There is no compost or recycling program at the medical school.
<p><i>Score explanation:</i></p> <p>There is a university-wide strategy to reduce the amount of waste going to landfill, and as a result, 85% of the University’s waste is diverted from landfill. As a result, all buildings across the campus have bins for the recycling of items including batteries, books, cardboard, metal, paper, plastics, and glass. Additionally, all organic waste generated from gardening and food waste from student accommodation and university catering outlets is directed to composting. However, there are no food waste bins accessible to students in the majority of university buildings.</p> <p>https://www.qub.ac.uk/about/sustainability/campus-activities/ https://www.qub.ac.uk/directorates/EstatesDirectorate/Services/SustainabilityatQueens/WasteandRecycling/</p> <p><i>Recommendations:</i> We recommend that the university introduces food compost bins to all major university buildings, and continues to reduce the amount of waste going to landfill.</p>	

7. Does the medical school apply sustainability criteria when making decisions about the campus food and beverage selections (e.g. local sourcing, reduced meat, decreased plastic packaging)?	
3	Yes, the medical school has adequate sustainability requirements for food and beverages, including meat-free days or no red-meat, and is engaged in efforts to increase food and beverage sustainability.
2	There are sustainability guidelines for food and beverages, but they are insufficient or optional. The medical school is engaged in efforts to increase food and beverage sustainability.
1	There are sustainability guidelines for food and beverages, but they are insufficient or optional. The medical school is not engaged in efforts to increase food and beverage sustainability.
0	There are no sustainability guidelines for food and beverages.
<p><i>Score explanation:</i></p> <p>The medical school itself does not have a direct role in campus food and beverage selections. There are a number of campus-wide initiatives involving both the university and the private companies who run campus catering outlets to source food sustainably. There is university-wide guidance on sourcing produce that is both local and seasonal. Campus Food & Drink have also established a ‘Plastic Reduction Project Group’ in collaboration with the Estates Environmental Team with the goal of reducing single use plastic consumption across campus catering outlets. Although there are no meat-free days, the campus catering outlets provide a large number of meat-free options daily, which is a huge improvement in the past number of years, especially considering NI’s farming culture and meat-reliant diets.</p> <p>https://www.qub.ac.uk/sites/campus-food-drink/Sustainability/</p>	

Recommendations: We recommend that the university introduces more sustainable food choice initiatives in campus catering outlets, and continues to support local and seasonal choices, and to reduce plastic packaging across campus catering outlets.

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

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

Score explanation:

The university has a “Supply Chain Code of Conduct” which references the United Nations Sustainable Development Goals. This Code of Conduct includes emphasising the “Environmental Compliance” of suppliers. The Procurement Team also encourage suppliers to register with NETpositive - a tool designed to assist suppliers create sustainability action plans for their own businesses.

<https://www.qub.ac.uk/directorates/FinanceDirectorate/visitors/procurement/>

Recommendations: We recommend that the university continues to apply sustainability criteria for supply procurement for all suppliers. These criteria should be made compulsory for suppliers and should require higher dedication to sustainable practices.

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:

Any medical school events catered for by Campus Food and Drink will incorporate their sustainability initiatives. Larger events at QUB, such as conferences, are managed by the Events Team, who have

achieved a Silver Award in the Green Impact accreditation scheme. However, there are no formal guidelines within the medical school governing the sustainability of events. We appreciate that this is partly because medical school events can often be informal society events held out of office hours, and can be held across a number of buildings.

<https://www.qub.ac.uk/sites/campus-food-drink/FileStore/Fileupload,967613.en.pdf>

<https://www.qub.ac.uk/events-at-queens/GreenatQueens/>

Recommendations: We would encourage the medical school to distribute sustainability guidelines to the medical societies, to be followed at their informal events. We would also encourage the medical school to make these guidelines transparent, and to implement them across the School of Medicine, Dentistry and Biomedical Sciences – who share a number of spaces across 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.

Score explanation:

Research labs within the School of Medicine, Dentistry and Biomedical Sciences are committed to the LEAF (Laboratory Efficiency Assessment Framework) pilot certification programme. A number of other schools across the university have also committed to this initiative. This framework proposes a set of actions which aims to make labs more aware of their sustainability – relating to waste, travel, energy, water, procurement and research quality - which must be achieved to be awarded a Bronze, Silver or Gold certification.

<https://www.qub.ac.uk/directorates/EstatesDirectorate/Services/SustainabilityatQueens/GreenatQueensE-Zine/>

<https://www.ucl.ac.uk/sustainable/staff/labs/take-part-leaf>

Recommendations: We hope that, following the pilot of this scheme, the LEAF programme will be established in all lab spaces across the university.

11. Does your institution’s endowment portfolio investments include fossil-fuel companies?

4	The institution is entirely divested from fossil fuels and has made a commitment to reinvest divested funds into renewable energy companies or renewable energy campus initiatives.
---	---

3	No, the institution is entirely divested from fossil fuels.
2	The institution has partially divested from fossil fuel companies or has made a commitment to fully divest, but currently still has fossil fuel investments.
1	The institution has not divested from fossil-fuel companies, but faculty and/or students are conducting organised advocacy for divestment.
0	Yes, the institution has investments with fossil-fuel companies and there have been no efforts to change that.

Score explanation:

In May 2017, QUB announced its intentions to divest from fossil fuel extraction and production companies by 2025 – in part due to a two year long “Fossil Free QUB” campaign led by the QUBSU Climate Action Group.

The University’s latest “Responsible Investment Policy” was approved on 15 December 2020 and references “Environmental, Social and Corporate Governance” factors and “Responsible Investment” as being important factors in investment decision making. It states that it expects its fund manager will “act in a way that reduces and, ideally, eliminates corporate behaviour leading to environmental degradation [and] climate change”.

This policy does not necessitate complete divestment from fossil fuels and leaves this issue at the discretion of the fund manager BlackRock Investment Management.

These promises have now been incorporated into the University’s “Strategy 2030” however, there remains no tangible strategy for the complete divestment from fossil fuel companies.

<https://www.qub.ac.uk/directorates/FinanceDirectorate/visitors/FileStore-Visitors/ResponsibleInvestmentPolicy/Fileupload,1011043,en.pdf>

Recommendations: We implore QUB to urgently divest completely from fossil fuels and to reinvest into renewable energy companies or renewable energy campus initiatives. The university should work with BlackRock Investment Management to create a responsible and transparent investment strategy.

Section Total (18 out of 31)	58%
-------------------------------------	------------

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%

Planetary Health Grades for the Queen's University Belfast School of Medicine

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

Section	Raw Score	Letter Grade
Planetary Health Curriculum (30%)	$(53 / 69) \times 100 = 77\%$	B+
Interdisciplinary Research (17.5%)	$(13 / 17) \times 100 = 76\%$	B+
Community Outreach and Advocacy (17.5%)	$(9 / 14) \times 100 = 64\%$	B-
Support for Student-led Planetary Health Initiatives (17.5%)	$(12 / 15) \times 100 = 80\%$	A-
Campus Sustainability (17.5%)	$(18 / 31) \times 100 = 58\%$	C+
Institutional Grade	72 %	B

Report Card Trends

Section Overview

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

Planetary Health Report Card Trends for Queen's University Belfast

