



Planetary Health Report Card (Pharmacy):

Queen's University Belfast



2024-2025 Contributing Team:

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Summary of Findings

Overall Grade	B
Curriculum	C+
<p>Sustainable choice of inhalers, the impact of a changing environment on certain disease states and methods for designing treatment plans to reduce their carbon impact is covered in depth within core teaching.</p> <p>Recommendations: The School of Pharmacy should continue to update the course modules to include teaching about environmentally favourable practice as new information becomes available. The degree pathway should maintain and develop its practical workshops to encourage students to automatically consider sustainability in their new future prescribing roles as well as in traditional dispensing duties. More information could also be disseminated about the carbon footprint of the NHS and strategies that are being considered to reduce its impact.</p>	
Interdisciplinary Research	A
<p>There are a number of researchers at QUB who produce research on planetary health and the Centre for Sustainability, Equality and Climate Action (SECA) encourages interdisciplinary research in areas related to planetary health. The SECA website is accessible and provides information on publications relevant to planetary health.</p> <p>Recommendations: QUB should encourage and facilitate research in healthcare sustainability, alongside supporting research in planetary health. Suggestions made during workshops hosted by SECA, such as some implying communities affected by climate change could have input on the research agenda, should be made into action plans on SECA's website to show the progress being made.</p>	
Community Outreach and Advocacy	B
<p>Queen's University Belfast continues to make efforts to collaborate with community organisations. This is evidenced through the multiple events run by the university's Estates team such as, REACH 24, and events in the NI Science Fest such as "Climate Emergency Department" and "Queen's Biology Showcase"</p> <p>Recommendations: The medical school should continue to collaborate with the local community through their SSCs. More work should be done to create transdisciplinary events faced to the public. The creation of educational resources for patients on planetary health should be a long term goal.</p>	
Support for Student-Led Initiatives	A
<p>In terms of Planetary Health Queen's University Belfast has been an advocate for Supporting Student-Led initiatives and has actively been trying to bridge the gap between staff and student involvement. There are many working groups, made up of both staff and students, that are at the centre front of sustainability initiatives and net zero targets. The university annually provides a various array of events (from volunteering outdoor activities to panel discussions) surrounding sustainability providing its students with many chances to engage with and join planetary health initiatives.</p> <p>Recommendations: The university should make efforts to ensure that annually there are a number of events in various formats around sustainability and that certain types of events/ student opportunities are not a one off occurrence. It would be good to build and have a series of revisited annual sustainability opportunities for students whether that be research, volunteering or creative arts.</p>	
Campus Sustainability	B

Queen's University Belfast has made significant efforts to incorporate sustainable practices into the campus through building, lab spaces, transport, recycling programs, and an ambitious plan to achieve net neutrality by 2040.

Recommendations: To comply with the goal of Net Neutrality by 2040 further action needs to be taken such as completely divesting from fossil fuel investments, appointing a designated staff member for the hospital sustainability, and sourcing more energy from renewable sources.

Statement of Purpose

Planetary health is human health.

The Planetary Health Alliance describes planetary health as “a solutions-oriented, transdisciplinary field and social movement focused on 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 health professional schools’ 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 health professional training. It is imperative that we hold our institutions accountable for educating health professional 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 health professional schools, we have created a Planetary Health Report Card that students internationally can use to grade and compare their institutions on an annual basis. This student-driven initiative aims to compare health professional 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, 4) community outreach centred on environmental health impacts, and 5) medical school campus sustainability.

Definitions & Other Considerations

Definitions:

- **Planetary Health:** is described by the Planetary Health Alliance as “the health of human civilisation and the state of the natural systems on which it depends.” For example, topics such as climate change, declining biodiversity, shortages of arable land and freshwater, and pollution would all fall under the realm of planetary health. Both planetary health and traditional ‘environmental health’ examine the relationship between human health and the external environment, including extreme temperatures, chemicals, vector-borne diseases, etc. Planetary health explicitly concerns itself with the potential health harms associated with human-caused perturbations of natural systems. Therefore, the human health focus of planetary health makes the field well-adapted for the context of health professional 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.
- **Sustainable Healthcare:** As defined by the Academy of Royal Colleges, sustainable healthcare involves ensuring the ability to provide good quality care for future generations by balancing the economic, environmental, and social constraints and demands within health care settings. A sustainable healthcare system maintains population health, reduces disease burden and minimises use of healthcare services.
- **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.
- **Pharmacy School/Department vs. Institution:** When “Pharmacy school” is specified in the report card, this only refers to curriculum and resources offered by the School/department of pharmacy and does not include offerings from other parts of the university (e.g. undergraduate departments (USA), other related departments (e.g. Public Health, Population Health departments). In contrast, when “institution” is specified in the report card, we are referring to the university more broadly including all of its campuses. Any resource reasonably accessible by pharmacy students, no matter where in the institution the resource comes from or if it is

specifically targeted for pharmacy students, can meet this metric.

- **Environmental history:** This is a series of questions students 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 mould after flooding. Key components include place of residence over the lifecourse, occupational history, food and water sources (e.g. meat from industrial feeding operations, regular fishing in contaminated water, access to clean drinking water), and exposure to air pollution. Please be as specific as possible when providing evidence for this metric.
- **Elective:** The word "elective" refers to an optional course or lecture series that a 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.
- **Core Curriculum:** This refers to taught material that is delivered to the entire cohort of students in one year.
- **Clerkship / Outreach:** This is a term used in the USA to refer to placements that medical students go on e.g. Pediatrics, General medicine, Psychiatry. In the UK these are referred to as rotations, outreach or placements. This is a relatively short (approximately 4-8 weeks) period of study and patient-centred clinical experience that takes place as part of the undergraduate programme.
- **Clinical rotation:** This is a term used to refer to placements that students go on (e.g., ophthalmology, surgery, cardiology).
- **Physiotherapy vs Physical Therapy:** For the purposes of this report card these terms are considered interchangeable. However, physiotherapy will be used primarily.
- **Community organisations:** For most institutions, there are existing groups that are not directly affiliated with the university and exist as a product of what the community the institution exists in cares about or needs. These specific community organisations relevant to this report include those that are focused around some aspect of climate and health preservation. These community organisations can include but are not limited to local mutual aid initiatives, underserved-resource distribution groups, clean-up and nature conservation groups, community gardeners, and other environmental-related organisations. If your institution does not have access to local volunteerships with community groups, please report any community organisations your institution or school has collaborated with.
- **Climate justice:** The idea that certain population groups and geographical locations which are disproportionately more impacted by climate change are already economically and socially disadvantaged. This double vulnerability sits alongside pre-existing social justice concerns and should therefore shift policy and practice to mitigate the inequitable effects of the climate crisis.
- **Extractivism:** The removal of natural resources typically in large quantities. Within anthropology this term is often used in the context of colonialism to refer to the

historic seizing of natural resources, a practice which has developed business models tied to ecological degradation and loss of biodiversity.

- **Global South:** Nations that often have less economic and industrial development and are typically in the southern hemisphere. These nations have been found to be disproportionately impacted by the climate crisis.
- **Low socioeconomic status (SES):** An individual or geographical area that across a variety of socioeconomic factors (e.g., income, education, race/ethnicity) is considered vulnerable. This vulnerability has been correlated to more adverse health outcomes often as a consequence of encountering more barriers in accessing and receiving healthcare.
- **Low and Middle-Income Countries (LMIC):** Countries that have lower degrees of economic affluence.
- **Anthropogenic:** Created through human activity
- **Marginalized communities:** Groups excluded from mainstream economic, educational, social, and/or cultural experiences due to race, gender identity, sexual orientation, age, physical ability, language, and/or immigration status (Sevelius et al., 2020).

Other considerations:

- If there is more than one “track” at your institution 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 examples). Where possible please indicate the proportion of students that are on each track.

Completed in 2022 a [Literature Review by Metric](#) is available for the 2022 medicine report card metrics. We are in the process of updating this review and making it more applicable to all the disciplines. However the review serves as a rough 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 planetary health topics into the pharmacy school curriculum. Today's pharmacy students will be on the frontlines of tackling the health effects of climate and other environmental changes. Therefore, it is critical that pharmacy students understand planetary health issues and principles.

1.1 Does your pharmacy school curriculum address the impacts of extreme weather events on individual health and/or on healthcare systems?	
This topic was explored in depth by the core curriculum. (3 points)	
This topic was briefly covered in the core curriculum. (2 points)	
This topic was covered in elective coursework. (1 point)	
This topic was not covered. (0 points)	
Score Assigned:	2
<p>Score explanation:</p> <p>The Level 1 module '<i>How the Human Body Works</i>' discusses the impact of pollution and extreme temperatures on the function of the cardiovascular system. A lecture on thermoregulation outlines that humans may be more vulnerable to hypo/hyperthermia due to climate change.</p> <p>In Level 2 '<i>Clinical Pharmacology and Therapeutics 1</i>', temperature inversions, cold weather, and a storm's ability to whip up pollen is discussed in relation to how each can impact on asthma symptoms and condition control.</p> <p>The impacts of extreme weather events on individual health or healthcare systems is mentioned briefly in a Level 3 Medicines Optimisation workshop in the '<i>Placements and Preparation for Professional Practise 2</i>' module. The link between climate change and the increased length of allergies and antihistamine use is discussed. Reasons given for this include plants flowering for much longer periods in the UK and Ireland and stormy weather moving pollen across much wider areas than before.</p> <p><i>Recommendation:</i></p> <p><i>A compulsory Level 1 workshop in the module 'Skills for Pharmacy' addresses 'Sustainability and the United Nations Sustainable Development Goals' (SUNSDG). This involves a group exercise in which students review the Goals and discuss their knowledge of the Goals before and after the workshop. They are tasked to debate what goals will be important in their future roles as pharmacists. There may be potential within this workshop to discuss the impact that extreme weather events could have on the roll out of drugs and could be included as part of this teaching.</i></p>	

1.2 Does your pharmacy school curriculum address the environmental impact of medicines in terms of their pollution, ecological impact and contamination of water systems?

This topic was explored **in depth** by the **core** curriculum. (3 points)

This topic was **briefly** covered in the **core** curriculum. (2 points)

This topic was covered in **elective** coursework. (1 point)

This topic was **not** covered. (0 points)

Score Assigned:

3

Score explanation:

As mentioned in metric 1, the Level 1 workshop (SUNSDG) in the '*Skills for Pharmacy*' module considers a group exercise in which students look at a new drug under development for a chronic disease. The students are tasked with deciding what Sustainable Development Goals need to be considered to ensure sustainable production and roll out of the drug. They discuss the process of production, ethical global access and delivery on the ground, and debate how each step can be made more sustainable.

In teaching about the respiratory system in the Level 2 '*Clinical Pharmacology and Therapeutics I*' module, a table containing information about the respective environmental impact of different types and brands of inhalers is made available to students. This helps to create an awareness of the inhalers' role in contributing to climate change and can help students to consider more climate friendly alternatives.

Two modules in Level 2 and 3, '*Placements and Preparation for Professional Practice 1*' and '*Placements and Preparation for Professional Practice 2*' address the environmental impact of medicines and medical devices through simulated scenarios. Students are taught how to dispose of medicines correctly to harness the co-benefits of reducing their polluting ecological impact while simultaneously maintaining patient/ health professional safety.

The environmental impact of inhalers is also discussed in the Level 4 module '*Placements and Preparation for Professional Practice 3*'.

Throughout the MPharm pathway students are shown in laboratory-based learning as to where they can dispose of chemical material and waste correctly, to simultaneously prevent harmful pollution and mitigate safety hazards.

This is taught in the following modules; level (L)

L1 Physical and Chemical Properties of Drug Molecules

L1 - Microbes and Medicines

L1- How the Human Body Works

L2 - Pharmaceutical Technology

L2 - Medicinal Substances

L3 - Advanced Delivery of Large and Small Molecules

L4 - Research Project

Recommendation: The School of Pharmacy should continue to integrate this topic longitudinally in the curriculum. There could be increased teaching on how other dosage forms of medication may enter the environment and a more in-depth discussion on resulting pollution and health impacts that this may have.

1.3 Does your pharmacy school curriculum address the health effects of pharmaceutical industry- and manufacturing-related environmental toxins?

This topic was explored **in depth** by the **core** curriculum. (3 points)

This topic was **briefly** covered in the **core** curriculum. (2 points)

This topic was covered in **elective** coursework. (1 point)

This topic was **not** covered. (0 points)

Score Assigned:

0

Score explanation:

There is teaching presented in the module ‘*Advanced Delivery of Large and Small Molecules*’ in Level 3 that highlights processes of manufacture that are less environmentally friendly, but the health effects of the pharmaceutical industry and specific manufacturing related environmental toxins are not covered here.

Students are encouraged to dispose of material correctly during laboratory-based learning, but this is not emphasized as an action to mitigate adverse health effects of toxins as a by-product of the process of manufacture.

The Level 1 SUNSDG workshop in the ‘*Skills for Pharmacy*’ module explores the sustainable roll out and production of a new drug. This learning however focuses on increasing discussion broadly as to how processes can be made more sustainable, rather than addressing the health effects of toxins as a by-product of manufacture of the pharmaceutical industry.

Recommendation: There could be increased emphasis placed on the health effects of pollution and an awareness created about specific toxins released within lectures covering manufacturing processes in the module ‘Pharmaceutical Technology.’

1.4. Does your pharmacy school curriculum address the carbon footprint of healthcare systems?

This topic was explored **in depth** by the **core** curriculum. (3 points)

This topic was **briefly** covered in the **core** curriculum. (2 points)

This topic was covered in elective coursework. (1 point)	
This topic was not covered. (0 points)	
Score Assigned:	2
<p>Score explanation:</p> <p>The Level 1 SUNSDG workshop in the ‘<i>Skills for Pharmacy</i>’ module briefly discusses the need for systems to be more sustainable and implies within this the need for healthcare systems to also improve.</p> <p>The carbon footprint of inhalers is discussed in Level 2 ‘<i>Clinical Pharmacology and Therapeutics 1</i>’ and two resources, one evaluating the carbon footprint of each inhaler and a second from NICE guidelines giving information on inhalers and climate change, is disseminated.</p> <p>The carbon footprint of the NHS is discussed in the module ‘<i>Advanced Delivery of Large and Small Molecules</i>’ in Level 3 and in Level 4 in ‘<i>Placements and Preparation for Professional Practice 3</i>’ guided by information provided by the Royal Pharmaceutical Society in conjunction with teaching on inhalers.</p> <p>A new deprescribing workshop in Level 3 will reinforce that one of the benefits of deprescribing is reducing the carbon footprint of medicines.</p> <p><i>Recommendation: There could be more longitudinal teaching incorporated into the curriculum on the environmental impacts of the NHS and a comparison made with other healthcare systems to highlight how improvements could be made.</i></p>	

1.5. Does your pharmacy school curriculum address the impact of climate change on the changing patterns of infectious diseases and increased antimicrobial resistance?	
This topic was explored in depth by the core curriculum. (3 points)	
This topic was briefly covered in the core curriculum. (2 points)	
This topic was covered in elective coursework. (1 point)	
This topic was not covered. (0 points)	
Score Assigned:	2
<p>Score explanation:</p> <p>In Level 1 module ‘<i>Microbes and Medicines</i>’, Level 2 ‘<i>Clinical Pharmacology and Therapeutics 1</i>’ and Level 3 ‘<i>Clinical Pharmacology and Therapeutics 2</i>’, patterns of infection, increased antimicrobial resistance, antimicrobial stewardship and mechanisms of resistance are discussed in detail. The prescribing and deprescribing of antibiotics using current guidelines, severity assessment tools and delayed prescribing is addressed as a measure to reduce antimicrobial</p>	

resistance. The importance of finishing a course of antibiotics to prevent antimicrobial resistance is also highlighted to students. It is expected that they counsel patients on this while on placement.

Practice discussing with patients the rationale behind why an antibiotic may not be appropriate for them including self-care counselling is provided in Level 2 '*Clinical Pharmacology and Therapeutics 1*'. This teaching is all discussed in the context of recognising and addressing problems arising from a change pattern of infectious disease.

Recommendations: While covering the topics outlined above, it could be considered to discuss the role of climate change as a contributing factor for increasing patterns of infectious disease and antimicrobial resistance.

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

This topic was explored **in depth** by the **core** curriculum. (3 points)

This topic was **briefly** covered in the **core** curriculum. (2 points)

This topic was covered in **elective** coursework. (1 point)

This topic was **not** covered. (0 points)

Score Assigned:

3

Score explanation:

Pollution from burning biomass is covered as a contributing factor towards the development of COPD in lectures addressing the respiratory system in Level 2 module '*Clinical Pharmacology and Therapeutics 1*'.

Air pollution as a contributing factor for asthma attacks is also discussed within this lecture series, and the first death of a child with air pollution stated as a contributing factor by the coroner's report is highlighted.

As previously mentioned in metric 1.2, a resource containing information about the respective environmental impact of different types and brands of inhalers is made available to students to increase awareness about their effects in contributing to climate change.

Recommendation: The School of Pharmacy should continue to integrate this topic longitudinally throughout the course and could place further practical advice and emphasis on selecting the most climate friendly inhaler type when completing medication reviews or commencing a patient on a new treatment. It could be considered that the impact of pollution on the respiratory system be incorporated into respiratory learning in Level 1.

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

This topic was explored **in depth** by the **core** curriculum. (3 points)

This topic was **briefly** covered in the **core** curriculum. (2 points)

This topic was covered in **elective** coursework. (1 point)

This topic was **not** covered. (0 points)

Score Assigned:

3

Score explanation:

The Level 1 module '*How the Human Body Works*' discusses the impact of pollution and extreme temperatures on the function of the cardiovascular system. A lecture on thermoregulation outlines that humans may be more vulnerable to hypo/hyperthermia due to climate change.

In the Level 3 'Clinical Pharmacology and Therapeutics 2' module, pollution as an increasingly prevalent risk factor for some cardiovascular conditions is discussed.

Recommendation: Within this module there could also be teaching incorporated that addresses the link between risk of extreme weather events and climate change and cardiovascular health.

1.8. Does your pharmacy school curriculum address the relationship between climate change and allergies?

This topic was explored **in depth** by the **core** curriculum. (3 points)

This topic was **briefly** covered in the **core** curriculum. (2 points)

This topic was covered in **elective** coursework. (1 point)

This topic was **not** covered. (0 points)

Score Assigned:

2

Score explanation:

The relationship between climate change and allergies is mentioned briefly in a Level 3 Medicines Optimisation workshop as mentioned in metric 1.1. The link between climate change and an increased length of allergies and antihistamine use is discussed. Reasons given for this include plants flowering for much longer periods in the UK and Ireland and stormy weather moving pollen across much wider areas than before.

As mentioned in metric 1.1, in the Level 2 module '*Clinical Pharmacology and Therapeutics 1*', temperature inversions, cold weather, and a storm's ability to whip up pollen is discussed in relation to how each can impact on asthma symptoms and condition control.

Recommendation: As the link between the effects of climate change and allergies are already mentioned in the module 'Clinical Pharmacology and Therapeutics 1', it might be possible to frame the discussion to include that there is a high probability that such effects are increasingly being caused by climate change and that there is potential for such events and their consequences to become more frequent in the future.

1.9. Does your pharmacy school curriculum address the mental health and neuropsychological effects of environmental degradation and climate change?

This topic was explored **in depth** by the **core** curriculum. (3 points)

This topic was **briefly** covered in the **core** curriculum. (2 points)

This topic was covered in **elective** coursework. (1 point)

This topic was **not** covered. (0 points)

Score Assigned:

0

Score explanation:

Mental health and neuropsychological effects of environmental degradation and climate change are not addressed in the pharmacy curriculum.

The Level 1 SUNSDG workshop in the module 'Skills for Pharmacy' touches on the importance of an awareness of mental health and the promotion of good mental health, however, this is not discussed in the context of climate anxiety or related neuropsychological effects because of environmental degradation.

Recommendation: This topic could potentially be covered by the Level 1 workshop or within another lecture or lecture series dedicated to 'Pharmacists and Climate Change/Sustainability'. Students could be prompted to consider the counselling of a patient who has experienced negative mental health because of the impacts of climate change. The role of the pharmacist in managing such health effects of climate change could be discussed. Pharmacists could be made aware of resources to signpost patients to if such a topic arose during a consultation.

1.10. Does your pharmacy school curriculum address the unequal regional health impacts of climate change nationally and globally, including the impact of social inequality?

This topic was explored **in depth** by the **core** curriculum. (3 points)

This topic was **briefly** covered in the **core** curriculum. (2 points)

This topic was covered in **elective** coursework. (1 point)

This topic was **not** covered. (0 points)

Score Assigned:	2
<p>Score explanation:</p> <p>The Level 1 SUNSDG workshop within the ‘<i>Skills for Pharmacy</i>’ module discusses the Sustainable Development Goals and social inequality. The impact of climate change is also discussed within this session.</p> <p><i>Recommendations: This Level 1 workshop could highlight unequal regional health nationally/globally more specifically as a potential result of climate change. It could be included within this discussion as to how marginalized groups are disproportionately affected and what negative health outcomes this may result in.</i></p>	

1.11 Does your pharmacy school curriculum address the relationship between climate change and social determinants of health (e.g., reduced nutritional value of food)?	
This topic was explored in depth by the core curriculum. (3 points)	
This topic was briefly covered in the core curriculum. (2 points)	
This topic was covered in elective coursework. (1 point)	
This topic was not covered. (0 points)	
Score Assigned:	3
<p>Score explanation:</p> <p>The Level 1 SUNSDG workshop in the module ‘<i>Skills for Pharmacy</i>’ discusses the social determinants of health within the Sustainable Development Goals. A slide briefly mentions the effect of diet on the health of people and on the planet. The teaching does not however go into detail about the relationship between climate change and for example the reduced nutritional value of food and its impact on health outcomes.</p> <p>Lectures on infant nutrition in Level 1 highlight the role of breastfeeding in promoting sustainability by offering a renewable resource, reducing the environmental impact associated with production and disposal of formula packaging, bottles and sterilising equipment. It highlights that breastfeeding provides an accessible cost-effective source of optimal nutrition which reduces resource use linked to infant illness. Support of this aligns with broader sustainability goals. The importance of this practice specifically in lower income countries is discussed.</p> <p><i>Recommendation: There is teaching on the social determinants of health already incorporated into the curriculum in the Level 1 module ‘Introduction to the Profession and Practice of Pharmacy.’ This could be modified to include teaching on how climate affects food and healthcare availability as social determinants of health. It could be highlighted how this may negatively impact on patient outcomes. There could be more longitudinal teaching throughout the MPharm degree pathway on the relationship between climate change and the social determinants of health.</i></p>	

1.12. Does your pharmacy school curriculum address the environmental and health co-benefits of a plant-based diet?	
This topic was explored in depth by the core curriculum. (3 points)	
This topic was briefly covered in the core curriculum. (2 points)	
This topic was covered in elective coursework. (1 point)	
This topic was not covered. (0 points)	
Score Assigned:	2
<p>Score explanation:</p> <p>As mentioned in 11 above, the Level 1 SUNSDG workshop in the 'Skills for Pharmacy' module discusses the effect of diet on the health of people and on the planet but does not yet explore in depth what this consists of. There is further coverage of a plant based and teaching surrounding other nutritional teaching in Level 1 such as the nutritional needs of infants. Students are primarily taught about dietary advice outlined by organisations such as NHS/NICE.</p> <p><i>Recommendations: The environmental and health co-benefits of a plant-based diet with an emphasis on reducing reliance on animal based or processed food could be taught under non-pharmacological methods to reduce risk factors for disease. The environmental advantage could also be outlined more clearly. Students could be taught how to help patients interested in adopting a more plant-based diet find accurate guidance on nutritional requirements to promote best patient outcomes and prevent deficiencies. Counselling opportunities for students on this topic could be explored.</i></p>	

1.13. Does your pharmacy school curriculum cover these components of sustainable clinical practice? (1 point each)	Score
Waste production within the healthcare system and strategies for reducing waste in clinical activities such as single use plastic and packaging. (1 point)	1
Patient counselling on safe disposal of medications. For example, what can be disposed of and how to locate recycling schemes, in addition to certain drugs or drug classes that are most important to dispose of properly (e.g. hormonal contraceptives, drugs that are excreted unchanged/active metabolites). (1 point)	1
The impact of extreme heat, on patients on medications which can interfere with thermoregulation. (1 point)	1
The impact of anaesthetic gases on the healthcare carbon footprint. (1 point)	0

The environmental impact of pharmaceuticals and over-prescribing as a cause of climate health harm. Alternatively, teaching on de-prescribing where clinically appropriate and its environmental and health co-benefits would fulfil this metric. (1 point)	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 point)	1
The impact and benefits of benign by design pharmaceuticals through exploring medicinal chemistry concepts and/or discussing implications of excretion of active metabolites/unchanged drug products on ecological system. (1 point)	0
Score Assigned:	5
<p>Score explanation:</p> <p>Biopolymers are addressed in the module '<i>Pharmaceutical Technology</i>' in Level 2 as a method to reduce the burden of single use plastics in industry.</p> <p>Medicines optimisation and reducing waste generated by overprescribing or poor patient compliance is highlighted in the Entrustable Professional Activities (EPAs) completed during placement within the '<i>Placements and Preparation for Professional Practice 2</i>' module in Level 3. The importance of counselling patients on bringing back medicinal products to the pharmacy for safe disposal is also outlined during this teaching. Absorption affected by heat in transdermal delivery with fentanyl patches is also discussed.</p> <p>Teaching in Level 2 and 3 in the modules '<i>Clinical Pharmacology and Therapeutics 1 and 2</i>' on drugs which may impair circulation (e.g. beta blockers and diuretics) highlight that such drugs could put patients at increased risk of overheating in circumstances of extreme heat.</p> <p>The carbon footprint of anaesthetic gases is not covered by the curriculum.</p> <p>The overprescribing of antibiotics is addressed in lectures discussing antimicrobial stewardship in Level 1 '<i>Microbes and Medicines</i>' and in Levels 2 and 3 in '<i>Clinical Pharmacology and Therapeutics 1 and 2</i>' as a factor which increases infectious disease and antimicrobial resistance. The co-benefits of reducing waste while promoting patient health and safety is outlined and discussed with students.</p> <p>Benefits of healthy social practices and outdoor exercise are addressed in the modules '<i>Clinical Pharmacology and Therapeutics 1 and 2</i>' in Levels 2 and 3 in the Cardiovascular Disease and Diabetes lecture series.</p> <p><i>Recommendation: The School of Pharmacy should continue to integrate topics outlined above longitudinally in the curriculum. The impact on the environment of anaesthetic gases could be outlined in lectures addressing the use of anaesthetics. The module Pharmaceutical Technology could explore incorporation of the impact and benefits of benign by design pharmaceuticals through exploring medicinal chemistry concepts and/or discussing implications of excretion of active metabolites/unchanged drug products on ecological systems in Level 2.</i></p>	

1.14. Does your pharmacy school curriculum discuss the environmental implications of various dosage forms, medication delivery devices, and/or excipients?

This topic was explored **in depth** by the **core** curriculum. (3 points)

This topic was **briefly** covered in the **core** curriculum. (2 points)

This topic was covered in **elective** coursework. (1 point)

This topic was **not** covered. (0 points)

Score Assigned:

3

Score explanation:

The benefits of biopolymers when compared with traditional plastics is discussed in the module '*Pharmaceutical Technology*' in Level 2.

The benefits of reducing packaging and encouraging proper management of medicines to prevent wastage of out-of-date stock is also addressed in the modules '*Pharmaceutical Technology*' in Level 2, and in '*Placements and Preparation for Professional Practice*' in Levels 2 and 3.

The environmental harm caused by inhalers and the discontinuation of CFCs through policy change is discussed in Level 2 '*Pharmaceutical Technology*'. As previously highlighted, a resource containing information about the respective environmental impact of different types and brands of inhalers is made available to students in the '*Clinical Pharmacology and Therapeutics 1*' module to increase awareness about their effects when making prescribing decisions. A new deprescribing workshop in Level 3 will reinforce this process's benefit of reducing carbon footprint of medicines use.

Recommendations: The School of Pharmacy should continue to integrate the topics outlined above with a focus on increasing longitudinal incorporation throughout the curriculum. There could be increased teaching on how use of dosage forms other than inhalers may affect the environment and their impact on climate change could be outlined more clearly.

1.15. In training for patient communication, does your pharmacy school's curriculum introduce strategies for having conversations with patients about the health effects of climate change?

Yes, there are clear and detailed strategies introduced for having conversations with patients about climate change in the core curriculum (3 points)

Yes, having conversations with patients about climate change is briefly mentioned in the core curriculum. (2 points)

Yes, there are some examples of having conversations with patients about climate change in elective coursework. (1 point)	
No, there are not strategies or examples for having conversations with patients about climate change (0 points)	
Score Assigned:	0
<p>Score explanation:</p> <p>The curriculum does not directly address having conversations with patients about climate change, however the benefits of low carbon footprint inhalers are discussed in the Level 4 module 'Placements and Preparation for Professional Practice 3'.</p> <p><i>Recommendation: Simulated conversation with patients about climate change could be incorporated into the curriculum in the Level 1 SUNSDG workshop. Such teaching could aim to outline and discuss with students the role of the pharmacist and multidisciplinary teams in participating in such patient interactions. However, it is likely that these conversations need to be linked to counselling and advice around medication and conditions as it is unlikely that a healthcare professional would have the chance to speak solely about the health effects of climate change in a broad sense during a consultation.</i></p>	

1.16. Does your pharmacy school curriculum guide students to consider the environmental impact of medications as a factor in addition to safety, efficacy, cost, and pill burden when comparing equivalent therapies?	
This topic was explored in depth by the core curriculum. (3 points)	
This topic was briefly covered in the core curriculum. (2 points)	
This topic was covered in elective coursework. (1 point)	
This topic was not covered. (0 points)	
Score Assigned:	2
<p>Score explanation:</p> <p>Entrustable professional activity (EPA) forms to be completed on placement throughout the MPharm degree guide students to consider the environmental impact of the therapies prescribed and encourage students to check whether a more environmentally friendly alternative is available.</p> <p>The resource containing information about the respective environmental impact of different types and brands of inhalers also helps students to consider the environmental impact of medications as a factor when comparing equivalent therapies.</p>	

Recommendations: There could be further emphasis on providing students with resources to assess the environmental impact of other medicinal products. At present, students are asked to consider the impact of different dosage formulations, but lack resources, except when it comes to inhalers as to how they can find climate friendly alternatives. Students make decisions based predominantly on the National Institute for Health and Care Excellence (NICE) guidelines and it can prove difficult to find information while in busy placement scenarios on more environmentally friendly therapeutic options for patients that may be considered for use.

1.17. Is your pharmacy school currently in the process of implementing or improving Education for Sustainable Healthcare (ESH)/planetary health education?

Yes, the school is currently in the process of making major improvements to ESH/planetary health education. (4 points)

Yes, the school is currently in the process of making minor improvements to ESH/planetary health education. (2 points)

No, there are no improvements to planetary health education in progress. (0 points)

Score Assigned:

2

Score explanation:

New teaching on nutritional benefits have been introduced to teaching in Level 1 as has been discussed above.

The school has also expanded its signposting to SDGs throughout teaching by highlighting relevant SDG logos on relevant lecture slides presented throughout the MPharm pathway.

Staff have welcomed the request to adapt some of their existing teaching to link certain topics to respective environmental impacts.

Recommendations: The School of Pharmacy should continue to incorporate longitudinal teaching on sustainable planetary healthcare throughout the MPharm degree pathway. More in depth teaching on this topic should continue to be considered by academics when bringing in new teaching by reflecting on what other universities have determined as appropriate for enhancing sustainability learning in Pharmacy. The curriculum should continue to be updated to provide an education that will equip students to actively promote sustainable healthcare in their future professional roles. Collaboration with other schools of Health Science at Queen's could be considered, to simulate how interdisciplinary healthcare teams might be able to operate sustainably in the future.

1.18. Does your pharmacy school have a member of faculty to incorporate planetary health and sustainable healthcare as a theme throughout the curriculum ?

Yes, there is/are a member(s) of faculty whose role is directly responsible for the incorporation of planetary health and sustainable healthcare as a theme throughout the curriculum (4 points)	
Yes, there is/are member(s) of faculty who are incorporating planetary health and sustainable healthcare as a theme throughout the curriculum as well as doing their principle role (2 points)	
There are no members of faculty who are incorporating planetary health and sustainable healthcare as a theme throughout the curriculum (0 points)	
Score Assigned:	2
<p>Score explanation:</p> <p>Dr Stephen Kelly is the UN Sustainability Champion of the School of Pharmacy who has recently incorporated the Sustainable United Nations and Sustainable Development Goals workshop as a compulsory element in Level 1 teaching. Since his appointment, the school has also commenced a new initiative to increase the visibility of sustainable development in education throughout the MPharm degree pathway, to improve awareness of the SDGs.</p> <p>Dr Vicky Kett is the Environmental Officer for the School of Pharmacy.</p> <p>Both academics fulfil these roles alongside their other responsibilities in teaching and research within the school.</p> <p><i>Recommendation: The School of Pharmacy could consider the possibility of approaching Queen's University to appoint a member of faculty whose role is directly responsible for the incorporation of planetary health and sustainable healthcare as a theme throughout the pharmacy curriculum if deemed appropriate.</i></p>	

1.19. Does your pharmacy school curriculum offer clinical practice experiences (for example, IPPE/APPE rotations in the U.S. or placement opportunities in the UK) that allow for the exploration of planetary health topics?	
There are multiple clinical practice experiences/placements that allow for direct exposure to planetary health topics. (3 points)	
There is one available clinical practice experience/placement that allows for direct exposure to planetary health topics. (2 points)	
There are available clinical practice experiences/placements that allow for indirect exposure to planetary health topics. (1 point)	
No, there are no such clinical practice experiences/placements available through the pharmacy school. (0 points)	
Score Assigned:	0
Score explanation:	

No clinical practice or placements are offered that allow for the exploration of planetary health topics.

Recommendations: Experiential Learning Placements are funded by the department of Health and it is mandatory that all MPharm students in NI complete these during the academic year. However, the School of Pharmacy could consider the introduction of placement opportunities for students during or outside of the academic term to explore planetary health topics. Several academic staff within the School are members of the Sustainability Education group, a body which operates throughout the UK to promote strategies for climate change mitigation within pharmacy education. There could be scope for members of this group to increase such placement opportunities for students and this could be further explored in the coming years.

1.20. Does your pharmacy school curriculum acknowledge a disparity in the effects of climate change? Specifically, does your curriculum address groups more vulnerable to environmental impacts, such as BIPOC, immigrant groups, low income populations, children, elderly, persons with disabilities, persons with pre-existing or chronic medical conditions?

This topic was explored **in depth** by the **core** curriculum. (3 points)

This topic was **briefly** covered in the **core** curriculum. (2 points)

This topic was covered in **elective** coursework. (1 point)

This topic was **not** covered. (0 points)

Score Assigned:

0

Score explanation:

The disparity in the effects of climate change specifically addressing the impact in vulnerable groups is not discussed in the curriculum. There is teaching in the Level 1 SUNSDG workshop on outcomes for marginalised groups, however, there is little coverage of climate change specifically as a factor contributing to disparity.

Recommendation: The topic outlined above could be incorporated into the existing Level 1 SUNSDG workshop. An understanding of this could be important in comprehending a patient's background and could help to refine a pharmacist's empathy when communicating with those impacted by climate change.

Section Total (38 out of 66)

57.58%

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Interdisciplinary Research

Section Overview: *This section evaluates the quality and quantity of interdisciplinary planetary health research at the 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, institutions 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.*

2.1. Are there researchers engaged in planetary health research and healthcare sustainability research at your **institution**?

Yes, there are faculty members at the **institution** who have a **primary** research focus in planetary health **or** sustainable healthcare/vetcare. (3 points)

Yes, there are individual faculty members at the **institution** who are conducting research **related** to planetary health or healthcare sustainability, OR are part of a national/international sustainability working group, but it is not their primary research focus. (2 points)

There are sustainability researchers at the **institution**, but not specifically associated with healthcare/vetcare. (1 point)

No, there are **no** planetary health and/or sustainability researchers at the **institution** at this time. (0 points)

Score Assigned:

3

Score explanation:

[PURE](#) is the portal used to access research at Queen's University Belfast. The input of 'planetary health research' on the portal identified Dr Leandro Garcia and Professor Ruth Hunter in the School of Medicine, Dentistry and Biomedical Science (MDBS), as well as Queen's Centre for Public Health (CPH). PURE was also searched to find publications related to planetary health and links to some of the most relevant articles are included. A comparable search for 'healthcare sustainability' did not lead to any directly relevant research, however Queen's research on PURE is linked to the relevant UN Sustainable Development Goals (SDGs). The SDGs: 3 'Good Health and Wellbeing', 10 'Reduced Inequality', 11 'Sustainable Cities and Communities' and 13 'Climate Action' were mentioned across these publications.

Professor Hunter was the first author on '[Advancing urban green and blue space contributions to public health](#)', which advocates that 'The full potential of UGBS as public health, social economic and environmental assets is yet to be realised' and gives recommendations. This contributes to SDG 3.

Dr Garcia was the first author on '[Health impacts of changes in travel patterns in Greater Accra Metropolitan Area, Ghana](#)', which researched how switching increased car use for walking and bus journeys in Accra could prevent disease due to increased exercise, air quality and road safety. This contributes towards SDGs 3 and 11.

Professor Hunter is a co-director, and Professor Garcia is a co-investigator, for the [GroundsWell](#) project. This aims to optimise health and wellbeing through urban green and blue spaces (UGBS) and is a collaboration between Queen's University Belfast, University of Edinburgh and University of Liverpool. It contributes towards SDGs 3, 10, 11 and 13 and is funded by the UK Prevention Research Partnership (UK PRP). As part of Groundswell Professor Hunter was involved in '[Exploring mechanistic pathways linking urban green and blue spaces to mental wellbeing before and after urban regeneration of a greenway: Evidence from the Connswater Community Greenway, Belfast, UK](#)'. This aimed to discover the mechanisms for improved mental well-being after regeneration of an UGBS in Belfast. Additionally, Professor Hunter and Dr Garcia were involved in '[Examining the spatially varying and interactive effects of green and blue space on health outcomes in Northern Ireland using multiscale geographically weighted regression modelling](#)'. This was in order to see how varying distances from, and the interactions of, UGBS affect health.

Professor Hunter was the principal investigator, and Dr Garcia was a co-investigator, for '[A vision of healthy urban design for NCD prevention](#)' (2020-2024). This project collaborated with the University of Melbourne and a number of other universities and aimed to understand how the design of cities impacts non-communicable diseases to inform policy. Major funders include National Institutes of Health (NIH) and the Medical Research Council (MRC).

Professor Hunter and Professor Bernadette McGuinness (linked with MDBS and CPH) are the principal investigators of SPACE '[Supportive Environments for Physical and Social Activity, Healthy Ageing and Cognitive Health](#)', whilst Dr Garcia and Professor Frank Kee (also linked with MDBS and CPH) are co-investigators. SPACE explores how urban design impacts brain health and dementia in older adults to inform policy and relates to SDGs 3,10,11 and 13. Funders include the NIH, the ISCF (Industrial Strategy Challenge Fund) and Innovate UK. It includes '[A systematic review of associations between the environment, DNA methylation, and cognition](#)', which studies how environmental risk factors, such as air pollution, may increase the incidence of neurodegenerative disease through epigenetics.

Professor Hunter and Dr Garcia were the principal investigators for '[Developing system-oriented interventions to reduce car dependency for improved population health in Belfast](#)' (2020-2022). The purpose of this project was to help create policies to reduce dependence on cars in Belfast, is related to SDGs 3,10,11 and 13 and was funded by the MRC. For example, '[Group model building for developing systems-oriented solutions to reduce car dependency in Belfast, United Kingdom](#)' focuses on understanding the reasons for dependence of cars and Belfast and factors that may reduce this, partially in order to improve health and the environment.

MDBS researchers such as Professor Jayne Woodside were involved in research about the links between health, diet and climate change. This includes, '[The environmental impact, ingredient composition, nutritional and health impact of meat alternatives: A systematic review](#)'. This meta-analysis looked at meat alternatives' nutritional content and impact on human and environmental health, contributing to SDG 3.

Recommendation:

The university should continue with its emphasis on planetary health research and encourage more healthcare sustainability research.

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

There is **at least one** dedicated department or institute for interdisciplinary planetary health research. (3 points)

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. (2 points)

There is an **Occupational and Environmental Health department**, but no interdisciplinary department or institute for planetary health research. (1 points)

There is **no** dedicated department or institute. (0 points)

Score Assigned:

3

Score explanation:

The [Centre for Sustainability, Equality and Climate Action](#) (SECA) was formed in 2019 and replaced the [Centre for Study of Risk & Inequality](#). SECA encourages interdisciplinary research across the schools at QUB with regards to its pillars of sustainability, equality and climate action. Its objectives include the aim ‘To establish the most effective interdisciplinary methods of working towards addressing different dimensions of the planetary crisis and “living sustainably”’ and its themes mention the UN Sustainable Development Goals. SECA outputs include a report on the event ‘[What should Higher Education Institutions do about the Planetary Crisis?](#)’, held on the 3rd November 2023, which was discussed in last year’s report. A homonymous [follow- up workshop](#) was held at QUB on the 15th March 2024 and was hosted by SECA. Issues raised include:

- The ‘urgency’ of action and communications around the climate crisis;
- A ‘Sustainability and Climate Mandatory Module’;
- ‘Democratising universities’, for example by involving citizens assemblies in Higher Education Institutions’ (HEIs’) actions to mitigate the climate crisis; and
- Creating an ‘All Ireland Network’ to increase collaboration and lobbying for resources for a mandatory climate module.

The workshop report mentioned the [Sustainable Development Solutions Network Ireland](#) (SDSN Ireland) as a place for senior management in HEIs across Ireland to collaborate on the issues mentioned in the report. This network of universities and institutions, coordinated by QUB and University College Cork, aims to promote collaboration with local authorities, NGOs, civil society organisations and policymakers across the island to achieve the 17 UN SDGs, including through research and community involvement.

Recommendation:

QUB should continue to support SECA to help address the interactions of inequalities and the climate crisis.

2.3. 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 institution?

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. (3 points)

Yes, there is a process in which community members impacted by climate and environmental injustice **advise** the climate + environmental research agenda. (2 points)

No, but there are **current efforts** to establish a process for community members to advise or make decisions on the research agenda. (1 points)

There is **no** process, and **no** efforts to create such a process. (0 points)

Score Assigned:

1

Score explanation:

One of SECA's research themes includes 'engaged and transdisciplinary partnership-based research involving citizens' and other groups. The 2023 event '[What should Higher Education Institutions do about the Planetary Crisis?](#)' encouraged discussion on areas such as 'Research as/for public good' and 'Community Engagement and Outreach'. This involved discussion of "power-sharing" between the community and HEIs' and "community ownership of research". However, this event was to facilitate ideas from the university and community and does not include a detailed action plan to implement these changes.

The report on the [follow-up workshop](#) in 2024, mentioned in 2.2, does not explicitly mention a goal to allow groups affected by climate change to impact the research agenda at QUB. However, the report does advocate for 'democratising universities', 'in how HEIs are run and managed', including through Citizens' Assemblies/ Juries, to ensure an effective response to climate change. It identifies 'resistance/opposition' to their goals and the need to identify power in the university to collaborate and advocate for change, however similarly does not include a detailed action plan for QUB.

As part of '[Developing system-oriented interventions to reduce car dependency for improved population health in Belfast](#)', mentioned in 2.1, a [Citizen's jury](#) was held. This was held across a weekend in 2022 and involved residents learning about the issue, possible solutions and forming recommendations to solve the problem of car dependency.

There are existing requirements for Personal and Public Involvement (PPI) in applications for research grants. For example, the Health and Social Care (HSC) has a statutory duty to involve service users, carers and the public, including in research. [PPI in research](#) can impact which research is carried out and how it is applied, so groups impacted by climate change may be able to give input. PPI considerations are also required for grants from UKRI, however, as mentioned in last year's report, it does not guarantee input from communities affected by climate change.

Recommendation:

The institution should prioritise creating a process by which communities disproportionately affected by climate change have input on research undertaken. SECA has helped facilitate some discussion to this end, however there is no evidence of any implementation in the medical school

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

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. (3 points)

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. (2 points)

The **institution** has an **Office of Sustainability website** that includes **some** resources related to health and the environment. (1 point)

There is **no** website. (0 points)

Score Assigned:

3

Score explanation:

The Queen's University Belfast website has a very easily accessible [sustainability section](#) under the research banner, which advertises some of their major projects relating to research in: coast flooding, conservation of marine environments and tackling the algal blooms in Lough Neagh to name a few. The website also provides a link to the [PURE](#) research search engine at QUB which has the SDG as filters which is a helpful way to narrow down the search to relevant research papers.

This webpage also links to [SECA](#), the research centre at QUB which encourages collaboration across schools within the university to investigate the climate crisis using the three pillars of sustainability, equality and climate action. The SECA website includes past and future events and opportunities as well as a [list of faculty members](#) which makes it possible to access the profiles of the members who are part of the school of Medicine, Dentistry and Biomedical Sciences.

Currently, QUB still doesn't have a separate dedicated website for research relating to health and environment, however the [PURE](#) research search engine can be used to find relevant research by refining the search to 'planetary health,' as mentioned in 2.1.

The '[Research Opportunities](#)' tab has plenty of funded postgraduate research opportunities by refining the search to 'Climate.' Alternatively, you could look up the planetary health researchers at QUB (see section 2.1) and contact them to ask them about opportunities, however it is not easy to find these opportunities using the sustainability section of the QUB website.

Recommendation: SECA should have links to current, relevant research and also link to relevant funding opportunities in order to make access to planetary health research more accessible.

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

Yes, the **institution** has hosted at least one conference or symposium on topics related to planetary health in the past year. (4 points)

Yes, the **institution** has hosted at least one conference or symposium on topics related to sustainable healthcare/vetcare in the past year. (3 points)

Yes, the institution has hosted a conference on topics related to planetary health / sustainable healthcare/vetcare in the past three years. (2 points)	
The institution has not hosted any conferences directly, but they have provided financial support for a local planetary health event. (1 point)	
No, the institution has not hosted a conference on topics related to planetary health in the past three years. (0 points)	
Score Assigned:	4
<p><i>Score explanation:</i></p> <p>SECA holds regular events:</p> <ul style="list-style-type: none"> - The Degrowth Movement's Erasure of The Working-Class Struggle (27/2/2024) - Waste and the Circular Economy (10/4/2024) <p>The Sustainable Healthcare Development Group (SHDG) holds an annual interactive simulation event in the Medical Biological Centre aimed at 8-12 year olds for the NI Science Festival. This year the event will be held on 22/2/25 and will focus on "Climate Emergency Department" where rising temperatures, algal bloom and air pollution will be some of the topics covered.</p> <p>Additionally, Queen's collaborated with the UN Sustainable Development Solutions Network (SDSN) Ireland to host the first ever 'Reach '24 Festival' which seeks to explore the climate emergency and sustainable solutions through a variety of artistic mediums, including film screenings, performances, discussions and an art exhibition. Although not directly related to planetary health, this is an important development in the Sustainability movement here at Queen's.</p> <p><i>Recommendation:</i> <i>The institution should host a conference on topics relevant to planetary health and increase awareness of and improve access to the recording of the previous Public and Planetary Health Conference to make it easily accessible for all.</i></p>	

2.6. Is your <u>institution</u> a member of a national or international planetary health or ESH/ESV organisation?	
Yes, the institution is a member of a national or international planetary health or ESH/ESV organisation. (1 points)	
No, the institution is not a member of such an organisation. (0 points)	
Score Assigned:	1
<p><i>Score explanation:</i> Queen's University Belfast is a member of the Alliance for Sustainability Leadership in Education.</p> <p><i>Recommendation:</i> <i>We recommend the university continues to be involved with international planetary health organisations.</i></p>	

Section Total (15 out of 17)	88.24%
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Community Outreach and Advocacy

Section Overview: This section evaluates pharmacy 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.

3.1. Does your <u>institution</u> partner with community organisations to promote planetary and health?	
Yes, the institution meaningfully partners with multiple community organisations to promote planetary and environmental health. (3 points)	
Yes, the institution meaningfully partners with one community organisation to promote planetary and environmental health. (2 points)	
The institution does not partner with community organisations, but participates in community focused events relating to planetary health. (1 point)	
No, there is no such meaningful community partnership. (0 points)	
Score Assigned:	3
<p><i>Score explanation:</i></p> <p>The Sustainability Team at QUB continue to host numerous sustainability events during the “Green Month of Community Action”. They also organised the annual community litter pick, “The Big Autumn Clean Up”, in November alongside Orchardville Belfast, a local charity helping individuals with learning disabilities and autism. Furthermore, QUB partnered with the RSPB to host a presentation on the importance of supporting wildlife in the environment.</p> <p>The university itself held three major sustainability events in collaboration with local organisations:</p> <p>QUB held its first Sustainable Construction Conference, which explored the reduction of carbon in buildings. The construction conference was organised in partnership with South West College, Belfast City Council, Feilden Clegg Bradley Studios and HOK.</p> <p>The university also collaborated with Bryson Recycling and Belfast City Council to host its first Arts and Sustainability festival called “REACH '24”. The exhibition explores the impacts of plastic waste on our oceans with many speakers such as representatives from the “groundswell project”. The “Groundswell Project” regularly works and collaborates with the Centre for Public Health (CPH), a section of the medical school. The Groundswell Project consists of a collaborative team of researchers, local communities, implementers, and policymakers dedicated to improving public understanding and enhancing local urban green and blue spaces.</p>	

QUB, in collaboration with Belfast City Council, Translink and the Department for Infrastructure, participated in a [panel event](#) discussing active and sustainable travel in Belfast. The event resulted in the opening of a brand-new cycle shelter which accommodates up to 54 bikes in a covered and secured environment, and, for the first time at the University, offer staff and students e-bike charging facilities for bikes with detachable batteries.

Local group [Friends of the Field](#) was invited to participate in the [Student Sustainability Summit](#). As part of Horizon's UPSURGE project, Friends of the Field have co-designed a community garden with Belfast City Council and QUB. They have volunteer days on Saturday mornings. The goal of the community garden is to enhance the biodiversity of the space and add to the wellbeing of the local community.

Recommendations: We commend the university's community outreach to local charities and organisations regarding sustainability, but we would recommend more involvement from the medical school. The medical school could partner with local patient advocacy groups/charities to highlight the importance of planetary health and environmental risk factors to patient health. Furthermore, the medical school could push their student-selected components (SSCs) to have a better community or hospital facing approach incorporated into its curriculum.

3.2. Does your **institution** offer community-facing courses or events regarding planetary health?

The **institution** offers community-facing courses or events at least once every year. (3 points)

The **institution** offers courses or events open to the community at least once per year, but they are not primarily created for a community audience. (2 points)

The **institution** has promoted community-facing courses or events, but was not involved in planning those courses or events. (1 point)

The **institution** has not offered such community-facing courses or events. (0 points)

Score Assigned:

3

Score explanation:

The '[Sustainable Entrepreneurship Program](#)' has been launched by QUB to allow participants to "merge business acumen with sustainable practices", however this was aimed at student participation, and it is unclear if members of the community not enrolled at QUB could take on the course. This could be a great program to be made more community facing. However, with reference to last year's report, it is still limited to students and not the general public.

The QUB Sustainable Healthcare Development Group (SHDG) team is organising their annual 'Climate Emergency Department'. This event is part of the NI Science Festival and hopes to highlight the effects of climate change on healthcare with multiple interactive role-play scenarios. It is a free event for children and young adults within the community.

The '[Queen's Biology Showcase](#)', hosted by the School of Biological Sciences in conjunction with the NI Science Festival, is also open to the public with discussion points on sustainable nutrition and the impact of climate change on disease transmission.

QUB's Law Department hosted a talk on the Rights of Nature. Specifically, the Rights of Lough Neagh where they responded to some proposals on the democratic and legal dimensions.

The university also hosts an annual sustainability lecture that is open to the public every year. This event provides students with the opportunity to learn and get involved with the University's actionable steps towards the Net Zero plan and how sustainability is embedded through all areas of the University. The event included a panel of strategic climate influencers who answered questions from students on sustainability and tackling the climate crisis.

[REACH 24](#) is a sustainable arts festival run by the institution. Multiple events were run over three days, aimed at students, staff and local community members.

Recommendations:

The university offers a range of sustainability events and talks across the year that are open to the local community. We would encourage collaboration between university departments to organise innovative and interdisciplinary community events. Furthermore, we would recommend that current courses (like the 'Sustainable Entrepreneurship Program') would be expanded to encourage more community involvement.

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

Yes, all students **regularly** receive communication updates dedicated to planetary health and/or sustainable healthcare. (2 points)

Yes, planetary health and/or sustainable healthcare topics are regularly included in communication updates to **some courses**. (1 point)

Students **do not** receive communications about planetary health or sustainable healthcare. (0 points)

Score Assigned:

1

Score explanation:

QUB utilises a range of communications outlets, such as their sustainability account 'Green at Queen's', to promote news about sustainability on campus. This offers students an alternative and accessible way to keep up to date with planetary health and sustainability information. GreenatQueens has accounts on Twitter, Facebook and Instagram, giving students opportunities to access their information on a range of platforms.

Furthermore, we also note the consolidated bank of information that is available via the QUB Sustainability website. This includes the '[Green at Queen's E-Zine](#)' to provide snippets of insight into on-campus projects. This zine hasn't been updated since the last report, since they have refocused their efforts into hosting more sustainability events to increase student participation. Some of the community facing events they hosted were: The Inaugural Reach'24 Art and Sustainability Festival, Portaferry Marine Lab Open Day, Student Sustainability Summit, Queen's Annual Litter Picks and numerous Climate Conversations and Talks.

We welcome the wide and accessible range of sustainability communications and events offered by the wider university.

Recommendations:

We appreciate the already vast volume of correspondence required to be communicated to students, and we understand that a stand-alone page requiring regular updates may be difficult to manage. However, we would encourage the development of a sustainable healthcare resource bank on the MedPortal for medical students and on Canva's student information page for other courses.

3.4. 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?

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. (2 points)

Yes, the **institution** or **main affiliated hospital trust** offers one course relating to planetary health and/or sustainable healthcare for post-graduate providers. (1 point)

There are **no** such accessible courses for post-graduate providers. (0 points)

Score Assigned:

2

Score explanation:

QUB runs an [MPH in Public Health](#) and an [MPH in Global Health](#), which a select number of medical students choose to intercalate in each year. These courses include an emphasis on global health and development.

Furthermore, QUB offers a range of general sustainability courses at a postgraduate level such as their MSc degrees in '[Leadership for Sustainable Development](#)', '[Leadership for Sustainable Rural Development](#)' and '[Climate Change](#)'.

QUB also offers programs in conjunction with the external accreditation body SEDA (Staff and Education Development Association). The module entitled '[Education for Sustainable Development \(ESD\)](#)' is run by SEDA and provides staff with postgraduate education related to the Sustainable Development Goals.

Northern Ireland Medical and Dental Training Agency ([NIMDTA](#)) is a body in Northern Ireland with the responsibility of postgraduate medical and dental education. When the keyword "sustainability" is used to search their webpage it highlights the importance of sustainability in the curriculum and in quality improvement, signposts to NHS Sustainability in Quality Improvement page.

An event in association with NIMDTA "Sustainability in Healthcare: For Foundation Doctors" was made available on Learn HSCNI for junior doctors in Northern Ireland. There was a piece of live online learning over Zoom and covered the topics; sustainability and planetary health, the Planetary Health Report Card, the role of foundation doctors in sustainable healthcare and SusQI.

Recommendations:

We recommend that the university offers more CPD courses, over a wider range of dates and sustainability topics. This may make sustainability education more accessible for those that cannot

undertake an MSc/MPH. Furthermore, the affiliated hospital trusts could become more involved in the promotion and organisation of sustainability education activities. Collaboration between the university and hospital trusts could allow trust employees to undertake CPD courses offered by the university itself.

3.5. Does your institution or its affiliated teaching hospitals have accessible educational materials for patients about environmental health exposures?

Yes, the **institution** or **all affiliated hospitals** have accessible educational materials for patients. (2 points)

Some affiliated hospitals have accessible educational materials for patients. (1 point)

No affiliated hospitals have accessible educational materials for patients. (0 points)

Score Assigned:

1

Score explanation:

The medical school partners with all five hospital trusts across Northern Ireland, and so it is challenging to evaluate the range of resources available across hospitals and departments. Using the trust websites, we were able to find resources related to sun exposure and protection for patients in the [Belfast](#), [Southern](#), [Northern](#) and Western Trusts. The South-Eastern Trust instead featured a piece from a patient who had previously suffered from skin cancer, who reiterated the importance of wearing sunscreen.

Belfast trust has some information on [staying well in winter](#). The page describes the health effects of living in a [cold and damp home](#).

However, we were unable to find patient resources relating to other environmental hazards, such as pesticides and pollution.

Recommendation:

We appreciate that QUB is not directly involved in making educational materials for patients within each of the trusts. However, we would encourage the institution to champion for improved sustainability resources for patients as this would improve the patient experience, and empower students and staff to promote sustainable health in a changing climate.

3.6. Does your institution or its affiliated teaching hospitals have accessible educational materials for patients about the health impacts of climate change?

Yes, the **institution** or **all affiliated hospitals** have accessible educational materials for patients. (2 points)

Some affiliated hospitals have accessible educational materials for patients. (1 point)

No affiliated hospitals have accessible educational materials for patients. (0 points)

Score Assigned:	0
<p><i>Score explanation:</i></p> <p>As mentioned regarding the previous metric, it is challenging to establish what information is available to patients given the range of departments and hospitals that QUB collaborates with. We could not find any evidence of online resources for patients related to the health impacts of climate change; this has notably not improved in the past four years. Information was available in some trusts, particularly the Southern and South-Eastern Trust, on their ongoing efforts to be more environmentally friendly but this did not include patient-facing resources on climate change itself.</p> <p>The Northern Trust Corporate Plan has a section entitled <i>Focus on: Sustainability</i> where they state that “Climate change represents a significant health challenge for the 21st century.” They do not detail the specific health effects of climate change, but comment on the healthcare systems contributing factors and their plan in the Northern Trust to combat these. This is patient facing information, however, not with the primary purpose of patient education.</p> <p><i>Recommendation:</i></p> <p><i>We acknowledge again that QUB does not have a large say in the resources available to patients. Nonetheless, we believe it is important that trusts provide accessible information on the health impacts of climate change; we suggest that trusts supplement their current resources on environmental exposure with information on how this is related to our changing climate. For example, the existing educational materials on sun exposure could be updated to include information on increasing temperatures due to climate change. We would further encourage the trusts to utilise aspects like their primary care centres to provide resources (such as brochures/leaflets/QR code links) informing patients about the impacts of climate change on their health and healthcare system.</i></p>	

Section Total (10 out of 14)	71.43%
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Support for Student-Led Planetary Health Initiatives

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

4.1. Does your **institution** offer support for students interested in enacting a sustainability initiative/QI project?

Yes, the **institution** *either* offers grants for students to enact sustainability initiatives/QI projects *or* sustainability QI projects are part of the core curriculum. (2 points)

The **institution** 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. (1 point)

No, the institution **does not** offer opportunities or support for sustainability initiatives or QI projects. (0 points)

Score Assigned:

2

Score explanation:

Queen's Green Fund:

The QUB Green Fund is an annual scheme run by the Estates' Department, that empowers both staff and students, via funding, to create and deliver projects that benefit the environment of the surrounding Queen's Campus and local community. Financial funding will be provided for the best proposals. The total money awarded to each team will be a maximum of £2000. The project has been running since 2019 a total of 88 green fund projects have been funded. Some projects that are currently promoted on the Sustainability at Queen's home page include; Sewing Classes with SewReady & the PHRC Committee, Adopting waterless condensers, saving water in chemistry labs, Widening Participation Unit Workshops Go Green! The SHDG successfully applied for funding to repeat the Sustainable Sewing Sessions, where staff and students can learn the basics of sewing and revitalising clothes to encourage less fast fashion use.

Sustainability and Quality Improvement (SusQI):

During 2024-2025 Academic year all Year 5 medical students have undertaken the pilot scheme SusQI project, which has previously been run as an optional SSC module. The aim is that in the coming years this pilot scheme will remain as a part of the core final year content. In the pilot a small group of students would be assigned to an NHS supervisor to work on a Quality improvement project and experience a complete data collection and PDSA cycle, equipping final years with the skills to carry out QI projects when they become junior doctors whilst incorporating a sustainability aspect to their work. Due to logistical problems during the pilot year of the scheme many of the projects have been conceptual rather than an applied project.

Recommendation: We recommend that the medicine faculty continues to run the SusQI project for fifth year medical students and transform it from a pilot scheme to a mainstay in the C25 curriculum.

4.2. Does your institution offer opportunities for students to do research related to planetary health and/or sustainable healthcare/vetcare?

The **institution** has a **specific** research program or fellowship for students interested in doing planetary health/sustainable healthcare/vetcare research. (2 points)

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. (1 point)

There are **no opportunities** for students to engage in planetary health/sustainable healthcare research. (0 points)

Score Assigned:

1

Score explanation:

Summer Studentships:

The Centre for Public Health ran a Summer Research Studentship Program in the summer of 2024 entitled "[Sustainable diets: consumers attitudes, beliefs, and current practices](#)". This studentship will allow students to work with a supervisory team to develop a set of research questions which will allow research to be done to compare how current national dietary patterns impact both public and planetary health. Full support will be given in terms of statistical skills and access to software. This studentship was supervised by Professor Jayne Woodside.

Intercalated degrees/ Master Programmes:

Two Master's programmes, a [Master's of Public Health](#) and a [Master's of Global Health](#), are available to third and fourth year medical and dental students to apply for an Intercalated Masters Degree. As per the nature of these courses, students need to take a year out of medicine to complete these. Both these courses include aspects of sustainable healthcare.

There are other newer courses which have been developed at Queen's, focussing on sustainable development. [MSc Leadership for Sustainable Development](#) and [MSc Leadership for Sustainable Rural Development](#), which are both available to students from all subject backgrounds. The course equip students with the skills to become Sustainable Development 'Champions' and become innovators of Sustainable Development across all sectors. As part of the course students will be engaging in a real-world project to promote sustainable development through experiential learning, action research and work-based placements.

Recommendation: We recommend that at least one Summer Studentship should continue to have Sustainability as one of its main themes. This could be included into whatever framework is used to set up Summer Studentships each year.

4.3. Does the institution have a webpage where students can find specific information related

to planetary health and/or sustainable healthcare/vetcare activities and mentors within the institution? For example, projects achieved, current initiatives underway at the medical school and/or contact of information of potential mentors.

The institution has a webpage with specific information related to planetary health or sustainable healthcare/vetcare that includes up-to-date information on relevant initiatives and contact information of potential mentors. (2 points)

There is an institution webpage that features some information on projects and mentors within planetary health and sustainable healthcare within the institution, but it lacks key information. (1 point)

There is **no institution** specific webpage for locating planetary health and/or sustainable healthcare projects or mentors. (0 points)

Score Assigned:

2

Score explanation:

QUB has a Sustainability Subpage on their main QUB website. This page is a hub for sharing any sustainability news across the university and includes information about the university's commitment to sustainability e.g. QUB's 2030 Net Zero strategy. Within the Research subpage efforts have been made to ensure sufficient sustainability focused research sign-posting through: links to the SECA website (containing a contact list of academic members of the centre and current PhD projects) and links to Pure (the internal registry of research output's at Queen's), enabling users to search for specific researcher's and project areas and research related to certain SDG's.

As each school has their individual webpage, the QUB sustainable webpage does not contain a dedicated list of current sustainability researchers and publications, because these can instead be filtered via SDG mapping using the Pure website.

The QUB medical school has just created a Planetary Health Subpage for the "MedPortal" webpage. This page will include sections on; How planetary health is incorporated into the medical course, Post-graduate/ intercalated degree which include planetary health aspects, Summer internships, links to Queen's Sustainable Healthcare Development Group, links to other sustainability based resources across Queen's and Further reading for students on planetary health. This page is complete but not yet launched to all students.

Recommendation: Get feedback from medical students on the Sustainability subpage of the Medical Portal website and consider using this as a blueprint model to use across other QUB faculties, including other healthcare courses.

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

Yes, there is a student organisation **with faculty support** at my institution dedicated to planetary health or sustainability in healthcare. (2 points)

Yes, there is a student organisation at my institution dedicated to planetary health or sustainability in healthcare but it **lacks faculty support**. (1 point)

No, there is **not** a student organisation at my institution dedicated to planetary health or sustainability in healthcare. (0 points)

Score Assigned:

2

Score explanation:

Sustainable Healthcare Development group:

The Sustainable Healthcare Development Group (SHDG) is a working group of students, academics from across SMDBS, researchers, the Estates team and the Faculty Pro-vice-Chancellor. This cohort group started out, under a different name, with the singular task of completing the PHRC, but have since expanded their field to foster and promote sustainability and climate action within healthcare- related degrees. The cohort of students is primarily medical based, but have had students from other healthcare professions join over their existing years.

Sustainability Network:

The Estates' Team have created a Sustainability Forum and Sustainability Network that is open to both staff and students of the university. The network functions as an informal forum where anyone can openly share information about research, events, projects and other opportunities relating to Sustainability. There are three formal Forum meetings each academic year. Outside of the Sustainability Network there are various boards and groups, which focus on ensuring that QUB meet their 2030 NetZero target, multiple students are part of a variety of these boards, including some students from the SHDG.

Recommendation: Continue the publication and support the presence of the work completed by the Sustainable Healthcare Development Group and continue to expand and foster inter-faculty relationships and encourage other healthcare-aligned staff and students to get involved with planetary health.

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

Yes, there is a student representative that serves on a department or institutional decision-making council/committee. (1 points)

No, there is no such student representative. (0 points)

Score Assigned:

1

Score explanation:

Sustainability Boards & Groups

The sustainability boards & Groups at QUB are collaborative groups of both staff and students who provide oversight on the delivery of various aspects of QUB's NetZero Plans. Some students from the QUB Sustainable Healthcare Development Group are representatives on some of these boards.

Student' Union Representation

The current Student's Union President, Kieran Minto, is the main university-wide student representative on Sustainability. Sustainability is one of his key manifesto points and as SU president he sits in various committees, councils and management boards, advocating for and taking sustainable action.

Environmental Action Student Association

On an institutional level, there is an Environmental Action Student Association. The network is a democratically elected group of students, dedicated to taking environmental action at the university. This is a new Association and it is hoped that as the group develops it is hoped that it can become involved with the Sustainability Branch of the University Estates. (website to be updated)

Recommendation: Continue with the development of the Environmental Action Student Association and encourage the growing inclusivity of students into the wider sustainability Network at Queen's, helping to bring student voice, opinion and concerns to the Senior Management of QUB.

4.6. In the past year, has the <u>institution</u> had one or more co-curricular planetary health programs or initiatives in the following categories? (1 point each)	Score
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.	0
Cultural arts events, installations or performances related to planetary health that have students as an intended audience.	1
Local volunteer opportunities related to building community resilience to anthropogenic environmental impacts.	1
Wilderness or outdoors programs (e.g., that organise hiking, backpacking, kayaking, or other outings for students)	1
Score Assigned:	5
<p><i>Score explanation:</i></p> <p><u>Sustainable foods and agriculture</u></p> <ul style="list-style-type: none"> - The Elm's BT9 Allotment is a long running green fund project which aims to get students and staff to understand where their food comes from whilst increasing biodiversity, supporting mental wellbeing and mindfulness. This project is facilitated by the residential Life team at BT9 and the Conservation Volunteers and runs weekly, allowing students to grow and harvest their own food storing it in the onsite kitchen. 	

- Students from the SHDG worked with the Belfast City Council to run two sustainable cooking classes in the Elms student accommodation. All students and staff were welcome with a target audience of students who live in the Elms accommodation, to teach various tips and tricks and provide sustainability education around food shopping, storing, cooking and waste.

Panels, speaker series, or similar events

- The “Transforming Travel Through Partnership” was a collaborative panel discussing active and sustainable travel in Belfast and how this can be improved via a collaborative approach through the Belfast City Council, the Department of Infrastructure, Queen’s University and Translink.
- The “Student Summit” is an annual sustainability summit run by the Queen’s University Sustainability Team. It is an opportunity for students to discuss key sustainability concerns that students have around education, travel, food and banking with Queen’s University staff and other guest speakers.

Students learn directly from members of a local environmental justice community about challenges they face, and how health professionals can partner with their community to address these exposures and impacts

- *While there is evidence of events discussing local environmental justice, none of these are specific to healthcare professionals.*

Cultural arts events, installations or performances

- The 2024 REACH festival was an art festival collaboration with the UN SDSN that aimed to merge arts and sustainability to examine and highlight the emerging climate emergency, and provide sustainable solutions via various art mediums. As well as art exhibitions and performances, talks from people who are leading the way in the path of merging art and sustainability.
- The Students from the Sustainable Healthcare Development Group have run a “Climate Emergency Department” as part of the NI Science Festival for the past 2 years and are running it again in 2025. This event is an interactive Simulation, run in multiple sessions, hosted by QUB InterSim and is designed to inspire the youth (and potentially future Healthcare workers to be) to think about the impact climate change has on our health and the healthcare system.

Local volunteer opportunities related to building community resilience to anthropogenic environmental impacts.

- In 2024 QUB had a Green Month of Community Action including events and volunteering opportunities such as; Litter Pick Along The River Lagan, Planting at the David Keir Building Quad, Community Gardening at the Elmwood Learning & Teaching Centre & Bioblitz with friends of the field. The listed events involved voluntary community action in and around the QUB campus helping to reduce plastic waste, boost biodiversity and monitor biodiversity of the local areas.

- During the European Week for Waste Reduction QUB ran nine events based around waste production (e.g carbon literacy training, cookery classes, reuse and repair classes). This provided numerous events for students, staff and the wider community to have hands-on opportunities to get involved in sustainability and help to build a sustainable community, share ideas and make meaningful actions around sustainability.
- The SU group Handy Helpers offers numerous one-off volunteering opportunities which encompass various activities including sustainability and upkeep of the local Queen's community area
- The university is a partner in several community projects including the "One Million Tree project by Belfast City Council", which aims to plant one million trees in Belfast by 2035. "UPSURGE" is another project of note. The UPSURGE project looks at growing food on contaminated land in an aim to look at fast forwarding nature based solutions for cities. Belfast is 1 of 5 cities in the European Upsurge project and alongside the co-designers from QUB, other local stakeholders include Belfast City Council and the locals of the area who are involved in the ecological community gardens which support soil research and urban food growing. A community group "Friends of the Field" meet weekly at this allotment.

Clubs & societies

- There are several Clubs and Societies registered with the Students' Union which focus on wilderness and outdoor programmes. This includes the Mountaineering Club, Caving Club, Scout Network and QUB Climate Action Network & the Queens University Wilderness and Expedition Medicine Society. Further information about these Societies can be found on the [QUBSU Website](#).

Activities that do not fit above criteria

- The Sustainable Construction Conference was a half-day event designed to deepen knowledge of reducing carbon in buildings. The conference was open to all involved in design, construction and operation of the built environment, but this event was not specifically targeted at students.
- A Bike to Work Week ran at QUB for staff members in the summer of June 2024, in which a range of opportunities were available, such as bike loop cycle clinic, to encourage staff to cycle to travel Greenly to work.
- [City Conversations- Nature in the City](#). This is a public facing event advertised by the Estates Team to get students involved in discussions around sustainability in the local urban area.
- A Stakeholder Event to [review evidence for environmental governance](#) was held in the QUB school of law in February 2025. This event allowed for the public to submit feedback on the current state of environmental governance in NI.

Recommendation: QUB has dedicated substantial time and resources to fostering strong relationships with numerous community groups, and has provided many opportunities for students to get involved with these projects and schemes. We encourage the continued advertisement of these opportunities within the QUB and wider Northern Irish communities.

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Campus Sustainability

Section Overview: This section evaluates the support and engagement in sustainability initiatives by the 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 pharmacy schools, clinics, and hospitals must set the standard for sustainable practices, and show other sectors what is possible when it comes to minimising environmental impact.

5.1. Does your <u>institution</u> have an Office of Sustainability?	
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. (3 points)	
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 hospital sustainability. (2 points)	
There are no salaried sustainability staff , but there is a sustainability task force or committee. (1 point)	
There are no staff members or task force responsible for overseeing campus sustainability. (0 points)	
Score Assigned:	2
<p><i>Score explanation:</i></p> <p>The university currently has a Board of Sustainability which is involved in overseeing the 2040 Net Zero plan consisting of seven academic staff nominees, nineteen professional services nominees, one trade union representative and two student representatives. The Sustainability Governance oversees the development and implementation of working groups in relation to the Net Zero Plan such as the Campus Decarbonisation Working group, the Sustainability Engagement and Communications Working Group, and the Sustainable Use of Goods and Services Working Group. The goal of having an unpaid “Sustainability Champion” remains in the early stages. Once implemented, this role is hoped to be a point of contact for staff on environmental issues, providing feedback on implementation of initiatives. There is currently no position specific to the hospital nor the School of Medicine, Dentistry and Biomedical sciences.</p> <p><i>Remomdation:</i> We recommended the commencement of the program for the “Sustainability champion” as well as encouraging the university to create a paid position for the Health Sciences School specifically</p>	

5.2. How ambitious is your <u>institution's</u> plan to reduce its own carbon footprint?
The institution has a written and approved plan to achieve carbon neutrality by 2030 (5 points)

The institution has a written and approved plan to achieve carbon neutrality by 2040 (3 points)	
The institution has a stated goal of carbon neutrality by 2040 but has not created a plan to reach that goal or the plan is inadequate (1 point)	
The institution does not meet any of the requirements listed above (0 points)	
Score Assigned:	3
<p><i>Score explanation:</i></p> <p>In June of 2023 Queen's University of Belfast published the Net Zero Plan with the goal of achieving zero greenhouse gas emissions by 2040 based on the 2018-2019 emissions of 105,430 tonnes of carbon dioxide equivalent. Further, the university has a goal of 45% reduction by 2030 to align with the goals of Northern Ireland. The Net Zero Plan is focused on direct emission from owned or controlled sources, indirect emissions from the generation of energy purchased, and indirect emissions from university activities. Since the Carbon Management Plan was published in 2010, the university reduced emissions by 21% and diverted 94% of waste from landfill. The Net Zero plan is more ambitious than the UK carbon target from the Climate Change act of 2008, which aims to achieve net zero by 2050. The university aims to use less energy, use clean energy efficiently, use renewable energy, and offset carbon emissions through carbon sequestration regimes.</p> <p><i>Recommendations: The Net Zero plan does acknowledge many factors outside of the University's control such as campus infrastructure, the Northern Ireland electricity grid, energy security risks, government policy, and the fact that 80% of emissions are outside the University's control (e.g. reliance on external infrastructure and suppliers). We would recommend the university make the limitations clearer to clarify what exact factors are not within the control of the organisation as well as create plans to compensate for the factors not within the direct control of the university.</i></p>	

5.3. Do buildings/infrastructure used by the institution for teaching (not including the hospital) utilize renewable energy?	
Yes, institution buildings are 100% powered by renewable energy. (3 points)	
Institution buildings source >80% of energy needs from off-site and/or on-site renewable energy. (2 points)	
Institution buildings source >20% of energy needs from off-site and/or on-site renewable energy. (1 point)	
Institution buildings source <20% of energy needs from off-site and/or on-site renewable energy. (0 points)	
Score Assigned:	1
<p><i>Score explanation:</i></p> <p>Currently 44% of the overall energy requirements for the University, including the Health Sciences Campus, is from renewable resources. However there is no information specific to each department. The university says it generates heat and electricity on site and uses renewable energy for electricity procured from the NI National Grid, but was unable to provide evidence of the</p>	

renewability of purchased energy. The Net Zero Plan includes a goal of installing solar panels and purchasing renewable energy; if this is implemented, it will greatly benefit the reduction of energy use and creation of clean energy. There are currently feasibility studies ongoing for the implementation of solar panels across campus. Solar panels are to be implemented on the [Whitla Hall building, and Maths and Physics Teaching Centre](#). However, public information on the progress of the installation of solar panels is difficult to find.

Recommendation: We once again urge the university to make public their information regarding the purchasing of renewable energy. We also suggest they provide more information on the goals of having the installation of solar panels for the university such as the site, number of panels, funds allocated, dates to be installed.

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

Yes, sustainable building practices are utilised for new buildings on the institution's campus and the **majority** of old buildings **have been retrofitted** to be more sustainable. (3 points)

Sustainable building practices are utilised for new buildings on the institution's campus, but most old buildings have **not been retrofitted**. (2 points)

Sustainable building practices are **inadequately or incompletely** implemented for new buildings. (1 point)

Sustainability is **not considered** in the construction of new buildings. (0 points)

Score Assigned:

3

Score explanation:

Queen's University Belfast follows [BREEAM excellent standards](#) as well as their own criteria, which is far more stringent than the BREEAM criteria. They continue their new guidelines such as [Passivhaus](#) for new buildings over £1 million. For projects over £1 million, Enerphit Passivhaus is used as well as a "[Whole Life Carbon Assessment](#)" to align with the target of < 500 kgCO₂e/m². Retrofits and refreshments less than £1 million will continue to target the [SKA Gold Rating](#). In April of 2024, permission for [the first Passivhaus](#) student accommodation in Northern Ireland was granted by Belfast City Council. This will feature insulation, a blue roof, [mechanical ventilation](#), 100% renewable energy for heating and hot water, triple glazing, and airtight building fabric. The new building, [BRCD Institute for Research Excellence in Advanced Clinical Healthcare](#) will be BREEAM Excellent and will employ smart meters, air source heat pumps, EV charging points. QUB implements retrofitting and reusing existing buildings where possible; this includes upgrading controls for temperature, lighting, and double and triple glazing of windows. For lab and research buildings constructed prior to 1990, refurbishments with mineral wool insulation, LEDs and window glazing will be implemented as needed. In addition to the use of LED lighting, Queens continues to prioritise daylighting to reduce VOCs.

Recommendations: We recommend the university continues its comprehensive approach to construction and refurbishment, and commend them on their practices of Passivhaus and their upholding of BREEAM Excellent standards. We encourage the University to provide updates on the building and the greenhouse gas emissions needed to construct the Passivhaus building.

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

Yes, the institution 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. (2 points)

The institution has implemented **some** strategies to provide environmentally-friendly transportation options, but the options are **unsatisfactorily** accessible or advertised. (1 point)

The institution has **not** implemented strategies to encourage and provide environmentally-friendly transportation options. (0 points)

Score Assigned:

2

Score explanation:

The university has created a [travel plan](#) for 2023-2028 in an effort to reduce the impact of traffic from the university. The target of the travel plan is to reduce carbon emissions from commuting by 25% by 2028. This is part of the larger Net Zero Plan which hopes to create environmentally sustainable travel for students and staff via policy, lobbying, and continuous improvement. They plan on continuing surveying the QUB community to review the impact of specific measures. The university has also created the [Sustainable Travel Guidance](#) Outline for information for staff and students travelling to and from the university. They encourage use of the public transit via the Ylink travel card which allows students a discounted rate of 50% from all public travel via translink. The university has also implemented [staff travel to work loan schemes](#) where by salaried employees can get an interest free loan towards the purchase of an annual travel card.

The “Transforming Travel Through Partnership” was a collaborative panel discussing active and sustainable travel in Belfast and how this can be improved via a collaborative approach through the Belfast City Council, the Department of Infrastructure, Queen’s University and Translink.

Additionally the school has hosted a [Bike Pop Up](#) stand in the medical building, which provided free bike service and information on how to fix and repair their own bikes. The university has Sheffield bicycle stands at the majority of buildings with shower facilities for the staff to avail of. The University has the QUB [QUB Bike Hub](#) which provides discounted refurbished bikes and servicing to students and staff. Staff can also obtain a bicycle with the cycle plus [CYCLEScheme](#) which allows staff to hire tax free bikes for work up to £3,000. The University also uses Liftshare, a care sharing portal to allow staff and students to find car sharing matches based on location.

The medical school has a direct shuttle bus to the Royal Victoria Hospital site from the Belfast City Hospital which allows staff and students to travel between the campuses. The [Open Botanic Project](#) was hosted in 2024 with the university involved as part of a push to have a popular street made into a pedestrian only zone, this would allow for increased bicycle and pedestrian traffic. The University also has joined [Link My Ride](#) which allows students and staff to familiarise themselves with campus and the city through community bike rides.

Recommendations: *We recommend the University to provide more information on the results from surveys that are conducted on travel as well as encouraging projects like the Open Botanic Project. We also encourage that showers be made accessible to students and not just staff for after bike transit*

5.6. Does your institution have an organics recycling program (compost) and a conventional recycling program (aluminium/paper/plastic/glass)?

Yes, the institution has **both** compost **and** recycling programs accessible to students and faculty. (2 points)

The institution has **either** recycling **or** compost programs accessible to students and faculty, but not both. (1 point)

There is **no** compost or recycling program at the institution. (0 points)

Score Assigned:

2

Score explanation:

The [Net Zero Plan](#) made by QUB aims to achieve zero greenhouse gas emissions by 2040. One of the goals is to reduce waste and increase recycling. Presently there is food recycling in some cafe areas that is composted or sent for anaerobic digestion. Additionally, food waste from accommodation and catering for the university is composted. There is also recycling for chemical containers from the labs including glass, plastic and chemicals.

Recommendation: As suggested previously, it is recommended that the university begins their goal of reducing its amount of landfill by providing food compost bins to staff and students throughout the campus. This process has been started, but the institution should continue to make food compost and recycling available across university buildings.

5.7. Does the institution apply sustainability criteria when making decisions about the campus food and beverage selections (e.g. local sourcing, reduced meat, decreased plastic packaging)?

Yes, the institution 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. (3 points)

There are sustainability guidelines for food and beverages, but they are **insufficient or optional**. The institution **is engaged** in efforts to increase food and beverage sustainability. (2 points)

There are sustainability guidelines for food and beverages, but they are **insufficient or optional**. The institution is **not** engaged in efforts to increase food and beverage sustainability. (1 point)

There are **no** sustainability guidelines for food and beverages. (0 points)

Score Assigned:

2

Score explanation:

[There are a number of campus initiatives to ensure food is sourced sustainably](#); These apply to both the university and private catering companies. There is a large focus on using local produce from the Island of Ireland.

In terms of reducing meat, there has been no direct implementation of meat-free days, though the campus catering outlet provides a large number of meat-free options daily, which is a step towards reducing consumption of meat produce, especially considering NI's farming culture and meat-reliant diet's.

[The NetZero Plan](#) (p46) discusses the university's plans to reduce the carbon impact of purchased goods and services (such as campus food and drink), however, the specific on campus actions are not detailed.

Recommendation: We recommend that the university continues to support local and seasonal choices, and continues their proactive implementations to reduce plastic waste. We encourage the introduction of more sustainable options and introduction of meat free days. If there is resistance to entirely meat free days we suggest that a step in the right direction would be reduced red meat days- where establishments may still serve fish or chicken for example, but no red meat.

5.8. Does the institution apply sustainability criteria when making decisions about supply procurement?

Yes, the institution has **adequate** sustainability requirements for supply procurement **and** is **engaged** in efforts to increase sustainability of procurement. (3 points)

There are sustainability guidelines for supply procurement, but they are **insufficient or optional**. The institution is **engaged** in efforts to increase sustainability of procurement. (2 points)

There are sustainability guidelines for supply procurement, but they are **insufficient or optional**. The institution is **not engaged** in efforts to increase sustainability of procurement. (1 point)

There are **no** sustainability guidelines for supply procurement. (0 points)

Score Assigned:

2

Score explanation:

The university as an institution has a [“Supply Chain Code of Conduct”](#) which has to meet the applicable Government Buying Standards and comply with the universities Environmental Policy statement and is endorsed by the University operating board. It references the United Nations Sustainable Development Goals, within the code one section is “environmental compliance”. Within this section it states for suppliers to “avoid, if possible, causing environmental damage” and to identify opportunities to/ innovate more environmentally friendly products/ service solutions.”

[The Procurement Team](#) encourages suppliers to utilise the [NETPositive tool](#), which is an aid for suppliers to create a more sustainable business model. All tendered procurement require supplier compliance to the Supply Chain Code of Conduct and have a sustainability criteria considered in every tender exercise

The Scope 3 in the [Net Zero Plan](#) includes actions to improve the sustainability of procurement. Some of the planned interventions include; updating procurement policy and processes, developing

a methodology to account for a transition to a net zero supply and setting annual targets for the procurement action on climate literacy.

Recommendation:

The University should continue with their efforts to apply sustainability criteria to supply procurement, and these guidelines should be more strictly enforced.

5.9. Are there sustainability requirements or guidelines for events hosted at the institution?

Every event hosted at the institution **must** abide by sustainability criteria. (2 points)

The institution **strongly recommends or incentivizes** sustainability measures, but they are **not required**. (1 point)

There are **no** sustainability guidelines for institution events. (0 points)

Score Assigned:

1

Score explanation:

The University [Campus Food and Drinks](#) teams follow a sustainable food policy, any events managed by the Events team and catered for should follow this policy. The [Events team](#) currently holds a Green Meetings Gold award for their efforts in Green Tourism and sustainability. There is information available regarding [Sustainable Conferences and Events](#) on the QUB website. This includes suggestions on travel, activities and accommodation. It highlights ways the university Events Team can support those trying to be more sustainable, however, these are recommendations only and not required or enforced.

Recommendation:

We recommend the institution to form sustainability guidelines, and make them accessible for anyone hosting an event, even at students' informal/after hours events. This could be done by highlighting the guidelines when completing a booking request for a room for an event.

5.10. Does your institution have programs and initiatives to assist with making lab spaces more environmentally sustainable?

Yes, the institution has **programs** and **initiatives** to assist with making lab spaces more environmentally sustainable. (2 points)

There are **guidelines** on how to make lab spaces more environmentally sustainable, but not programs or initiatives. (1 point)

There are **no** efforts at the institution to make lab spaces more sustainable. (0 points)

Score Assigned:

2

Score explanation:

The LEAF programme was launched at QUB in 2021 as a criteria metric to help schools determine if they follow sustainable practices. The LEAF programme has labs peer audited to assess sustainability criteria with a focus on waste management, procurement, efficiency, and chemical management. In 2023 a new incentive, the Queen's LEAF Sustainability Champion Award was created to highlight an individual who supported the program and helped implement sustainability practices in labs.

At QUB a total of 68 labs are accredited by LEAF. This is an increase of over double from the 31 labs involved in 2023. This year 52 labs received a Bronze accreditation and 16 received silver. The clinical skills team from the [Faculty of Medicine, Health and Life Sciences](#) were awarded the [Bronze award for LEAF](#) labs in June 2024

QUB is now also a member of the [Irish Green Labs Network](#). Alongside LEAF this allows the university to target activities where the labs have a negative impact on the environment and to embed the UN's sustainable development goals into good lab practice.

As the LEAF labs scheme only covers “wet” labs, QUB is in the process of developing the Green DiSC pilot which would assess the practice of computer labs.

Recommendations: We recommended that QUB take further steps to encourage all labs throughout the university to participate in the LEAF program, as well as continue to publicise the program to students in order to encourage involvement and awareness of the importance of sustainability practices in their labs.

5.11. Does your institution's endowment portfolio investments include fossil-fuel companies?

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. (4 points)

The institution is **entirely divested** from fossil fuels. (3 points)

The institution has **partially divested** from fossil fuel companies **or** has made a **commitment to fully divest**, but **currently** still has fossil fuel investments. (2 points)

The institution has **not divested** from fossil-fuel companies, but faculty and/or students are **conducting organised advocacy** for divestment. (1 point)

Yes, the institution has investments with fossil-fuel companies and there have been **no efforts** to change that. (0 points)

Score Assigned:

2

Score explanation:

The university is currently making efforts to divest from fossil fuels- though are not completely divested as of yet.

By the [Responsible Investment Policy](#) (last updated March 2024) QUB commits to “exclude companies involved in the extraction and production of fossil fuels from its investments and to have “*no meaningful exposure to fossil fuel companies by 2025*”. In keeping with their overall Net Zero target of 2024 QUB seeks to achieve Net Zero across their investments by 2040.

This is an important improvement from the previous policy (2020) which only enforced divestment if it did not detrimentally impact investment returns and did not enforce complete divestment by 2025.

The University determines the type of assets it wishes to invest in, with the University's Statement of Responsible Investment being a named consideration in these decisions. The University expects its shareholders and bankers to be signatories of the United Nations Principles for Responsible Investment (UNPRI) which essentially states that they must take Environmental, Social, and Corporate Governance(ESG) issues into consideration during their decision making on behalf of the University. The policy states “.... *the University expects that its fund managers will act in a way that reduces and, ideally eliminates, corporate behaviour leading to:*

- *Environmental degradation*
- *Climate change*
- *Support for war or loss of life*
- *Human rights violations*
- *The institutionalisation of poverty through discriminatory market practices*
- *Racial or sexual discrimination*
- *Practices contributing to ill health*
- *The exploitation of workers*
- *The giving or receiving of bribes.*

Consistent with this, the University expects its fund managers to avoid investment in companies with significant revenue derived from:

- *Controversial weapons*;
- *Tobacco production or distribution;*
- *Fossil fuel extraction or production... “*

Policy Statement- Updated March 2024

<https://www.qub.ac.uk/about/Leadership-and-structure/filestore/Responsible%20Investment%20Policy.pdf>

Annual Report 23-24:(p28- Responsible Investment)

<https://www.qub.ac.uk/home/Filestore/annual-report-23-24.pdf>

Recommendation:

The university should continue to make efforts to reduce their investments in fossil fuel companies to ensure they meet their own targets of no meaningful investment in fossil fuels by 2025 and complete divestment by 2040.

Section Total (22 out of 32)

68.75%

Back to Summary Page [here](#)

Grading

Section Overview

This section focuses on the grading of the report card. The institution received a grade for each of the individual sections as well as an overall institutional grade. Section point totals were tallied, divided by the total points available for the section, and converted to a percentage. The overall institutional grade is a weighted average of the section grades, with curriculum receiving a higher weight owing to its larger number of metrics. Letter grades for each section and the institution overall were then assigned according to the table below.

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

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

Planetary Health Grades for the Queen’s University Belfast School of Pharmacy

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

Section	Raw Score %	Letter Grade
Planetary Health Curriculum (30%)	$(38/66) \times 100 = 57.58\%$	C+
Interdisciplinary Research (17.5%)	$(14/17) \times 100 = 88.24\%$	A
Community Outreach and Advocacy (17.5%)	$(10/14) \times 100 = 71.43\%$	B
Support for Student-led Planetary Health Initiatives (17.5%)	$(13/15) \times 100 = 86.67\%$	A
Campus Sustainability (17.5%)	$(22/32) \times 100 = 68.75\%$	B
Institutional Grade	$(Ax0.3 + Bx0.175 + Cx0.175 + Dx0.175 + Ex0.175) = 72.41\%$	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

